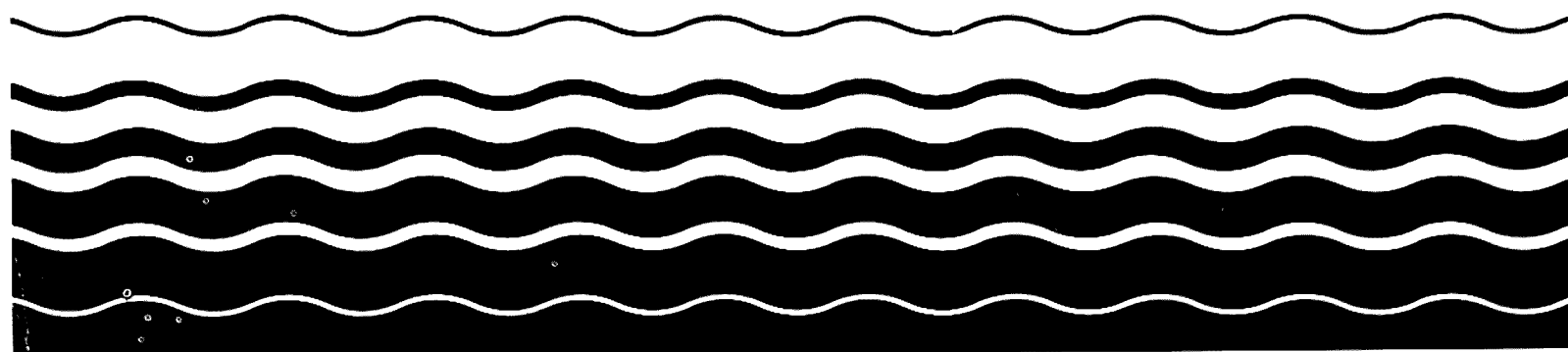




**Directory of:**

**Draft**

**Federal Programs  
Related to  
Water Conservation**



## Water Conservation

Managing our vital water resources depends on a balance of supply, demand and wise use. Using water more efficiently is often cheaper and less demanding to the environment than developing additional supplies. *While increases in supply will still be necessary, these reforms place emphasis on water conservation and make clear that this is now a national priority.*

In addition to adding the consideration of water conservation to the Principles and Standards, the initiatives I am taking include:

*Directives to all Federal agencies with programs which affect water supply or consumption to encourage water conservation, including:*

- making appropriate community water conservation measures a condition of the water supply and wastewater treatment grant and loan programs of the Environmental Protection Agency, the Department of Agriculture and the Department of Commerce;
- integrating water conservation requirements into the housing assistance programs of the Department of Housing and Urban Development, the Veterans Administration and the Department of Agriculture;
- *providing technical assistance to farmers and urban dwellers on how to conserve water through existing programs of the Department of Agriculture, the Department of the Interior and the Department of Housing and Urban Development;*
- requiring development of water conservation programs as a condition of contracts for storage or delivery of municipal and industrial water supplies from federal projects;
- requiring the General Services Administration, in consultation with affected agencies, to establish water conservation goals and standards in Federal buildings and facilities;
- encouraging water conservation in the agricultural assistance programs of the Department of Agriculture and the Department of the Interior which affect water consumption in water-short areas; and
- requesting all Federal agencies to examine their programs and policies so that they can implement appropriate measures to increase water conservation and re-use.

A directive to the Secretary of the Interior to improve the implementation of irrigation repayment and water service contract procedures under existing authorities of the Bureau of Reclamation. The Secretary will:

- require that new and renegotiated contracts include provisions for recalculation and renegotiation of water rates every five years. This will replace the previous practice of 40-year contracts which often do not reflect inflation and thus do not meet the beneficiaries' repayment obligations;
- under existing authority add provisions to recover operation and maintenance costs when existing contracts have adjustment clauses;
- more precisely calculate and implement the "ability to pay" provision in existing law which governs recovery of a portion of project capital costs.

Preparation of legislation to allow States the option of requiring higher prices for municipal and industrial water supplies from Federal projects in order to promote conservation, provided that State revenues in excess of Federal costs would be returned to municipalities or other public water supply entities for use in water conservation or rehabilitation of water supply systems.

—President Carter's Water Policy Message  
June 6, 1978

November 1978

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DIRECTORY OF:  
FEDERAL PROGRAMS RELATED TO WATER CONSERVATION

Introduction

President Carter's Water Policy Message of June 6, 1978, contained the directive on water conservation (see inside cover) that currently has every Federal agency examining its programs to identify ways of implementing each program's water conservation potential. Nineteen interagency task forces have been meeting since the directives were issued, to identify the changes that will be necessary to implement water policy reforms, including water conservation measures. The process, which will include public meetings and hearings and other opportunities for public comments, is expected to be completed by the end of September 1979. When proposed changes become final, the next phase -- implementing changes -- begins.

This document starts to display what that process is turning up. It is a draft of a directory that is being compiled of federal programs that could have an impact on water conservation. Ultimately, it is hoped, such a directory will assist persons, agencies, and other organizations interested in conserving water in figuring out where the federal programs are that may be able to help.

Publication of this directory prior to completion, in draft form, is intended to serve two main purposes. First, it is intended to provide some immediate assistance to persons attending an EPA-sponsored national conference on water conservation in Chicago on November 28 and 29, 1978, at which it will be released and distributed. Second, it is also aimed at stimulating comments, questions, and suggestions that will make subsequent versions of this directory more complete and useful, and that might also have a constructive impact on the current effort by federal agencies to determine what their conservation efforts will eventually include.

This draft has been prepared by Clean Water Fund. Information sources included interviews with agency staff, review of the work produced by the nineteen task forces, and excerpts of program descriptions contained in the 1978 Catalog of Federal Domestic Assistance, published by the Office of Management and Budget, Executive Office of the President, Washington, D. C., May 1978.

Preparation of this draft has been financed with federal funds from the U. S. Environmental Protection Agency under Grant No. T900914010. The contents of this draft do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of any trade names or commercial products constitute endorsement or recommendation for use.

Comments and suggestions on the material in this draft are encouraged. Please send comments to Will Sibley, Facility Requirements Division (WH595), U. S. EPA, 401 M Street, S. W., Washington, D. C. 20460, and to Clean Water Fund, 1341 G Street, N. W., Washington, D. C. 20005, telephone (202) 638-3013.

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APPALACHIAN REGIONAL COMMISSION

WATER AND SEWER GRANT PROGRAM

WATER AND SEWER GRANT PROGRAM

Type of Assistance: Project grants

Nature of Program: The Appalachian Regional Commission operates as a federal-state partnership with grants available in any area already covered by an existing federal grant aid program, ranging from child care and education to water and sewer development. The Appalachian Regional Commission can supply primary funding, match, or supplement funds from other agencies such as Farmers Home Administration, depending on the situation.

Applicant Eligibility: Initial contact must be made through a Local Development District, which are multi-county agencies distributed throughout the 13 Appalachian states.

Legal Authority: The Appalachian Regional Development Act of 1965 as amended; Section 214.

Current Status/Scope of Program: This will vary according to state needs and priorities. Total 214 funding for FY '78 was \$115 million, with an estimated 10 to 30% going to the water and sewer program. Total federal aid for any project cannot exceed 80%.

Information Contacts: Regional or Local: Local Development District.

Headquarters: Appalachian Regional Commission

1666 Connecticut Avenue, N.W.

Washington, D.C. 20235

Telephone: (202) 673-7893

## DELAWARE RIVER BASIN COMMISSION

Type of Assistance: Information and advice to the public

Nature of Program: The DRBC is one of two river basin commissions funded directly by Congress as an independent agency (the other being the Susquehanna River Basin Commission). One representative from each of the member states (New York, Pennsylvania, New Jersey, and Delaware), plus a Federal representative form the commission; and each representative has an equal vote. The Commission's basic goals and directions are outlined in a Comprehensive Basin Plan against which all government or private water development proposals or plans are evaluated. Specific activities and responsibilities of the Commission which affect water conservation include:

- A Level B (comprehensive long-range) Study, funded by the Water Resources Council, is currently underway in the basin. This will evaluate all phases of water resource planning for the area, and will give special emphasis to non-structural alternatives and water conservation provisions.
- Any project having a substantial impact on the Delaware River Basin must be approved by the Commission, including:
  - .channel encroachments
  - .dams, impoundments, etc.
  - .all but small surface and ground water withdrawals
  - .projects having an impact on wetlands
  - .sewage treatment plants of capacity greater than 50,000 gallons/day
- The Commission also has responsibility for water quality standards in the basin, and a developer or project must meet their standards even if they are stricter than the State's standards. This is done in several ways. Wasteload allocations (the total amount of any specific stream segment or water body) are set by the Commission. Anyone wishing to discharge into a stream or lake must receive an N.P.D.E.S. (National Pollutant Discharge Elimination System) permit (under Section 402 of the Clean Water Act) from the DRBC.
- Special attention has been given to encouraging sewage treatment systems which return water to the ground, such as spray irrigation or other land treatment systems.
- Monthly meetings are held on the activities of the DRBC, and any change in the Comprehensive Basin Plan is subject to a public review.

Water Conservation Provisions: See above.

Applicant Eligibility: General public

Legal Authority: Delaware River Basin Compact of 1961, P.L. 87-328 (75 Stat. 688)

Current Status/Scope of Program: FY 78 budget is approximately \$1.5 billion.

Information Contacts: Executive Director's Office  
Delaware River Basin Commission  
P.O. Box 7360  
West Trenton, New Jersey 08628

Telephone: (609) 883-9500

## DEPARTMENT OF AGRICULTURE

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## AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE

### AGRICULTURAL CONSERVATION PROGRAM (Agricultural Stabilization and Conservation Service)

Type of Assistance: Project grants

Nature of Program: This program provides direct financial assistance to any private person or group to share the cost of carrying out approved soil, water, woodland and wildlife conservation practices. Participants are responsible for the upkeep and maintenance of practices installed. Some states have matching programs, e.g. Iowa.

Water Conservation Provisions: Practices when installed can reduce runoff and conserve soil and water. Practices include improved irrigation management.

Applicant Eligibility: Any person who bears a share of the cost of an approved conservation practice.

Legal Authority: The Soil Conservation and Domestic Allotment Act of 1936, Sections 7 to 15, 16(a), and 17, as amended; PL 74-46; U.S.C. 590d, 590g-590o, 590(a), and 590q.

Current Status/Scope of Program: FY '78 budget level was \$190 million from ASCS, and \$12.9 million to SCS for technical assistance. In recent years 15-20% of the program funding was spent on improving irrigation systems. Range of financial assistance on individual agreements: \$3 to \$1,500. Average funding: \$500. Pooling agreements range from \$3 to \$10,000. The average joint funding was \$1,000.

Information Contacts: Regional or Local: Local telephone listing for ASCS county office  
 Headquarters: Agricultural Stabilization and Conservation Service  
 Department of Agriculture  
 P.O. Box 2415  
 Washington, D.C. 20013 Telephone: (202) 447-6221

### WATER BANK PROGRAM (Agricultural Stabilization and Conservation Service)

Type of Assistance: Project grants; advisory services and counseling

Nature of Program: Agreements are for 10 years with eligible landowners to preserve, restore, and improve wetlands, conserve surface waters, and preserve and improve habitat for migratory waterfowl. Annual payments are made to participants in return for not destroying these areas, and both management practices and structural aids (fences, water level control) may be required.

Applicant Eligibility: Landowners and operators of specified types of wetlands in important migratory waterfowl nesting and breeding area.

Legal Authority: Water Bank Act; PL 91-559

Current Status/Scope of Program: FY '78 budget level \$1 million to SCS for technical assistance, \$9 million cost share by ASCS. Financial assistance ranges from \$4 to \$20 per acre.

Information Contacts: Regional or Local: Local telephone listing for ASCS county office  
 Headquarters: Agricultural Stabilization and Conservation Service  
 Department of Agriculture  
 P.O. Box 2415  
 Washington, D.C. 20013 Telephone: (202) 447-6221

## ECONOMICS, STATISTICS, AND COOPERATIVES SERVICE

### ECONOMIC RESEARCH AND ANALYSIS (Economics, Statistics, and Cooperatives Service)

Type of Assistance: Dissemination of technical information

Nature of Program: Economic research by staff scientists on subjects which are of general interest to the individual, organization, or community requesting the research.

# ECONOMIC RESEARCH AND ANALYSIS (Economics, Statistics, and Cooperatives Service) (continued)

Water Conservation Provisions: Research topics have included economic implications of water supply, demands, efficiency of use, water quality, and water management; all of which have significant implications for water conservation. A greatly expanded number of studies specifically relating to water conservation is proposed for 1979.

Applicant Eligibility: General public

Legal Authority: Agricultural Marketing Act of 1946

Current Status/Scope of Program: FY '78 budget level: \$2 million for research

Information Contacts: Deputy Administrator for Economics  
Economics, Statistics, and Cooperatives Service  
Department of Agriculture  
500 - 12th Street, N.W.  
Washington, D.C. 20250 Telephone: (202) 447-8710

## FARMERS HOME ADMINISTRATION

### BUSINESS AND INDUSTRIAL LOANS (Farmers Home Administration)

Type of Assistance: Guaranteed/Insured loans

Nature of Program: This is a very broad program generally designed to improve the economic and environmental climate in rural communities by improving, developing or financing business, industry, and employment and promoting pollution abatement and control, and the conservation, development, and utilization of water for agriculture. The above goals are met primarily through loan guarantees to commercial lenders.

Water Conservation Provisions: pollution control, water reuse, and other water conservation practices are covered. Administrative changes to promote water reuse and conservation in industry are proposed.

Applicant Eligibility: Cooperatives, corporations, partnerships, trust or other legal entity organized and operated on a profit or nonprofit basis; an Indian Tribe; a municipality, county or other political subdivision of a State; or an individual in a rural area.

Legal Authority: Consolidated Farm and Rural Development Act, as amended, Section 310 B, PL 92-419; 7 U.S.C. 1932.

Current Status/Scope of Program: FY '78 budget \$1 billion. Range of financial assistance: \$11,000 to \$10,000,000. Average funding: \$620,000.

Information Contacts: Regional or Local: Local telephone listing FmHA county office  
Headquarters: Administrator  
Farmers Home Administration  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 447-7967

### FARM OWNERSHIP LOANS (Farmers Home Administration)

Type of Assistance: Guaranteed/insured loans

Nature of Program: This program provides general assistance to family farm owner/operators in purchasing a farm to make efficient use of its resources and afford the family a chance to have a reasonable standard of living.

Water Conservation Provisions: Uses for loans include providing water and water facilities, soil, and land conservation measures, and other activities which can impact upon water conservation.

Applicant Eligibility: Farmers and ranchers unable to obtain credit elsewhere and who meet other criteria of experience, reliability, etc.

Legal Authority: Consolidated Farm and Rural Development Act, Section 302; PL 92-419; 7 U.S.C. 1922.

# FARM OWNERSHIP LOANS (Farmers Home Administration) (continued)

Current Status/Scope of Program: Estimated FY '79 budget: \$550 million. Range of financial assistance: \$18,830 to \$100,000. Average funding: \$42,530.

Information Contacts: Local or Regional: Local telephone listing FmHA county office  
 Headquarters: Administrator  
 Farmers Home Administration  
 Department of Agriculture  
 Washington, D.C. 20250 Telephone: (202) 447-7967

# IRRIGATION, DRAINAGE, AND OTHER SOIL AND WATER CONSERVATION LOANS (Farmers Home Administration)

Type of Assistance: Guaranteed/Insured loans

Nature of Program: Provides loans to non-profit public or quasi-public bodies for irrigation, drainage, or other soil conservation measures which will benefit farmers or rural residents. General objectives include the increase of income to these persons, and the more efficient use of land.

Applicant Eligibility: Non-profit public or quasi-public bodies or corporations serving rural areas and villages of up to 10,000 in population which are unable to obtain credit elsewhere.

Legal Authority: Consolidated Farm and Rural Development Act, Section 306; PL 92-419; 7 U.S.C. 1926.

Current Status/Scope of Program: Estimated FY '79 budget: \$6 million. Range of previous financial assistance: \$32,000 to \$612,000. Average funding: \$254,210.

Information Contacts: Local or Regional: Local telephone listing FmHA county office  
 Headquarters: Administrator  
 Farmers Home Administration  
 Department of Agriculture  
 Washington, D.C. 20250 Telephone: (202) 447-7967

# RESOURCE CONSERVATION AND DEVELOPMENT LOANS (Farmers Home Administration)

Type of Assistance: Guaranteed/Insured loans

Nature of Program: Administered through local Resource Conservation and Development (RC&D) districts this program is designed to increase economic opportunities for local people. SCS provides planning and technical assistance.

Water Conservation Provisions: Loans can be used for public outdoor water based recreational facilities, soil and water development and conservation facilities, and community water storage facilities.

Applicant Eligibility: Public agencies and local non-profit corporations in an authorized Resource Conservation and Development Area.

Legal Authority: Food and Agriculture Act of 1962; PL 87-703; 1011 (Supp. V) 1959-63; 7 U.S.C. 1010.

Current Status/Scope of Program: Estimated FY '79 budget: \$4 million. Range of financial assistance: \$2,400 to \$250,000. Average funding: \$81,459.

Information Contacts: Regional or Local: Local telephone listing FmHA county office  
 Headquarters: Administrator  
 Farmers Home Administration  
 Department of Agriculture  
 Washington, D.C. 20250 Telephone: (202) 447-7967

## SOIL AND WATER LOANS (Farmers Home Administration)

Type of Assistance: Guaranteed/Insured loans

Nature of Program: This program provides assistance to achieve efficient use of farm land through soil conservation; water development, conservation and use; forestation; drainage of farmland; and other related measures. Loans are primarily to individual farms and limited funds are available.

Water Conservation Provisions: Projects designed to improve irrigation techniques, develop ponds and water supplies, and other water conservation activities are eligible for assistance.

Applicant Eligibility: Individual farm owners or tenants, partnerships and domestic corporations who are unable to obtain credit elsewhere.

Legal Authority: Consolidated Farm and Rural Development Act, Subtitle A, Section 304; PL 92-419; 7 U.S.C. 1924.

Current Status/Scope of Program: Estimated FY '79 budget: \$48 million. Range of financial assistance: \$3,300 to \$100,000. Average funding: \$17,000.

Information Contacts: Local or Regional telephone listing FmHA county office  
 Headquarters: Administrator  
 Farmers Home Administration  
 Department of Agriculture  
 Washington, D.C. 20250 Telephone: (202) 447-7967

## WATERSHED PROTECTION AND FLOOD PREVENTION LOANS (Farmers Home Administration)

Type of Assistance: Guaranteed/Insured loans

Nature of Program: Local organizations can obtain up to 100% of the local cost share, depending on need, of the cost for watershed improvement projects for flood prevention, irrigation, drainage, water quality management, sedimentation control, fish and wildlife development, public water-based recreation, and water storage and related costs. FmHA can supply the basic plan while SCS provides a cost share and technical assistance.

Water Conservation Provisions: Water conservation potential exists in some of the areas listed above.

Applicant Eligibility: Non-profit local organizations, such as a municipal corporation or a soil and water conservation district, which operate in the watershed.

Legal Authority: Watershed Protection and Flood Prevention Act as amended; PL 83-566; Section 8, 16 U.S.C. 1006a.

Current Status/Scope of Program: Estimated FY '79 budget: \$26 million. Range of financial assistance: \$7,230 to \$5,000,000. Average funding: \$299,129.

Information Contacts: Regional or Local: Local telephone listing FmHA county office  
 Headquarters: Administrator  
 Farmers Home Administration  
 Department of Agriculture  
 Washington, D.C. 20250 Telephone: (202) 447-7967

## WATER AND WASTE DISPOSAL SYSTEMS FOR RURAL COMMUNITIES (Farmers Home Administration)

Type of Assistance: Project grants; guaranteed and insured loans

Nature of Program: This program provides loans and grants to public bodies and non-profit cooperatives to finance the construction, improvement, repair, or expansion of water and waste disposal facilities in rural areas. Joint funding is available with related federal programs. Grants are made only if necessary to reduce user charges to a reasonable level.

Water Conservation Provisions: Many opportunities to conserve water are associated with pipelines, distribution systems, reservoirs, etc. Administrative changes are proposed to reduce leakage in pipelines, require metering of systems, and establish rate structures to encourage water conservation.

**WATER AND WASTE DISPOSAL SYSTEMS FOR RURAL COMMUNITIES (Farmers Home Administration) (continued)**

Applicant Eligibility: Public bodies and non-profit cooperatives who are unable to finance a project through their own resources or through commercial credit, and who have the legal authority to build and operate the project and repay the loan.

Legal Authority: Consolidated Farm and Rural Development Act, Section 306; PL 92-419; 7 U.S.C. 1926.

Current Status/Scope of Program: FY '78 budget level: \$254 million for grants and \$750 million for loans. Range of financial assistance in loans: \$50,000 to \$20,000,000; in grants: \$5,000 to \$1,000,000. The average amount of loans: \$365,000; grants: \$242,000.

Information Contacts: Regional or Local: Local telephone listing for FmHA county office

Headquarters: Administrator  
Farmers Home Administration  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 447-7967

**U.S. FOREST SERVICE**

**COOPERATIVE FORESTRY ASSISTANCE (U.S. Forest Service)**

Type of Assistance: Financial and technical assistance.

Nature of Program: This program is scheduled to begin in 1981. It will consolidate many of the previous authorities for State and private forestry.

Water Conservation Provisions: Technical and financial assistance is authorized through the State Forester to protect and improve soil resources and the quality, quantity, and timing of water yields.

Applicant Eligibility: Information not currently available.

Legal Authority: Cooperative Forestry Assistance Act of 1978, PL 95-313.

Current Status/Scope of Program: Information not currently available.

Information Contacts: Administrator  
U.S. Forest Service  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 447-7967

**COOPERATIVE FOREST FIRE PROTECTION (U.S. Forest Service)**

Type of Assistance: Formula Grants, technical assistance.

Nature of Program: This program provides financial and technical assistance to states to help protect all known federal forested and non-forested watershed lands.

Water Conservation Provisions: Reduces burned land and so reduces nonpoint source pollution.

Applicant Eligibility: State Forestry agencies

Legal Authority: Clarke-McNary Act of 1924, 16 Stat. 653; 16 U.S.C. 564,565,567.

Current Status/Scope of Program: Estimated FY '79 budget: \$23,026,000. Range of financial assistance: \$47,000 to \$1,735,000. Average grant: \$510,000.

Information Contacts: Cooperative Fire Protection Staff  
U.S. Forest Service  
Department of Agriculture  
P.O. Box 2417  
Washington, D.C. 20013 Telephone: (202) 447-7967

Type of Assistance: Technical assistance

Nature of Program: Forestry research through eight forest and range experiment stations is conducted under this program. This research is directed at all technology needs in managing, protecting, enhancing and utilizing these resources.

Water Conservation Provisions: Past research has developed information on: water quality as affected by the movement of soils, nutrients, pesticides, as well as nitrogen, transformation and vegetative modification; water supply through the study of percolation, evapotranspiration, ground and surface water interchange, and natural and artificial recharge. Models have been developed to predict runoff.

Applicant Eligibility: Non-profit institutions and organizations including state and local governments who are conducting research.

Legal Authority: McSweeney and McNary Act of 1928, 45 Stat. 699; T6 U.S.C. 581.

Current Status/Scope of Program: FY '78 budget: \$7.7 million for technical assistance.

Information Contacts: Regional or Local: The nearest regional Experimental Station  
Headquarters: Deputy Chief for Research  
U.S. Forest Service  
Department of Agriculture  
P.O. Box 2417  
Washington, D.C. 20013 Telephone: (202) 447-7075

#### RURAL ELECTRIFICATION PROGRAM

##### RURAL ELECTRIFICATION PROGRAM

Type of Assistance: Guaranteed/Insured loans

Nature of Program: Long term interest bearing loans and guaranteed loans are provided by this program for rural electric service which includes construction and operation of generating plants and associated facilities (impoundments, mines, transmission lines, and distribution lines and systems).

Water Conservation Provisions: Aspects of generating plant water and wastewater treatment systems impact on water conservation (e.g. dry cooling towers reduce water consumption. Closed cycle wet cooling systems increase consumption and reduce withdrawal, whereas a once through system decreases consumption but may have adverse environmental thermal effects.)

Applicant Eligibility: Rural power suppliers; utilities, municipalities, etc.

Legal Authority: Rural Electrification Act of 1936 as amended, Titles I and II; 7 U.S.C. 901-915, and 930-940.

Current Status/Scope of Program: FY '78 budget level: \$5 billion in loan guarantees for power plants; \$800 million in loans for distribution systems; \$26 million for administration.

Information Contacts: Administrator  
Rural Electrification Administration  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 447-5123

#### SCIENCE AND EDUCATION ADMINISTRATION-AGRICULTURAL RESEARCH

##### MANAGEMENT AND USE OF PRECIPITATION AND SOLAR ENERGY FOR CROP PRODUCTION (Science and Education Administration-Agricultural Research)

Type of Assistance: Project grants and dissemination of technical information.

Nature of Program: This program provides for research and grants to conduct research to increase the yields of cropland and rangeland through more efficient use of precipitation. Approximately 90% of the cropland in the U.S. is farmed without irrigation. Water is the biggest limiting factor of crop production.

Water Conservation Provisions: The program is concerned with increasing the efficiency of water used by crops through cultivating practices, evaporation control, and cropping systems.

Applicant Eligibility: Technical information is available to the general public. Project grants are available to qualified non-profit institutions, including universities, whose primary purpose is scientific research.

Legal Authority: Research and Marketing Act of 1946, PL 79-733, 7 U.S.C. 427.

Current Status/Scope of Program: The FY '78 budget level is \$2.9 million for research.

Information Contact: Deputy Director for Federal Research  
Science and Education Administration  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 436-8403

#### IMPROVE IRRIGATION AND DRAINAGE OF AGRICULTURAL LAND (Science and Education Administration-Agricultural Research)

Type of Assistance: Project grants; dissemination of technical information.

Nature of Program: This program covers research and grants to conduct research to develop water management practices, methods, equipment, and assistance to efficiently utilize soil, water, and energy resources for increased agricultural productivity. Results from studies will be used to determine the quantity of water required for various crops and the water control practices needed.

Water Conservation Provisions: Research to determine the minimum amount of water needed to sustain the economic production of food and fiber is the main thrust of the research.

Applicant Eligibility: Technical information is available to the general public. Project grants are available to qualified non-profit institutions, including universities whose primary purpose is scientific research.

Legal Authority: Research and Marketing Act of 1946, PL 79-733, 7 U.S.C. 427.

Current Status/Scope of Program: The FY '78 budget level is \$2.153 million for research.

Information Contact: Deputy Director for Federal Research  
Science and Education Administration  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 436-8403

#### SCIENCE AND EDUCATION ADMINISTRATION-EXTENSION

##### MANAGEMENT AND USE OF NATURAL RESOURCES AND THE IMPROVEMENT OF ENVIRONMENTAL QUALITY (Science and Education Administration-Extension)

Type of Assistance: Formula grants; education.

Nature of Program: This program includes education, instruction and practical demonstrations in agricultural and home economics, and in related subjects to persons not attending college. Information is disseminated through demonstrations, publications, and other sources of informational dissemination provided by State and county extension service personnel.

Water Conservation Provisions: Approximately 1% of the budget now deals with water conservation and use. This funds meetings, demonstrations, the news media and other information sources directed at farmers to inform them of the advantages of water conservation and of programs available to them to achieve water conservation results.

Applicant Eligibility: Grants are made to land grant institutions to provide educational and technical assistance through extension service personnel.

Legal Authority: Smith Lever Act of 1914.

Current Status/Scope of Program: The FY '78 budget is \$269 million, with 1% going to water conservation and use. Increases to double this portion are proposed administratively.

Information Contact: Science and Education Administration-Extension  
Department of Agriculture  
Washington, D.C. 20250 Telephone: (202) 447-6781

CONSERVATION OPERATIONS-TECHNICAL ASSISTANCE (Soil Conservation Service)

Type of Assistance: Technical assistance and advice.

Nature of Program: Under this program, technical assistance is provided to individual landowners, groups and units of government through and in cooperation with conservation districts in the 50 States, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands. Technical assistance includes conservation planning to meet the needs and objectives of land users within the conservation potential of available soil, water, and related resources. It also includes assistance in the application of these conservation measures.

Water Conservation Provisions: Planning and implementation assistance on soil and water conserving practices includes:

- |   |  |
|---|--|
| ·pasture and range seeding                      | ·terraces and grade stabilization structures         |
| ·cropping systems                               | ·ponds   |
| ·pasture, range and cropland management systems | ·improvements to irrigation water management systems |

Applicant Eligibility: Individual landowners, groups and units of government.

Legal Authority: PL 74-46, 49 Stat. 163 (16 U.S.C. 590 a-f, q).

Current Status/Scope of Program: The FY '78 budget level is \$189 million in technical assistance.

Information Contacts: Regional or Local: Soil Conservation Service state office.

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013 Telephone: (202) 447-4531

GREAT PLAINS CONSERVATION PROGRAM (Soil Conservation Service)

Type of Assistance: Direct payments for specified use; advisory services and counseling.

Nature of Program: This program is designed to bring about a long term solution to soil and water conservation problems in the 10 Great Plains States by aiding farmers, ranchers and others in planning and implementing conservation practices.

Water Conservation Provisions: Runoff reduction to conserve soil and water and practices for improved irrigation water management are among the aims of this program. Proposed changes would provide new financial incentives for implementing water conservation practices (higher cost share and contract limit), place a higher administrative priority on water conservation, and include drip irrigation systems and groundwater recharge as eligible measures.

Applicant Eligibility: Must have control of the land for the duration of the contract; minimum of 3 and maximum of 10 years.

Legal Authority: Soil Conservation and Domestic Allotment Act, PL 74-46, as amended by the Great Plains Act of August 7, 1956, PL 84-1021, and PL 86-793, and PL 91-118.

Current Status/Scope of Program: Estimated FY '79 budget is \$8,023,000. The range of financial assistance is up to \$25,000 per landowner or operator over a contract period running from 3 to 10 years. The average funding is \$8,240.

Information Contacts: Regional or Local: State conservationists for the Soil Conservation Service in the 10 Great Plains States (Montana, N. Dakota, S. Dakota, Wyoming, Colorado, Nebraska, Kansas, New Mexico, Oklahoma, and Texas). Also the District Conservationist for the Soil Conservation Service in the 469 counties where the program operates.

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
Washington, D.C. 20013 Telephone: (202) 447-4531



12  
**RESOURCES CONSERVATION AND DEVELOPMENT (Soil Conservation Service)**

**Type of Assistance:** Project grants, advisory services, and technical assistance.

**Nature of Program:** This program assists local people in initiating and carrying out long-range programs of resource conservation and development in rural communities to promote satisfactory levels of income, a pleasing environment and to create a favorable investment climate to private capital.

The program operates only in authorized Resources Conservation and Development Areas. The Soil Conservation Service is the lead agency and supplies technical assistance in planning and implementation of such plans, and funding on a cost-share basis. Farmers Home Administration also has a loan program which works with this program. (See Farmers Home Administration Resources Conservation and Development loans.)

**Water Conservation Provisions:** Areas which have received assistance and which affect water conservation include:

- |                                     |   |
|-------------------------------------|---|
| • flood prevention                  | • general agricultural water management |
| • sedimentation and erosion control | • rural community water supply          |
| • public water based recreation     | • agriculture related pollution control |
| • fish and wildlife promotion       | • water quality management              |

**Applicant Eligibility:** Public agencies and non-profit organizations with authority to operate in an authorized Resources Conservation and Development Area.

**Legal Authority:** Soil Conservation Act of 1935, PL 74-46; Bankhead-Jones Farm Tenant Act, PL 75-210, as amended by PL 89-796; Food and Agriculture Act of 1962 (Section 102), PL 87-703; PL 91-343; and PL 92-419.

**Current Status/Scope of Program:** Estimated FY '79 budget is \$6,797,000. Range of financial assistance: \$2,000 to \$250,000. Average grant: \$50,000.

See also: Farmers Home Administration Resources Conservation and Development loans.

**Information Contacts:** Regional or Local: Telephone listing for state and/or field office of the Soil Conservation Service, U.S. Department of Agriculture.

Headquarters: Administrator  
Soil Conservation Service  
U.S. Box 2890  
Washington, D.C. 20250 Telephone: (202) 447-4531

**RIVER BASIN SURVEYS AND INVESTIGATIONS (Soil Conservation Service)**

**Type of Assistance:** Provision of specialized services; advisory services and counseling.

**Nature of Program:** U.S. Department of Agriculture (USDA) expertise and assistance is provided to federal, state, and local planning agencies responsible for directions and decisions regarding water and related land resources. Through a close working relationship among USDA and such agencies, plans are developed with both economic and environmental objectives for rural, agricultural, and forestry aspects.

**Water Conservation Provisions:** River Basin studies involving water conservation have covered some of the following subjects:

- |                                   |   |
|-----------------------------------|---|
| • water supply                    | • Colorado River Basin Salinity Control |
| • multiple use and reuse of water | Program, since salinity control is      |
| • alternative solutions for more  | related to water conservation           |
| efficient irrigation of crops     |   |

**Applicant Eligibility:** Any state or federal agency concerned with water resource development. Soil Conservation Service works in cooperation with these agencies.

**Current Status/Scope of Program:** Estimated FY '79 budget is \$16,487,000. The range of financial assistance is \$300,000 to \$1,500,000. Average funding is \$650,000.

**Information Contacts:** Regional or Local: Soil Conservation Service state office

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890 Telephone: (202) 447-4531  
Washington, D.C. 20013

Type of Assistance: Project grants and technical assistance.

Nature of Program: This program provides long term (5-10 years) technical and financial assistance to land users in 29 states for the reclamation, conservation, and the development of eligible abandoned coalmined lands. This new program is just being implemented. Cost sharing assistance in the form of grants is available up to 100% of the cost, depending on applicant need, the eventual use of the land (financial assistance is higher if the land is put to non-profit use, e.g. wildlife habitat), and benefits to the public of reclamation. Technical assistance is free.

Water Conservation Provisions: Relevant activities involve restoration or improvement of water quantity and quality where degraded by past coal mining activities, including reduction of acid mine drainage. This includes:

- |                           |  |
|---------------------------|--|
| •sealing mines and shafts | •waterways                             |
| •liming acid waters       | •grade stabilization                   |
| •land shaping and grading | •sediment basins                       |
| •critical area planting   | •temporary irrigation to establish new |
| •diversions               | vegetation                             |

Applicant Eligibility: Individuals, groups or state and local governments who are owner/resident on eligible property.

Legal Authority: Section 406, PL 95-8791, Stat. 460, (30 U.S.C. 1236).

Current Status/Scope of Program: Estimated FY '79 budget is \$10,128,000 plus \$4 million left over from 1978. This new program is just being implemented.

Information Contacts: Regional or Local: Local telephone listing for Soil Conservation Service county office.

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013 Telephone: (202) 447-4531

"RURAL CLEAN WATER ACT" (Proposed placement with Soil Conservation Service)

Type of Assistance: Project grants and technical assistance.

Nature of Program: This program was authorized by the '77 Clean Water Act but funding was not appropriated by Congress for '78. Up to 50% of the cost sharing and technical assistance will be provided to control non-point source pollution from rural land. The local 208 planning agency or other appropriate agency will outline Best Management Practices which recipients must follow to meet the grant requirements. These measures generally achieve not only pollution control, but make more efficient use of soil and water resources. Contracts last 5-10 years. Soil Conservation Service will be the lead agency and provide technical assistance, while Agricultural Stabilization and Conservation Service or a state agency provides cost sharing funds.

Applicant Eligibility: Owner/operators having control of rural lands.

Legal Authority: Federal Water Pollution Control Act, PL 95-217, as amended, Section 208(j).

Current Status/Scope of Program: Authorized by law, but not yet funded by Congress. FY '79 budget authorization of up to \$200 million; FY '80 authorization of \$400 million.

Information Contact: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013 Telephone: (202) 447-4531

14 **SNOW SURVEY AND WATER SUPPLY FORECASTING (Soil Conservation Service)**

Type of Assistance: Dissemination of technical information.

Nature of Program: This program provides forecasts of seasonal water supplies in affected areas of the western states and Alaska to facilitate agricultural, industrial, and municipal planning and operations.

Water Conservation Provisions: The data collected is used to improve efficiency in operating large and small reservoirs for:

- irrigation
- flood control
- power generation
- recreation
- industry and municipal supplies

Data is also used by the owner/operators of 23,000,000 irrigated acres.

Applicant Eligibility: Forecasting information is available to the general public.

Legal Authority: Soil Conservation and Domestic Allotment Act, PL 74-46.

Current Status/Scope of Program: Estimated FY '79 budget is \$3,377,000. The program operates in 11 states with 1600 sampling locations.

Information Contacts: Regional or Local: State office of Soil Conservation Service; in California, the State Department of Water Resources.

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013      Telephone: (202) 447-4531

**SOIL SURVEYS (Soil Conservation Service)**

Type of Assistance: Dissemination of technical information.

Nature of Program: This program provides for the collection, evaluation and documentation of soil data and information. Such information is essential for planning and implementing soil and related water conservation activities.

Water Conservation Provisions: A major objective of soil surveys is the conservation of soil and water resources. Soil surveys enable planners to give proper consideration to practices for the wise use of the resource. Information includes:

- infiltration and permeability capacity
- water holding capacity
- depth to impervious layers or water tables

Proposed administrative changes would give priority to competing surveys in water short areas and provide for training personnel to use this information more effectively for water conservation.

Applicant Eligibility: All individuals and groups that need the information.

Legal Authority: Appropriation Act of 1896, Chapter 169 and subsequent Appropriation Act; PL 74-46, Soil Conservation Act; and PL 89-560, Soil Surveys for Resource Planning and Development.

Current Status/Scope of Program: Estimated FY'79 budget is \$43,981,000.

Information Contacts: Regional or Local: Local or state Soil Conservation Service office

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013      Telephone: (202) 447-4531

SOIL AND WATER CONSERVATION (Soil Conservation Service)

15

Type of Assistance: Technical and advisory assistance.

Nature of Program: This program provides technical assistance to individuals, groups, and units of governments for planning and implementing soil and water conservation plans.

Water Conservation Provisions: Areas in which assistance has been given include:

- pasture and range seeding
- cropping systems
- pasture, range and cropland management
- terraces
- grade stabilization
- ponds
- improvements to irrigation water management systems

Proposed administrative changes would increase staff in the water conservation area, and offer disincentives to persons not following water conservation guidelines agreed upon within conservation districts.

Applicant Eligibility: Units of government usually review resource assistance needed with the conservation district governing body. Individuals and groups usually make initial contact with the local conservation districts.

Legal Authority: Soil Conservation and Domestic Allotment Act; PL 74-46, approved April 27, 1935.

Current Status/Scope of Program: Estimated FY '79 budget is \$189,874,000 for technical assistance.

Information Contacts: Regional or Local: State and local Soil Conservation Service offices

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013 Telephone: (202) 447-4531

WATERSHED PROTECTION AND FLOOD PREVENTION (Soil Conservation Service)

Type of Assistance: Project grants; advisory services and technical assistance.

Nature of Program: This program assists state and local agencies in developing a comprehensive watershed plan for the protection, conservation and development of soil and water resources within watersheds of less than 250,000 acres. Soil Conservation Service is the lead agency and supplies funds on a cost sharing basis. Funding can be supplemented by other sources, local or federal. Soil Conservation Service also supplies technical assistance, including planning and installation of approved measures.

The Farmers Home Administration (FmHA) also has loans available under this program to help meet the local cost share. (See listing under FmHA).

Water Conservation Provisions: Program areas which relate to water conservation and have received assistance include:

- flood prevention
- erosion and sediment control
- irrigation distribution systems
- developing municipal and industrial water supplies
- promoting water based recreation
- preservation, protection and improvement of fish and wildlife habitat

Applicant Eligibility: Any non-profit agency with authority under state law to carry out, maintain, and operate watershed programs.

Legal Authority: Watershed Protection and Flood Prevention Act; PL 83-566, as amended, is the major authorization. Also other additional not cited.

Current Status/Scope of Program: Estimated FY '79 budget is \$152,522,000. Range of financial assistance: \$20,000 to \$13,000,000. Average grant: \$2,000,000. See also FmHA loan program.

Information Contacts: Regional or Local: Soil Conservation Service state office

Headquarters: Administrator  
Soil Conservation Service  
Department of Agriculture  
P.O. Box 2890  
Washington, D.C. 20013 Telephone: (202) 447-4531

DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS

<u>Page</u>	<u>Program/Activity</u>
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	<u>General Investigations and Surveys</u>
17	Comprehensive Studies
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18	Coordination with other Federal Agencies and Non-Federal Interests
19	Phase I Advance Engineering and Design
20	Project Planning, Level C Implementation Studies
20	Review of Authorization, Completed Projects
20	Special Studies
	<u>Operation and Management</u>
21	Flood Control, Environmental and Water Quality Operational Studies
21	Multiple Purpose Projects
21	Regulatory Functions to Protect/Preserve Navigable Waters and the Environment
22	Scheduling Flood Control Reservoir Operations

NOTE REGARDING THE U.S. ARMY CORPS OF ENGINEERS:

*The Corps of Engineers is very broadly involved in water resources planning, development, and management.*

*Most of the program descriptions that are included refer to general administrative responsibilities. These include planning, surveys, engineering and design, operation and maintenance, and the review of completed projects. Most or all of these steps are included in the process of implementing a specific project, and most of these steps have the opportunity for consideration of water conservation.*

*A few of the program descriptions that are included cover specific regulatory responsibilities, such as the Corps' responsibility to protect and preserve navigable waters and the environment, as they relate to water conservation.*

**FLOOD CONTROL, MISSISSIPPI RIVER AND TRIBUTARIES (Corps of Engineers)**

Type of Assistance: Provision of specialized services.

Nature of Program: This is the comprehensive plan for the Mississippi River and tributaries, and includes federal investigations, advance engineering and design, construction and maintenance of projects.

Water Conservation Provisions: A broad range of water conservation measures are applicable to comprehensive basin planning, including:

- watershed management
- floodplain management
- systems operation
- urban stormwater control

Applicant Eligibility: Not applicable.

Legal Authority: PL 70-391, The Flood Control and Protection Act of 1928 (45 Stat. 534, 33 U.S.C. 702a)

Current Status/Scope of Program: FY '78 appropriation of \$235 million.

Information Contacts: Regional or Local: U.S. Army Corps of Engineers - District Engineer  
Headquarters: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

**COMPREHENSIVE STUDIES (Corps of Engineers)**

Type of Assistance: Provision of specialized services.

Nature of Program: Three general types of studies are covered here:

- Level A: Assessments and Framework Studies are directed by the Water Resources Council with the Corps usually being a major participant. They consist of an inventory of water and land problems, needs and desires of the populace for conservation, development, and utilization of water and land resources in the region.
- Level B: Regional or River Basin Studies focus on near term needs (10-25 years) and involve federal, state, and local interests in plan development.
- Level C: Implementation Studies. Site specific, e.g. small river basins.

Water Conservation Provisions: Opportunity exists to incorporate water conservation into the planning process relating to broad areas of management of resources, and education and public involvement. Specific measures can be implemented in Level B planning.

Applicant Eligibility: Not applicable.

Legal Authority: PL 89-80 Water Resources Planning Act of 1965, Section 209; PL 92-500 Clean Water Act.

Current Status/Scope of Program: FY '78 budget is \$1.7 million.

Information Contacts: Regional or Local: U.S. Army Corps of Engineers - District Engineer  
Headquarters: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

**CIVIL WORKS RESEARCH AND DEVELOPMENT (Corps of Engineers)**

Type of Assistance: Research and information.

Nature of Program: Studies to advance the Corps' capability in conservation, development, and management of the nation's inland and coastal water and related land resources. Research and development is aimed at resolving problems in current and future operational programs and at applying results toward solutions. Research is conducted at eight laboratories.

Water Conservation Provisions: Energy and water conservation research are currently the top

- 18 overall priorities in the research and development program. Study areas include:
- wastewater management by land treatment
  - planning methodologies and economic analysis
  - water conservation through installation of plumbing fixtures
  - of benefits for water quality
  - hydrologic operational studies
  - environmental quality
  - agency research
  - water supply

Applicant Eligibility: Not applicable.

Legal Authority: Research and development is considered a logical extension of the need for effective management of the Civil Works program, therefore the authority is rooted in the overall body of law authorizing Civil Works.

Current Status/Scope of Program: FY '78 budget is \$17 million.

Information Contacts: To find which research lab is working on a specific area, contact:  
Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

#### COORDINATION WITH OTHER FEDERAL AGENCIES AND NON-FEDERAL INTERESTS (Corps of Engineers)

Type of Assistance: Technical assistance and advice.

Nature of Program: The Corps of Engineers has 10 assistance and coordination programs, all of which are fairly small (less than \$0.5 million for FY '79) except for the Planning Assistance to States program. Technical assistance is currently given primarily in the areas of flood control and beach erosion control.

1. Comprehensive Planning Cooperation: Provides authority for cooperating "with any state in the preparation of comprehensive plans for the development, utilization and conservation of the water and related resources of drainage basins located within the boundaries of such state..." The program is authorized for an appropriation of \$4 million annually, except that not more than \$200,000 shall be expended in any one year in any one state.

Legal Authority: Section 22, PL 93-251, Water Resources Development Act of 1974.

2. Coastal Zone Management Program: The Program declared a national interest in the effective management, beneficial use, protection and development of the coastal zone. The Corps Civil Works activities undertaken subsequent to approval of a State's CZM plan will be consistent with that plan to the maximum extent possible. Permit applications for activities regulated by Corps authorities must include a certification that the action is consistent with approved State CZM plan. Technical assistance requested by the States to assist their implementation of the national policy for coastal zone management will be provided to the extent practicable. Funds have been provided to participate in the States' development, coordination and implementation of Coastal Zone Management Programs.

Legal Authority: Coastal Zone Management Act of 1972, PL 92-583, Section 307 (1).

3. Wastewater Management Program: Section 208(h) authorizes the Corps of Engineers to consult with and provide technical assistance to State and local interests in developing and operating a continuing area wide waste treatment management planning process upon the request of the Governor, or a designated planning organization. No funds have been appropriated for assistance under Section 208(h). Funds, however, are provided for field coordination and assistance.

Legal Authority: Wastewater Management. Congressional direction for five pilot studies of regional wastewater management in 1971. Also, Section 208(h), PL 92-500 (Clean Water Act of 1972).

4. Flood Plain Management Service: The Corps is authorized by Section 206 of the 1960 Flood Control Act, as amended, to provide information, technical planning assistance, and guidance to non-federal entities in identifying the magnitude and extent of the flood hazard and in planning wise use of the flood plains. It also provides basic hydrologic and damage information to the Federal Flood Insurance Administration under reimbursable agreement. Direct response and assistance of this kind are provided through the Flood Plan Management Services Program.

Legal Authority: Section 206, PL 86-645, River and Harbor amended by Section 206, PL 89-789.

## COORDINATION WITH OTHER FEDERAL AGENCIES AND NON-FEDERAL INTERESTS(Corps of Engineers) (continued)

5. Technical Assistance on Streambank Erosion: Provides technical and engineering assistance to non-federal public interests in developing structural and non-structural methods of preventing damages attributable to short and streambank erosion.

Legal Authority: Technical Assistance on Streambank Erosion. Section 55, PL 93-251.

6. Aquatic Plant Control: Corps of Engineers shall cooperate with other federal and non-federal agencies in comprehensive programs for control and eradication of obnoxious plants.

Legal Authority: Aquatic Plant Control, Section 302, PL 89-298 as amended.

7. Cooperation with the State of New York: Field cooperation with New York State Department of Environmental Conservation. Oriented toward developing and providing water resources information, including hydrology, climatology and reconnaissance studies.

Legal Authority: Cooperation with the State of New York, Section 214, PL 89-298.

8. Cooperation with the Commonwealth of Puerto Rico: Joint Comprehensive framework planning and detailed survey studies for flood control, navigation, wastewater management, water supply and beach erosion control.

9. River Basin Commissions: Cooperation with River Basin Compact Commissions, Interstate River Basin Compacts, Regional Planning Commissions, and any activity where Corps participation is required, including State planning agencies.

Legal Authority: River Basin Commissions, Titel III, PL 89-80, Water Resources Planning Act of 1965.

Water Conservation Provisions: Conservation measures and concepts may be formulated into planning and technical assistance for a variety of projects, including instream flow needs, water supply and demand. Expertise is also available in urban studies, wastewater management, hydrologic studies, and coastal zone management.

Applicant Eligibility: Depending on the program, technical assistance is available primarily to states.

Legal Authority: See individual program listings above.

Current Status/Scope of Program: See individual program listings above.

Information Contacts: Regional or Local: Army Corps of Engineers - District Office  
Headquarters: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

## PHASE I ADVANCE ENGINEERING AND DESIGN (Corps of Engineers)

Type of Assistance: Information available to the public.

Nature of Program: An objective reassessment of an authorized project to either reaffirm the project as authorized, or to modify it as required to meet changed conditions. Essentially an updated Level C survey report in scope (see Comprehensive Studies).

Water Conservation Provisions: Provides an opportunity to include updated concerns and objectives into the plan, which can affect water conservation depending on the project.

Applicant Eligibility: Not applicable. This is an agency administrative process which is part of any public works project.

Legal Authority: Section 201, PL 89-298; Section 1, PL 93-251; Section 101, PL 94-587.

Current Status/Scope of Program: FY '78 budget is \$8.6 million.

Information Contact: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456



20 PROJECT PLANNING, LEVEL C IMPLEMENTATION STUDIES (Corps of Engineers)

Type of Assistance: Provision of specialized services.

Nature of Program: Detailed program or project feasibility studies are undertaken by this program to recommend final authorization for a specific plan to solve water resource problems. Specifically, the detailed information obtained from the studies form the basis of the final plan of implementation. The information is then used by Congress in its determination of whether or not the project will be funded.

Water Conservation Provisions: Depending on the specific project, measures for water conservation may be included in the plan formulation process as alternatives, or as conditions of local cooperation or cost sharing. Survey studies have included:

- hydropower
- flood control
- irrigation
- navigation
- shore and beach erosion control
- hurricane protection
- municipal and industrial water supply
- fish and wildlife enhancement
- water quality control

Applicant Eligibility: Not applicable.

Legal Authority: Senate or House Public Works Committee resolution; Congressional authorization in an omnibus River and Harbor Flood Control Act; specific Congressional authorization in separate act.

Current Status/Scope of Program: FY '78 budget level is \$78 million.

Information Contacts: Regional or Local: Army Corps of Engineers - District Engineer  
Headquarters: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

REVIEW OF AUTHORIZATION, COMPLETED PROJECTS (Corps of Engineers)

Type of Assistance: Information on completed Public Works Projects.

Nature of Program: There are two main program areas of interest here: first, review and report to Congress on the operation of completed projects when found advisable due to significantly changed physical or economic conditions (Section 216). It is also possible to convert water quality reservoirs to other uses when the Environmental Protection Agency determines such storage is unnecessary (Section 65).

Water Conservation Provisions: Opportunities for more efficient resource management include:

- reallocation of water storage
- re-regulation
- contingency drought plans
- conjunctive uses
- maintenance of instream flows
- providing municipal and industrial water supplies
- requiring local cooperation for conservation and cost sharing

Applicant Eligibility: Not applicable.

Legal Authority: Section 216, PL 91-611, River and Harbor Flood Control Act of 1970. Section 65, PL 93-251, Water Resources Development Act of 1974.

Current Status/Scope of Program: FY '78 budget is \$0.9 million.

Information Contacts: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

SPECIAL STUDIES (Corps of Engineers)

Type of Assistance: Provision of specialized services.

Nature of Program: These are water resource problems that do not fit into any type of regular planning study. These studies are usually conducted by the Corps with the cooperation of other Federal agencies and the States concerned. The level of detail for these studies varies.

Water Conservation Provisions: Many of these studies are national or regional in scope and are amenable to the inclusion and explicit consideration of broad national water resource

planning objectives. Consideration of management and operation efficiencies are normally included and are key elements of available conservation options.

Applicant Eligibility: Not applicable.

Legal Authority: Separate, Congressionally authorized studies.

Current Status/Scope of Program: FY '78 budget is \$13.5 million.

Information Contact: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

#### FLOOD CONTROL, ENVIRONMENTAL AND WATER QUALITY OPERATIONAL STUDIES (Corps of Engineers)

Nature of Program: A new program aimed at developing improved design and operational procedures, emphasizing national water quality objectives, while maintaining authorized project purposes. Technology would be applied to existing Corps projects through field studies, and also be implemented in Level C studies.

Water Conservation Provisions: Work has been done on ecological modeling, environmental assessment methodology, and project design. This includes:

- more rational allocation
- maintenance of instream flows
- operation and regulation criteria
- for a variety of purposes

Legal Authority: Overall body of law authorizing Army Corps of Engineers public works projects.

Information Contact: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

#### MULTIPLE PURPOSE PROJECTS (Corps of Engineers)

Nature of Program: The various functions of multiple-purpose water resources development projects are interrelated, and operation for individual functions is coordinated with operation for all functions. Operations are conducted in such a way as to obtain the maximum total benefits. Typical concerns include:

- hydropower
- recreation
- flood control
- municipal and industrial water supply
- irrigation
- water quality control
- navigation
- ecological needs
- beach erosion control

Legal Authority: The general body authorizing multiple-purpose projects.

Information Contact: Office of the Chief of Engineers  
Department of the Army  
Washington, D.C. 20314 Telephone: (202) 693-6456

#### REGULATORY FUNCTIONS TO PROTECT/PRESERVE NAVIGABLE WATERS AND THE ENVIRONMENT (Corps of Engineers)

Nature of Program: The Corps issues permits for dredging and construction work in navigable waters (generally including wetlands and small streams) and for the disposal of dredged or fill material at aspecific sites. Permits are issued only if the proposed work is in the public interest.

All permit applications are subject to a public interest review, and requirements for pre-project research, post-project research, and monitoring to require compliance with permit conditions. Permit conditions can be included to ensure that the best water conservation measures are utilized.

Water Conservation Provisions: Permits must consider the effects of a project on many areas which affect conservation, including:

- fish and wildlife
- conservation of water and related resources
- wetlands and marshes
- recreation
- water quality
- water supply
- economics
- flood damage prevention

22 REGULATORY FUNCTIONS TO PROTECT/PRESERVE NAVIGABLE WATERS AND THE ENVIRONMENT (Corps of Engineers) (continued)

Legal Authority: River and Harbor Act of 1899 (Sections 9, 10, 11, 14); Federal Water Pollution Control Act of 1977 (Section 404); Marine Protection, Research, and Sanctuaries Act of 1972; Permits (ER 1145-2-303); 33 CFR 209, 320, 329.

Current Status/Scope of Program: FY '78 budget is \$25 million.

Information Contacts: To receive notices or information concerning permit applications in your region, contact: The District Engineer's Office in your area.

Headquarters: Office of the Chief of Engineers

Department of the Army

Washington, D.C. 20314

Telephone: (202) 693-6456

SCHEDULING FLOOD CONTROL RESERVOIR OPERATIONS (Corps of Engineers)

Nature of Program: Reservoir regulation governs the storage and release functions of a reservoir acting separately or in combination with other projects in a system. Operation thus affects the flexibility and resiliency of the water control system which can contribute to water conservation, and affect the broader river basin system.

Legal Authority: PL 74-738; Sect. 7, PL 87-534; Regulations ER 1110-2-241.

Information Contact: Office of the Chief of Engineers

Department of the Army

Washington, D.C. 20314

Telephone: (202) 693-6456

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ECONOMIC DEVELOPMENT ADMINISTRATION**BUSINESS DEVELOPMENT ASSISTANCE PROGRAM (Economic Development Administration)**Type of Assistance: Direct loans; guaranteed/issued loansNature of Program: This program offers financial assistance to private industry to expand or locate new facilities in areas burdened with high unemployment or low family income. The program has the potential to have an impact in industries which are high water users, where the assistance leads to their expanding in a way that maximizes water conservation.Applicant Eligibility: Eligible businesses.Legal Authority: Public Works and Economic Development Act of 1965, as amended (PL 89-136); 42 U.S.C. 3142, 3171.Current Status/Scope of Program: For direct loans, FY '78 budget level was expected to be \$37.5 million; FY '79 budget level is expected to be \$48.5 million. For guarantees, FY '78 budget level was expected to be \$6.5 million; FY '79 budget level expected to be \$7 million. Range of assistance: \$269,000 to \$5,200,000. Average funding: \$1.5 million.Information Contacts: Regional or Local: Regional offices are located in Denver, Atlanta, Chicago, Philadelphia, Austin, and Seattle. Listed under Department of Commerce, Economic Development Administration.  
Headquarters: Economic Development Administration  
Department of Commerce  
14th and Constitution Avenue, N.W.  
Washington, D.C. 20005 Telephone: (202) 377-3081**ECONOMIC DEVELOPMENT AND ADJUSTMENT ASSISTANCE PROGRAM (Economic Development Administration)**Type of Assistance: Project grants.Nature of Program: The program's objective is to help states and localities meet special needs coming from actual or threatened unemployment as a result of severe changes in economic conditions, such as dislocation. The grants are to set up special programs for economic development or adjustment. Examples might be grants to plan or carry out programs to attract new businesses, construct public facilities, set up public services, etc. so public projects helping to conserve water which also provide jobs could be planned or carried out with this kind of assistance. Also, water conservation could be kept in mind in efforts to attract or expand businesses--e.g. look for industries that will minimize water use.Applicant Eligibility: States, cities or other political subdivisions of a state, consortiums of such subdivisions, Indian Tribes, redevelopment areas designated under Section 401 of the Public Works and Economic Development Act of 1965, economic development districts under Title IV of the Act, or private or public non-profit organizations representing such areas.Legal Authority: Public Works and Economic Development Act of 1965 (PL 89-136); 42 U.S.C. 3241, 3243, 3245.Current Status/Scope of Program: FY '78 budget level \$110 million; FY '79 budget level expected to be \$180.5 million. No specified minimum or maximum size of grants. Estimated size of grants for developing plans: \$25,000 to \$150,000. Estimated size of grants for carrying out plans: \$200,000 to \$5 million.Information Contacts: Regional or Local: Regional Economic Development Administration offices are in Denver, Atlanta, Chicago, Philadelphia, Austin, and Seattle. Listed under Department of Commerce, Economic Development Administration.  
Headquarters: Economic Development Administration  
Department of Commerce  
14th and Constitution Avenue, N.W.  
Washington, D.C. 20005 Telephone: (202) 377-3081

Type of Assistance: Information to the public.

Nature of Program: This program has the objective of studying the depletion of the natural resources of the high plains area, which is presently utilizing the declining water resources of the Ogallala aquifer; and to develop plans to increase water supplies in the area.

Water Conservation Provisions: The entire program is based upon the study of the water supply and use in the high plains area. Results will be reported to Congress in July 1980.

Applicant Eligibility: Report anticipated available to public after July 1980.

Legal Authority: Water Resources Development Act (PL 94-587) Section 193.

Current Status/Scope of Program: \$6 million appropriation authorized for this program.

Information Contact: Economic Development Administration  
Research Contracts Division, OAS&P  
Department of Commerce  
14th and Constitution Avenue, N.W.  
Washington, D.C. 20230

Telephone: (202) 377-3596

## PUBLIC WORKS IMPACT PROGRAM (Economic Development Administration)

Type of Assistance: Project grants

Nature of Program: Aim is to provide immediate useful work to unemployed and underemployed persons in designated project areas. The grants are for the construction of public facilities which provide jobs. Facilities which have water conservation impact could be constructed.

Applicant Eligibility: States and local subdivisions; Indian Tribes; private or public non-profit organizations representing a redevelopment area or economic development center.

Legal Authority: Public Works and Economic Development Act of 1965 (PL 89-136); 42 U.S.C. 3131, 3135.

Current Status/Scope of Program: FY '78 budget level \$27.5 million. Priority has been to projects of \$600,000 or less. Average grants: \$220,000.

Information Contacts: Regional or Local: Economic Development Administration has regional offices in Denver, Atlanta, Chicago, Philadelphia, Austin, and Seattle. Listed under Department of Commerce, Economic Development Administration.

Headquarters: Economic Development Administration  
Department of Commerce  
14th and Constitution Avenue, N.W.  
Washington, D.C. 20230 Telephone: (202) 377-5265

## TRADE ADJUSTMENT ASSISTANCE PROGRAM (Economic Development Administration)

Type of Assistance: Direct loans; guaranteed/insured loans; dissemination of technical information.

Nature of Program: This program's objectives are to help firms and communities that are adversely affected by increased impacts to adjust to the new conditions of competition and to help communities adjust to economic damage caused by a local employer's moving to a foreign country.

Water Conservation Provisions: When the assistance is to firms that are high water users, and this assistance results in new construction or installation of new equipment, water conservation practices can be implemented. Administrative changes are proposed to make such practices a condition of receiving a loan. In the case of assistance to communities, when it takes the form of assistance aimed at helping the community attract new businesses, the businesses attracted can be ones which are not high water users.

Applicant Eligibility: Businesses and communities adversely affected by imports; communities adversely affected by a local business transfer to a foreign country.

TRADE ADJUSTMENT ASSISTANCE PROGRAM (Economic Development Administration) (continued)Legal Authority: Title II of the Trade Act of 1974 (PL 93-618); 19 U.S.C. 2101-2487 (1975).Current Status/Scope of Program: FY '78 budget level for loans and technical assistance was expected to be \$94.7 million. FY '79 budget level expected to be \$94.7 million. Range of financial assistance for firms: up to \$1 million in direct loans and \$3 million in loan guarantees under Chapter 3. For communities, there is no dollar limitation under Chapter 4.Information Contact: Economic Development Administration  
Department of Commerce  
14th and Constitution Avenue, N.W.  
Washington, D.C. 20005

Telephone: (202) 377-5067 or 5005

BUREAU OF STANDARDSENVIRONMENTAL MEASUREMENTS PROGRAM (National Bureau of Standards)Type of Assistance: Technical assistance.Nature of Program: This program consists of work to develop standard measurement methods and standard reference materials in order to utilize National Bureau of Standards personnel and facilities.Water Conservation Provisions: Specific aspects of this National Bureau of Standards work which were related to water quality and/or quantity involved the development of methods and standard reference materials for the measurement of toxic trace metals in water and toxic carcinogenic organics in water and measurements of water flow.Applicant Eligibility: General public.Legal Authority: There is no direct program authorization for National Bureau of Standards. This research has been sponsored by the Environmental Protection Agency.Information Contact: Environmental Measurements Program  
National Bureau of Standards  
Gaithersburg, Maryland

Telephone: (301) 921-1000

MEASUREMENT METHODS (National Bureau of Standards)Type of Assistance: Technical information.Nature of Program: This program is attempting to develop a series of new, improved measurement methods for use by the water resource conservation and management community. The measurement methods are based upon the interaction of electromagnetic energy with materials to deduce or measure moisture content and its distribution in the materials in an in-situ nondestructive manner. These measurement methods have been successfully tested with snow, a primary water resource, and agricultural type soils.Applicant Eligibility: General public.Legal Authority: Legal authority and current status information on the source of sponsorship of this research and its current status had not been received at the time of publication of this draft.Current Status/Scope of Program: cf. above.Information Contact: Measurement Methods  
National Bureau of Standards  
Gaithersburg, Maryland

Telephone: (301) 921-1000

PLUMBING SYSTEMS PROGRAM (National Bureau of Standards)Type of Assistance: Technical information.Nature of Program: This program consists of three main Projects:

- 1) Preparation of "Performance Criteria Resource Document for Innovating Plumbing" in response

to needs of the standardization activity under the American National Standards Institute A40.8 Minimum Requirements for Plumbing development and other model codes.

- 2) Plumbing Systems Design Criteria which is related to requirements of the entire plumbing system including the impact of reduced water flows in the waste transport system.
- 3) Technology of Water Conservation in order to evaluate and recommend new reduced flow rate standards and the effects on user requirements.

Applicant Eligibility: General public.

Legal Authority: Legal authority information on the source of sponsorship of this research and its current status had not been received prior to publication of this draft.

Current Status/Scope of Program: cf. above.

Information Contact: Plumbing Systems Program  
National Bureau of Standards  
Gaithersburg, Maryland

Telephone: (301) 921-1000

#### SEWERLESS DEVICES EVALUATION BASIS (National Bureau of Standards)

Type of Assistance: Technical information.

Nature of Program: This research program is to establish Standard Testing Methods and criteria for rating the performance of various types of sewerless toilets and waste disposal systems, including rating their performance in conserving water. The research is also expected to establish the expected range of performance of selected technologies.

Applicant Eligibility: General public.

Legal Authority: Research sponsored by Department of Housing and Urban Development.

Information Contact: Sewerless Devices Evaluation Basis  
National Bureau of Standards  
Gaithersburg, Maryland

Telephone: (301) 921-1000

#### WATER CONSERVING DEVICES (National Bureau of Standards)

Type of Assistance: Technical information.

Nature of Program: This program will establish standard reproducible test procedures of water conserving devices. This information could be useful in establishing performance standards, installation and inspection procedures.

Applicant Eligibility: General public.

Legal Authority: Legal authority and current status information not received by the time of publication of this draft.

Current Status/Scope of Program: cf. above

Information Contact: Water Conserving Devices  
National Bureau of Standards  
Gaithersburg, Maryland

Telephone (301) 921-1000

#### NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION

##### COASTAL ENERGY IMPACT PROGRAM (National Oceanographic and Atmospheric Administration)

Type of Assistance: Project grants, formula grants, direct loans.

Nature of Program: This program is designed to help coastal states plan for and cope with the consequences of outer continental shelf energy development. Four categories of assistance are available:

- 1) Formula grants (for a type of activity not any specific project) for a broad range of purposes and activities.



COASTAL ENERGY IMPACT PROGRAM (National Oceanographic and Atmospheric Administration) (continued)

- 2) Planning grants (project grants) to assist states and units of local government in studying and planning for the social, economic, and environmental consequences on the coastal zone of energy facilities and resource development.
- 3) Direct loans and guarantees for a broad range of public facilities necessary to support increased populations due to coastal energy activity, including:
  - water supply and distribution systems
  - water collection and treatment (including drainage) systems
- 4) Environmental grants (project grants) to states and units of local governments to prevent or reduce unavoidable losses of valuable recreational resources resulting from coastal energy activities. Grants can be used to make up the cost difference between one planned public facility and a more expensive but environmentally preferable facility.

Applicant Eligibility: Coastal states operating or planning a coastal zone management program under the following legal authority.

Legal Authority: Coastal Zone Management Act amendments of 1976 (PL 94-370), Section 308.

Current Status/Scope of Program: Estimated FY '78 budget levels (Grant Obligations):

- 1) \$27,750,000
- 2) \$3,500,000
- 3) \$200,000,000
- 4) \$3,000,000

Information Contact: Director, Federal Programs Office  
 Office of Coastal Zone Management  
 National Oceanographic and Atmospheric Administration  
 Department of Commerce  
 3300 Whitehaven Street, N.W.  
 Page Building, #1, Room 372  
 Washington, D.C. 20235

Telephone: (202) 634-4249

COASTAL ZONE MANAGEMENT PROGRAM (National Oceanographic and Atmospheric Administration)

Type of Assistance: Project grants

Nature of Program: Two main program areas are included here:

- 1) Grants to assist any coastal state in developing and administering a coastal zone management program for the land and water resources of its coastal zone.
- 2) Grants to assist states in the acquisition, development, and operation of estuarine (wetland) sanctuaries for the purpose of creating natural field laboratories to gather data and make studies of natural processes and the effects of human activities within coastal estuaries. Studies may be carried out by state personnel, or by qualified scientists and students.

Applicant Eligibility: Coastal States bordering the Atlantic, Pacific, or Arctic Oceans; the Gulf of Mexico, Long Island Sound, the Great Lakes, and including Puerto Rico, Guam, the Virgin Islands, and American Samoa.

Legal Authority: Coastal Zone Management Act of 1972, Sect. 305, 306, and 312 (PL 92-583); Coastal Zone Management Act of 1976, Sect. 305, 306, and 315 (PL 94-370).

Current Status/Scope of Program: 1) Development Grants: Estimated FY '78 budget is \$14,527,000. Range of grants: \$90,000 to \$900,000. Average grant: \$265,000. Administrative grants: Estimated FY '78 budget is \$18,212,000. 2) Estuarine sanctuary grants: Estimated FY '79 budget \$3,000,000.

Information Contact: Director, Office of Coastal Zone Management  
 National Oceanographic and Atmospheric Administration  
 Page Building No. 1, Room 324  
 3300 Whitehaven Street, N.W.  
 Washington, D.C. 20235

Telephone: (202) 634-4239

NATIONAL WEATHER SERVICE (National Oceanographic and Atmospheric Administration)

Type of Assistance: General resource data, technical assistance.

NATIONAL WEATHER SERVICE (National Oceanographic and Atmospheric Administration) (continued) 29

Nature of Program: The National Weather Service maintains a continuous watch over river levels and furnishes regular forecasts of river flow and level and seasonal water supply and also participates with other federal agencies in hydrometeorological investigations for overall planning and development of water resources. These flow forecasts are important for the effective management of water resource projects and operations that involve fisheries, water supply, pollution control, and other related activities.

Applicant Eligibility: Information is available to the public. Technical and planning assistance is available to other federal agencies depending on the specific project.

Legal Authority: Act of November 1, 1890; 15 U.S.C. 311, 313; 49 U.S.C. 1351, 1463; Reorganization Plan No. 4, 1970.

Current Status/Scope of Program: FY '78 base level for forecast and field operations is 150 positions and \$8 million. Expected services are proposed for 1980 to provide a full range of technical assistance to states and to collect and process instream flow data on all major streams in the United States.

Information Contact: National Weather Service  
National Oceanographic and Atmospheric Administration  
8060 - 13th Street  
Silver Spring, Maryland 20910 Telephone: (301) 427-7689

OFFICE OF REGIONAL ECONOMIC COORDINATION

MULTI-STATE REGIONAL COMMISSION ECONOMIC DEVELOPMENT PROGRAMS: SUMMARY (Office of Regional Economic Coordination)

Type of Assistance: Project grants, supplemental grants, technical assistance, demonstration grants (depending on the specific commission).

Nature of Program: The Regional Economic Development Commissions coordinate state and federal resources to assemble plans and programs to solve economic and social problems that manifest themselves on a regional basis. The Commissions themselves are formed of a federal representative, and the Governors of the member states. Each Governor is assisted by an alternate to the Commission, who handles the bulk of actual work. A regional liaison person located in each state, employed by the Commission, is normally the first contact in applying for assistance. Eight Commissions are now operating, and five more are proposed. (See also listing for Appalachian Regional Commission, which is an independent agency funded by Congress.)

A description of the individual commissions and their program areas follows this summary.

Applicant Eligibility: General public.

Legal Authority: Public Works and Economic Development Act of 1965 (PL 89-136), Title V.

Current Status/Scope of Program: FY '80 budget request is \$86 million.

COASTAL PLAINS REGIONAL COMMISSION (Office of Regional Economic Coordination)

Type of Assistance: Supplemental grants (providing up to 80% of local share). Technical assistance (planning and feasibility studies), demonstration grants (for projects not eligible under other federal programs, 100% funding).

Nature of Program: The Coastal Plains Regional Commission operates in a 290 county area in the eastern regions of Virginia, North Carolina, South Carolina, Georgia, and Northern Florida. The Commission provides grant monies for private firms or government agencies to do the actual work on a project. The five program areas are:

- |                              |                         |
|------------------------------|-------------------------|
| •Agriculture and Forestry    | •Industrial Development |
| •Marine Resources            | •Environmental Affairs  |
| •Travel Industry Development |                         |
| Tourism                      |                         |

Water Conservation Provisions: Examples of projects which have been funded that affect water

## COASTAL PLAINS REGIONAL COMMISSION (Office of Regional Economic Coordination) (continued)

## conservation include:

- ground water research programs resulting in new supplies
- studies of non-point source pollution, and related soil and water conservation effects
- a Georgia Tech University study of sand filtration for wastewater treatment
- water resource forums
- training for groundwater hydrologists

Current Status/Scope of Program: FY '79 budget will have approximately \$8,850,000 for grants. Typical grants have ranged from \$1,000 to several hundred thousand dollars.

Information Contact: Regional Headquarters:

Coastal Plains Regional Commission  
215 East Bay Street  
Charleston, South Carolina 29401 Telephone: (803) 724-4250

State Contacts: Virginia: Lynn Currie (804) 786-4474  
North Carolina: William Pittman (919) 733-4131  
South Carolina: Archie Todd (803) 765-5461  
Georgia: John Overstreet (404) 656-3866  
Florida: Gregg Higgins (904) 487-1156

Headquarters: Coastal Plains Regional Commission  
1725 K Street, N.W., Room 413  
Washington, D.C. 20012 Telephone: (202) 634-3910

## FOUR CORNERS REGIONAL COMMISSION (Office of Regional Economic Coordination)

Type of Assistance: Grants for technical assistance and supplemental funding.

Nature of Program: The Four Corners Regional Commission operates in Nevada, Utah, Arizona, Colorado, and New Mexico. Main program areas are:

- human resources
- industrial development
- natural resources
- transportation
- regional economic analysis and planning

Due to drought, water and water conservation projects received top priority in 1977.

Water Conservation Provisions: Projects which have been funded which affect water conservation include:

- bioconversion of agricultural wastes into methane gas, with fertilizer, a protein rich algae food supplement, and clean water as byproducts
- research for location and analysis of geothermal energy, which can also locate new water supplies
- a solar powered irrigation pumping project incorporating water conservation measures
- in Colorado, \$806,000 for supplemental grants for rural domestic water systems
- a project which mapped the Carson River system to prepare models to predict river flow and sediment transportation with the U.S. Geological Survey.
- preliminary engineering studies on water projects
- a demonstration project of a water pretreatment plant which takes water from an underground coal field and uses microalgae to remove contaminants and make the water fit for consumption
- cloud seeding
- leak detection and repair in distribution systems
- grants to build sewer and water systems

Current Status/Scope of Program: FY '77 budget approximately \$14,311,000. Technical assistance grants more than \$4.5 million. Supplemental grants more than \$5 million.

Information Contacts: Regional Headquarters:

Four Corners Regional Commission  
2350 Alamo, S.E., Suite 303  
Albuquerque, New Mexico 87106 Telephone: (505) 766-2990

State Contacts: Nevada: Gilbert Floref (702) 885-4322  
Utah: Phil Keene (801) 533-5872  
Arizona: Ronnie Lopez (602) 271-4331  
Colorado: Ivo Roosbold (303) 839-2631  
New Mexico: Leo Murphy (505) 827-2014

**Headquarters:**

Four Corners Regional Commission  
Department of Commerce  
14th and Constitution Avenue, N.W.  
Room 1819  
Washington, D.C. 20005

Telephone: (202) 377-5534

## NEW ENGLAND REGIONAL COMMISSION (Office of Regional Economic Coordination)

Type of Assistance: Direct project grants only.

Nature of Program: The New England Regional Commission operates in all of the seven New England states: Maine, Vermont, New Hampshire, Rhode Island, Connecticut, Massachusetts. Main program areas are:

- .transportation
- .economic development
- .energy

While the focus of these programs has not been on water resources, the energy program has investigations in the area of conservation generally, and has looked at small hydroelectric projects. The transportation program conducted an investigation of the Argo Merchant oil spill which included water quality and water resource aspects.

Current Status/Scope of Program: FY '78 budget approximately \$9 million. Grants are usually less than \$100,000.

Information Contacts: Regional Headquarters:

New England Regional Commission  
53 State Street  
Boston, Massachusetts 02109

Telephone: (617) 223-6330

State Contacts: Maine: Andrew Brown (207) 289-3138

Vermont: Tim Hayward (802) 828-3333

New Hampshire: Sidney Frank (617) 223-6380

Rhode Island: Arthur Markos (401) 277-2071

Connecticut: John Blair (203) 566-4840

Massachusetts: Judith Kurland (617) 727-7200

Headquarters: New England Regional Commission

Department of Commerce

14th and Constitution, N.W.

Washington, D.C. 20005 Telephone: (202) 377-4343

## OLD WEST REGIONAL COMMISSION (Office of Regional Economic Coordination)

(Information about the water conservation potential of the Old West Regional Commission had not been received prior to the time of publication of this draft.)

Information Contact: Headquarters:

Old West Regional Commission  
1730 K Street, N.W., Room 426

Washington, D.C. 20006 Telephone: (202) 634-3907

## OZARK REGIONAL COMMISSION (Office of Regional Economic Coordination)

Type of Assistance: Grants available for:

- .supplemental funding
- .technical assistance and planning
- .demonstration projects

Nature of Program: The Ozark Regional Commission operates in areas of Arkansas, Kansas, Louisiana, Mississippi, and Oklahoma. Major program areas are:

- .employment development
- .human resources

32 OZARK REGIONAL COMMISSION (Office of Regional Economic Coordination) (continued)

- community development
- recreation and tourism
- natural resources, environmental enhance-  
ment and energy
- agricultural development
- transportation
- research and planning
- institutional development and government  
services
- regional analysis and planning

Water Conservation Provisions: Grants and assistance affecting water conservation have come mainly from the Community Development and Natural Resources Programs. These include:

- water and sewer system development, both new construction and improvements
- general resource conservation studies
- a study on the possible effects of lignite mining on groundwater supplies

Current Status/Scope of Program: Approximate FY '78 budget: \$11 million; over 75% of this went to public facility grants of which most were for water and sewer systems.

Information Contacts: Regional Headquarters: Ozark Regional Commission  
1100 North University  
Suite 109  
Little Rock, Arkansas 72207  
Telephone: (501) 378-5905

State Contacts: Arkansas: Joan Vehik (501) 371-2171  
Kansas: Roland Loveless (913) 296-2477  
Louisiana: Lovell Thomas (504) 925-6504  
Mississippi: Joseph Bednari, Sr. (314) 751-4636  
Oklahoma: Bob Jones (405) 382-2102

Headquarters: Ozark Regional Commission  
Department of Commerce  
Room 2099 B  
14th and Constitution, N.W.  
Washington, D.C. 21005 Telephone: (202) 377-2572

PACIFIC NORTHWEST REGIONAL COMMISSION (Office of Regional Economic Coordination)

Type of Assistance: Technical assistance grants to state agencies.

Nature of Program: The Pacific Northwest Regional Commission operates in the states of Washington, Oregon, and Idaho. Main program areas are:

- agriculture and forestry
- natural resources
- energy
- emergency drought assistance

Most funding goes to agriculture and forestry, and energy. Two programs of special interest in the area of water conservation are:

- publications detailing water-related land-use
- a program which coordinates a system of water rights and access
- help in developing water supplies and conservation measures under the drought assistance program, with some grants as small as \$700.

Current Status/Scope of Program: Approximate FY '78 budget is \$7 million.

Information Contacts: Regional Headquarters: Pacific Northwest Regional Commission  
700 E. Evergreen  
Vancouver, Washington 98661  
Telephone: (206) 696-2581

State Contacts: Washington: Lanna Overbee (206) 753-6780  
Oregon: Mark Madden (503) 378-5457  
Idaho: Shirl Boise (208) 384-2100

Headquarters: Pacific Northwest Regional Commission  
444 North Capitol Street, N.W.  
Suite 122  
Washington, D.C. 20001 Telephone: (202) 633-7458

Type of Assistance: Not yet available.

Nature of Program: This Commission is just getting underway. It operates in the border regions of California, Arizona, New Mexico, and Texas. Major program areas are still being planned.

Two projects underway are:

- development of rubber from a native latex plant
- solar energy investigations

Current Status/Scope of Program: Budget levels are expected in the \$7-8 million per year range.

Information Contact: Regional Headquarters:  
Southwest Regional Commission  
100 North Stone Avenue, Room 309  
Tucson, Arizona 85726

Telephone: (602) 792-6781

Headquarters: Southwest Regional Commission  
1111 20th Street, N.W. Room 306  
Washington, D.C. 20036 Telephone: (202) 634-3917

#### UPPER GREAT LAKES REGIONAL COMMISSION (Office of Regional Economic Coordination)

Type of Assistance: Supplemental and technical assistance grants

Nature of Program: The Upper Great Lakes Regional Commission operates in the northern portions of Michigan, Minnesota, and Wisconsin. Major pro-gram areas are:

- .recreation and tourism
- .transportation
- .energy
- .industrial development
- .natural resources
- .human resources
- .local and state assistance (work with sub-state regional planning agencies)

Projects relating to water conservation include:

- water supply and sewer system projects
- water storage projects
- a study on harbor development, also looking at general water resources development
- a new waste treatment system which uses a peat bog as a filter medium
- a new waste treatment system using a common mound of individual septic tanks

Current Status/Scope of Program: Approximate FY '78 budget: \$2.3 million for supplemental grants; \$4.5 million for technical assistance grants.

Information Contacts: Regional Headquarters:  
Upper Great Lakes Regional Commission  
200 Medical Arts Building  
Duluth, Minnesota 55802

Telephone: (218) 727-6692

State Contacts: Michigan: Alex Laggis (517) 373-3533  
Minnesota: Frank Adams (612) 296-0621  
Wisconsin: Ernest Korpela (715) 682-2795

Headquarters: Upper Great Lakes Regional Commission  
Department of Commerce  
14th and Constitution, N.W., Room 2093  
Washington, D.C. 20005 Telephone: (202) 377-2845

#### SMALL BUSINESS ADMINISTRATION

##### LOCAL DEVELOPMENT COMPANY LOANS/REGULAR BUSINESS LOANS (Small Business Administration)

Type of Assistance: Direct and guaranteed/insured loans

Nature of Program: The general provision of the program is to provide financial assistance to qualified applicants, including rural communities and farmers that need financial assistance for water projects.

34 LOCAL DEVELOPMENT COMPANY LOANS/REGULAR BUSINESS LOANS (Small Business Administration) (continued)

These include:

- |                              |                              |
|------------------------------|------------------------------|
| ·irrigation equipment        | ·development of grazing land |
| ·constructing dams and ponds | ·sedimentation control       |
| ·ditching and tiling         | ·water pollution             |
| ·purchasing land             | ·water quality management    |
| ·drilling wells              |                              |

Applicant Eligibility: Regular business loans: small business which is independently owned and operated. Local development company loans: local development companies which operate for the purpose of promoting economic growth in a particular community.

Current Status/Scope of Program: Loan obligations for 1978: Regular business loan: \$101 million (individual loans range from \$1,800 to \$500,000; with the average loan between \$50,000 and \$100,000). Local development loans: \$500,000 (individual loans range from about \$4,000 to \$1 million; with the average loan about \$150,000).

Information Contacts: Regional or Local: Initial contact with the local district office of the Small Business Administration (check directory)

Headquarters: Director  
Office of Financing  
Small Business Administration  
1441 L Street, N.W.  
Washington, D.C. 20416 Telephone: (202) 653-6570

## DEPARTMENT OF ENERGY

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	<u>Energy Technology</u>
36	Research and Development
	<u>Federal Energy Regulatory Commission</u>
36	Hydroelectric Project Licensing

CONSERVATION AND SOLAR APPLICATIONSENERGY CONSERVATION (Conservation and Solar Applications)

Type of Assistance: Information and advice to the public.

Nature of Program: A major purpose of the establishment of the Department of Energy is to promote maximum possible energy conservation. The Department of Energy has several existing programs specifically oriented towards reduced energy demands in the following areas:

- Industrial
- Transporation
- Utilities
- Federal Energy Management Program
- Residential/Commercial
- State and Local Grants
- Multi-Sector

Water Conservation Provisions: The steam-electric power industry is second only to the agricultural sector in the volume of water withdrawals for off-stream uses nationwide. Thus, any successes in the conservation of energy can result in water conservation.

Applicant Eligibility: General public.

Legal Authority: PL 95-91 "Department of Energy Organization Act" and others.

Current Status/Scope of Program: Information had not been received prior to publication of this draft.

Information Contact: Assistant Secretary, Conservation and  
Solar Application  
Department of Energy  
825 North Capitol Street  
Washington, D.C. 20420      Telephone: (202) 376-4934



FEDERAL ENERGY REGULATORY COMMISSION**RESEARCH AND DEVELOPMENT (Energy Technology)**

Type of Assistance: Dissemination of technical information.

Nature of Program: Research and development projects are carried out by staff scientists or contracted out to private firms. Several areas will have a direct long range influence on fresh water conservation. Two existing research programs will have an effect on water use by steam electric users. (The steam-electric power industry is second only to the agricultural sector in the volume of water withdrawals for off-stream uses nationwide.)

Programs of special interest include:

- increased conversion efficiency research which will result in a decrease in waste heat and a corresponding decrease in cooling water use.
- development of dry and wet/dry cooling towers (design, build, and test) which will decrease the withdrawal and consumption of water for cooling uses also.
- the WATA data system: if supplied with basic data about water resources and related information in a particular region this system can produce a hypothetical scenario/model of the effects and efficiency of a specific proposed water resource development project in that region, including environmental and economic components. This data processing is available to the public at cost.

Applicant Eligibility: Current research data is available to the general public for free, if in the form of existing reports; at cost, if retrieval and/or reorganization is needed.

Legal Authority: PL 95-91, Department of Energy Organization Act, and others.

Current Status/Scope of Program: FY '78 budget is approximately \$300,000 for water related research and development. Previous budgets have been much larger, but since all major decreasing experimental work has been completed, funding is currently decreasing.

Information Contact: Assistant Secretary, Energy Technology  
Department of Energy  
285 North Capitol Street  
Washington, D.C. 20420 Telephone: (202) 376-4010

FEDERAL ENERGY REGULATORY COMMISSION**HYDROELECTRIC PROJECT LICENSING (Federal Energy Regulatory Commission)**

Type of Assistance: A regulatory program.

Nature of Program: The Federal Energy Regulatory Commission is authorized to issue licenses for the construction, operation, and maintenance of hydroelectric power projects on navigable waters. Planning advice is available to applicants.

Water Conservation Provisions: Projects to be licenses or relicenses must, in the judgement of the Commission, be best adapted to a comprehensive plan for improving waterways for water power development, and for other beneficial public uses, including recreation. (All license applications are subject of a public review including hearings if necessary. They are examined for compatibility with the general river basin resource development plan. An Environmental Impact Statement is required to obtain a license in all cases.

Applicant Eligibility: Utility authorities or other bodies with legal authority in this area.

Legal Authority: Federal Power Act, Section 4.

Current Status/Scope of Program: FY'78 budget is \$5.5 million.

Information Contacts: Regional or Local: One of the 5 Regional offices of the Federal Energy Regulatory Commission: N.Y., Atlanta, Chicago, Fort Worth, or San Francisco.

Headquarters: Division of Licensed Projects  
Federal Energy Regulatory Commission  
Department of Energy  
825 North Capitol Street  
Washington, D.C. 20420 Telephone: (202) 275-4868

## DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

OFFICE OF ENVIRONMENTAL EDUCATION

## ENVIRONMENTAL EDUCATION PROGRAM (Office of Environmental Education)

Types of Assistance: Project grantsNature of Program: The Office of Environmental Education administers the Environmental Education Act Program through which grant support is provided for education projects to improve public understanding of environmental issues and options for resolving them.

The environmental education projects addresss the social and economic as well as the physical environment aspects of an environmental topic. Water quality and supply are among the topics which may be addressed. The program is carried out through grants to public and private non-profit organizations, agencies, and institutions. Grants may be used to fund formal education programs in schools, set up community education projects, develop workshops, or train personnel.

Applicant Eligibility: Public and private non-profit organizations, agencies, and institutions.Legal Authority: Environmental Education Act of 1970, PL 91-516, as amended by PL 93-278.Current Status/Scope of Program: FY '78 budget of \$3.5 million; same requested for appropriation in 1979.

Information Contact: Office of Environmental Education  
U.S. Office of Education  
400 Maryland Ave., S.W., Room 2025  
Washington, D.C. 20202

Telephone: (202) 245-9231

# DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

## DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

Nature of Program: The Department of Housing and Urban Development (HUD) either controls or has a substantial interest in many community planning and development programs and many housing programs. While HUD has no program specifically aimed at water conservation, administrative changes are proposed starting FY '79 to maximize the water conservation potential of existing programs.

Existing programs include the following:

### Office of Community Planning and Development

- Community Development Block Grants
- Comprehensive Planning Assistance
- Section 312 Rehabilitation Loans Program
- Urban Development Action Grants

### Office of Housing

- 39 potential programs

### New Communities Administration

- New communities

### Federal Disaster Assistance Administration

- Disaster Assistance
- Disaster Preparedness

Changes may take the form of added requirements necessary to obtain grants or loans, or may simply include advice and persuasion during planning or assistance phases. Proposed activities include:

- encouraging water saving fixtures in all HUD projects
- a leak prevention program in existing housing projects
- promotion and protection of potential or existing ground water recharge areas where desirable
- ensuring the installation of water meters in communities which already use meters or have regulations requiring them
- encouraging through education clear and more equitable water billing practices which reveal the true price of the resource (e.g. not hiding part of system cost in ad valorem taxes, etc.
- encouraging water conservation in areas of geological subsidence (e.g. Galveston, Texas) where removal of ground water has structural and other undesirable side effects.
- focusing more attention on problems of leakage from municipal water supply and distribution systems. (According to the American Water Works Association these can represent 20-50% of total water use in such systems.) Special attention would be given to earthquake prone areas where many leaks exist which, besides wasting water, may dangerously lubricate fault zones.

Applicant Eligibility: This will vary depending on the program to which changes have been made.

Legal Authority: Administrative changes under existing authorizations in response to Presidential directives on water conservation.

Current Status/Scope of Program: The changes listed above are proposed, and are not yet approved for implementation.

### Information Contact:

Architectural and Engineering Branch  
 Office of Housing  
 Department of Housing and Urban Development  
 451 - 7th Street, S.W.  
 Washington, D.C. 20410      Telephone: (202) 755-6234

## DEPARTMENT OF THE INTERIOR

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55	Saline Water Research and Development
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## BUREAU OF INDIAN AFFAIRS

## AGRICULTURE (Bureau of Indian Affairs)

Type of Assistance: Technical assistance, construction, other.

Nature of Program: This program assists Indian farmers in developing and enhancing irrigated acreage, planning agronomic water needs and providing assistance in securing grants and low interest loans to establish farming operations.

Water Conservation Provisions: These fall into three categories:

- (1) Technical assistance while bringing new land into use, includes:
  - determining optimum length of irrigation runs
  - efficient drainage systems
  - land leveling
  - economic feasibility analyses of sprinkler and drip irrigation systems
  - projected optimum cropping patterns
- (2) Training on farm management practices and construction activities, including:
  - efficient methods of water scheduling
  - when and how much to fertilize
  - methods to reduce the sediment, nutrient, and pesticide loads of return flows
  - methods of recycling return flows
- (3) Construction activities, including:
  - land leveling and field reorientation
  - installation of sprinkler systems
  - on-farm ditch lining
  - installation of pipelines
  - installation of return flow recycling systems

Applicant Eligibility: Indians

Legal Authority: Act of April 27, 1935 (49 Stat. 163, 16 U. S. C. 590 a,b,c,d) as amended

Current Status/Scope of Program: Proposed funding levels to more fully implement water conservation measures in this program range from \$250,000 to \$1 million per year.

Information Contacts: Local or Regional: Nearest Bureau regional or local office  
 Headquarters: Division of Trust Facilitation  
 Bureau of Indian Affairs  
 Code 216  
 1951 Constitution Ave., N. W.  
 Washington, D. C. 20245  
 (202) 343-2287

## ENVIRONMENTAL QUALITY (Bureau of Indian Affairs)

Information on the water conservation potential of this program had not been received at the time this draft was published.

## FACILITIES (Bureau of Indian Affairs)

Information on the water conservation potential of this program had not been received at the time this draft was published.

## FORESTRY (Bureau of Indian Affairs)

Type of Assistance: Information and advice

Nature of Program: This program provides a variety of services necessary for the preservation of forest resources and their efficient utilization. Provisions for maintenance of forest cover through the reduction of burned areas and reforestation to reduce erosion and sedimentation

## FORESTRY (Bureau of Indian Affairs) (continued)

and protect water quality are included.

Applicant Eligibility: Indians

Current Status/Scope of Program: FY 78 budget \$19,950,000

Information Contacts: Regional or Local: Nearest Bureau regional or local office  
 Headquarters: Bureau of Indian Affairs  
 1951 Constitution Ave.  
 18th and C Streets, N. W.  
 Washington, D. C. 20245  
 (202) 343-5875

## IRRIGATION CONSTRUCTION (Bureau of Indian Affairs)

Type of Assistance: Project grants and technical assistance

Nature of Program: Technical assistance and funding are provided for the rehabilitation, betterment and extension of existing systems and the construction of new systems to improve the capacity of food and fiber production on Indian lands in the arid and semi-arid West.

Water Conservation Provisions: Construction projects provided include:

- canal construction and lining
- installation of pipelines, pumps, and water measurement devices
- automation of water controls
- construction of water diversion, storage and reregulation structures

These measures can reduce seepage, recycle return flows, and facilitate more efficient distribution of irrigation water.

Applicant Eligibility: Indians

Legal Authority: Snyder Act of 1921 (42 Stat. 208, 25 U. S. C. 13) and others

Current Status/ Scope of Program: FY 78 budget \$43,830,000.

Information Contacts: Local or Regional: Nearest Bureau regional or local office  
 Headquarters: Division of Trust Facilitation  
 Bureau of Indian Affairs  
 Code 216  
 1951 Constitution Ave., N. W.  
 Washington, D. C. 20245  
 (202) 343-2287

## IRRIGATION OPERATION AND MAINTENANCE (Bureau of Indian Affairs)

Type of Assistance: Administrative and technical assistance

Nature of Program: This program operates and maintains irrigation and hydropower systems. Water conservation measures provided include adjusting manpower requirements to more closely achieve optimum water delivery and facility maintenance, and development of adequate water accounting procedures.

Applicant Eligibility: Indians

Legal Authority: Snyder Act of 1921 (42 Stat. 208, 25 U. S. C. 13)

Current Status/ Scope of Program: FY 78 budget authority \$3,836,000

## IRRIGATION OPERATION AND MAINTENANCE (Bureau of Indian Affairs ) (continued)

Information Contacts: Regional or Local: Nearest Bureau regional or local office  
 Headquarters: Division of Trust Facilitation  
 Bureau of Indian Affairs  
 Code 216  
 1951 Constitution Ave., N. W.  
 Washington, D. C. 20245  
 (202) 343-2287

## MINERALS AND MINING (Bureau of Indian Affairs)

Information on the water conservation potential of this program had not been received at the time this draft was published.

## COLORADO RIVER SALINITY CONTROL PROJECT (Bureau of Land Management)

Type of Assistance: Information and advice to the public

Nature of Program: The Colorado River, flowing through an area generally deficient in rainfall, becomes increasingly saline as one proceeds downstream. The natural flow of the river is completely utilized by the United States and Mexico, and the quantity and quality of the river's discharge is guaranteed by international treaty. The salinity control project, in an effort to avoid escalation of the salinity of the river, is investigating the natural sources of salinity in the river and how to control them.

Water Conservation Provisions: By locating saline sources and investigation methods of water quality control, a more efficient use of the resource can be achieved.

Applicant Eligibility: General public

Legal Authority: Executive Order 11514, using Bureau of Reclamation funding.

Current Status/Scope of Program: \$200,000 in non-point salinity resources

Information Contacts: Regional or local: Regional offices of BLM  
 Headquarters: Office of the Commissioner  
 Bureau of Land Management  
 Department of Interior  
 Washington, D. C. 20240  
 (202)343-4157

## COOPERATIVE RIVER BASIN STUDIES (Bureau of Land Management)

Type of Assistance: Information and advice to the public

Nature of Program: These programs are directed toward conservation, development and utilization of water and related land resources within the boundaries of each river commission. Federal and State data collection and analysis activities are coordinated and combined to form a regional comprehensive plan.

Water Conservation Provisions: Studies generally include water conservation components, and specific studies relating to water conservation may be undertaken (e.g., New England Regional Assessment of Water Conservation).

Applicant Eligibility: General public

Legal Authority: Title II, P.L. 89-80, Water Resources Planning Act of 1965, 42 U. S. C. 1962.

Current Status/Scope of Program: FY 78 budget level \$200,000 in interagency planning

## COOPERATIVE RIVER BASIN STUDIES (Bureau of Land Management) (continued)

Information Contacts: Local or regional: Regional office of BLM  
 Headquarters: Office of the Commissioner  
 Bureau of Land Management  
 Department of the Interior  
 Washington, D. C. 20240  
 (202) 343-4157

## GEOTHERMAL, ON-SHORE ENERGY (Bureau of Land Management)

Type of Assistance: Information and advice to the public

Nature of Program: Geothermal management and investigations directed towards utilizing the resource on public lands.

Water Conservation Provisions: This program would affect water conservation primarily by producing usable fresh water to replace or supplement existing surface and groundwater supplies.

Applicant Eligibility: General public

Legal Authority: Geothermal Steam Act of 1970  
 Federal Land Policy and management Act of 1976

Current Status/Scope of Program: FY 78 budget \$1,040,000

Information Contacts: Regional or local: Regional office of BLM  
 Headquarters: Office of the Commissioner  
 Bureau of Land Management  
 Department of Interior  
 Washington, D. C. 20240  
 Washington, D. C. 20240  
 (202) 343-4157

## PLANNING FOR THE MULTIPLE RESOURCE MANAGEMENT OF THE PUBLIC LANDS (Bureau of Land Management)

Type of Assistance: Information and advice to the public

Nature of Program: The Bureau is responsible for developing land use plans on some 20% of U. S. land area. Plans are built around soil and water quality, quantity, and availability, and elaborated for management of other resources. The planning process involves:

- inventory of resources
- evaluation of resource condition and quality.
- consideration of managerial opportunities

Water Conservation Provisions: Opportunities to encourage a wise and efficient use of the resource occur in the planning process and include setting priorities in water use between range, forest, watershed, wildlife, wilderness, recreation resource management and the development and further management of coal and mineral resources.

Applicant eligibility: Other agencies or bodies with authority on the public lands covered by the program; general public

Legal Authority: Taylor Grazing Act, Outer Continental Shelf Act, Federal Land Policy and Management Act, Wild Horse and Burro Act, Range Improvement Act

Current Status/Scope of Program: FY 78 budget \$700,000

Information Contacts: Regional or local: Regional office of BLM  
 Headquarters: Office of the Commissioner  
 Bureau of Land Management  
 Department of the Interior  
 Washington, D. C. 20240 (202) 343-4157



# RANGE RESOURCE MANAGEMENT (Bureau of Land Management)

Type of Assistance: Information and advice to the public

Nature of Program: This program involves management of wild horses and burros, range water facilities, water rights, environmental statements, and range improvements.

Water Conservation Provisions: Best use and conservation of water as well as preservation of water quality are important to many areas covered by this program, including:

- livestock water facilities
- water and water facilities for wild burros
- range land management and improvement
- grazing and forage plans
- other land use plans

Applicant Eligibility: General Public

Legal Authority: Taylor Grazing Act, Federal Land Policy and Management Act of 1976, Range Improvement Act of 1978, Wild Horse and Burro Act of 1971

Current Status/Scope of Program: FY 78 budget \$5,300,000.

Information contacts: Regional or local: Regional office of BLM  
 Headquarters: Office of the Commissioner  
 Bureau of Land Management  
 Department of the Interior  
 Washington, D.C. 20240  
 (202) 343-4157

# RECREATION RESOURCE MANAGEMENT (Bureau of Land Management)

Type of Assistance: Information and advice to the public.

Nature of Program: This program is composed of two main parts. Recreation construction involves building recreational facilities on water bodies within the public lands. These facilities include campgrounds, boat launching ramps, picnic areas, informal swimming areas, trails, off-road vehicle facilities, etc. Management of Recreational Use of Rivers and Streams flowing through the public lands (including whitewater rafting, boating, canoeing, kayaking, etc.) controls use by permits, and advice and assistance is available in more heavily used areas. Water conservation concerns include:

- wasteful use of potable and non-potable water by recreationists
- increased siltation from recreation activities including use of off-road vehicles
- ensuring minimum stream flows to maintain recreation values.

Applicant Eligibility: General Public

Legal Authority: Federal Land Policy and Management Act of 1976, Wild and Scenic Rivers Act, National Scenic Trails Act.

Current Status/Scope of Program: FY 78 budget \$430,000

Information Contacts: Regional or local: Regional office of BLM  
 Headquarters: Office of the Commissioner  
 Bureau of Land Management  
 Department of the Interior  
 Washington, D. C. 20240  
 (202) 343-4157

**SOIL-AIR-WATER; SOIL INVENTORY (Bureau of Land Management)**

Type of Assistance: Information and Advice to the public

Nature of Program: Soil and other resource inventories on public lands to identify, locate, quantify, and qualify the resources; including physical and chemical properties.

Water Conservation Provisions: The ultimate objective of soil inventories is appropriate land utilization and soil and water conservation. Information from soil inventories gives an indication of the soils water-holding and infiltration capacities, permeability, and other characteristics.

Applicant Eligibility: General Public

Legal Authority: Federal Land Policy and management Act of 1976, National Environmental Policy Act of 1969

Current Status/ Scope of Program: FY 78 budget level \$3.3 million in information activities and data acquisition

Information Contacts: Local or regional: Regional office of BLM  
Headquarters: Office of the Commissioner  
Bureau of Land Management  
Department of the Interior  
Washington, D. C. 20240  
(202) 343-4157

**SOIL-AIR-WATER; WATER RESOURCE INVENTORY (Bureau of Land Management)**

Type of Assistance: Information and advice to the public

Nature of Program: Water and other resource inventories on public lands to identify, locate, quantify and qualify the resources.

Water Conservation Provisions: The ultimate objective of water resource inventories is to facilitate efficient use of the resource. Information on water quantity provides indications to suitable land management practices, and information on water quality provides indications of necessary soil and water conservation measures for land-use planning.

Applicant Eligibility: General Public

Legal Authority: Clean Water Act of 1972, PL 92-500; Executive Order 11296; P.L. 93-251, Executive Order 11514; P. L. 94-579; P. L. 95-217, Executive Order 11752.

Current Status/ Scope of Program: FY 78 budget level \$1,950,000

Information Contacts: Local or regional: Regional office of BLM  
Headquarters: Office of the Commissioner  
Department of the Interior  
Washington, D. C. 20240  
(202) 343-4157

**WATER RIGHTS ON PUBLIC LANDS (Bureau of Land Management)**

Type of Assistance: Information and advice to the public

Nature of Program: Identification of Federal water rights on the public lands, their inventory and reservation for multiple resource management.

## WATER RIGHTS ON PUBLIC LANDS (Bureau of Land Management) (continued)

Water Conservation Provisions: These lands are predominantly located in the arid and semi-arid areas of the west where the availability of scarce water is frequently an issue between the state and federal governments. Activities to resolve these issues and achieve an efficient resource management strategy include:

- definition of the federal right
- development of policy and procedure to implement that right
- determination and reservation of enough water to effectively manage public lands

Applicant Eligibility: General public.

Legal Authority: E.O. 107, 1926. Federal Land Policy and Management Act 1976.

Current Status/Scope of Program: FY '78 budget \$300,000 in identification and acquisition.

Information Contacts: Local or Regional: Regional Office of Bureau of Land Management

Headquarters: Office of the Commissioner  
Bureau of Land Management  
Department of the Interior  
Washington, D.C. 20240

Telephone: (202) 343-4157

## WILDLIFE MANAGEMENT (Bureau of Land Management)

Type of Assistance: Information and advice to the public

Nature of Program: A broad program of development, restoration, preservation and management of aquatic and terrestrial wildlife on public lands

Water Conservation Provisions: Since all life requires water, an integral part of this program calls for its management -- especially in water short areas of the West where most public lands are located. Specific activities include:

- development, operation, and maintenance of water structures
- maintenance of instream flows
- preservation and management of wetlands

Applicant Eligibility: General public

Legal Authority: Outer Continental Shelf Act, Federal Land Policy and Management Act, Wild Horse and Burro Act, Range Improvement Act

Current Status/Scope of Program: FY 78 budget level \$1,343,000

Information Contacts: Regional or Local: Regional office of BLM

Headquarters: Office of the Commissioner  
Bureau of Land Management  
Department of Interior  
Washington, D. C. 20240

Telephone: (202) 343-4157

BUREAU OF MINESINFORMATION AND TECHNICAL ASSISTANCE (Bureau of Mines)

Type of Assistance: Information and technical assistance.

Nature of Program: Technical information is available from a broad range of research projects conducted by the Bureau of Mines including environmental problems associated with mining. Topics include:

- groundwater hydrology and mining
- non-point source pollution related to mining

Applicant Eligibility: General public.

Legal Authority: Amended Organic Act (P.L. 62-386); Solid Waste Disposal Act.

Current Status/Scope of Program: Information available under this program is generated by research by many individual projects and financial obligations are not separately identifiable.

Information Contact: Director  
Bureau of Mines  
Department of the Interior  
2401 E Street, N.W., Room 1033  
Washington, D.C. 20241  
Telephone: (202) 634-1300

BUREAU OF RECLAMATIONCOLORADO RIVER BASIN AND UPPER COLORADO STORAGE PROJECT (Bureau of Reclamation)

Type of Assistance: Constructing and operating water resource management projects.

Nature of Program: This program develops multi-purpose water resources projects in the Colorado River Basin which relate to water conservation, including:

- irrigation
- water supply
- hydropower
- flood control
- water quality control
- restoration
- fish and wildlife enhancement

Applicant Eligibility: Members of the general public (i.e. any kind of group or individual) may demonstrate to the Bureau of Reclamation and Congress the need for this kind of project.

Legal Authority: Colorado River Basin Project Act of 1968, PL 90-537, Act of April 11, 1956, PL 84-485, and Boulder Canyon Project Act of 1929.

Current Status/Scope of Program: FY '78 budget is \$145.4 million.

Information Contact: Regional or Local: Regional Office of Bureau of Reclamation  
Headquarters: Office of the Commissioner  
Bureau of Reclamation  
18th and C Streets, N.W.  
Washington, D.C. 20240 Telephone: (202) 343-4159

COLORADO RIVER SALINITY CONTROL (Bureau of Reclamation)

(Information on the specific water resources potential of this program had not been received at the time of publication of this draft. For general information about the Colorado River Salinity Control Project, see listing of the same title under Bureau of Land Management.)

CONSTRUCTION AND REHABILITATION (Bureau of Reclamation)

Type of Assistance: Planning construction and repair of reclamation projects.

Nature of Program: This program consists of four parts:

- 1) Advance planning--after authorization of a specific project, additional studies are required to further refine the original plan. This includes:
  - collecting final design data
  - preparation of final designs
  - completion of the final plan report

- 2) Construction--provides funds for actual construction
- 3) Drainage and Minor Construction--Minor completion work of projects on which major construction is completed.
- 4) Rehabilitation and Betterment: Repairs and improvements to older projects which have deteriorated and/or no longer are as efficient as possible due to changes in land use, methods of irrigation, and types of crops raised.

Water Conservation Provisions: All reclamation projects are planned and designed to make more efficient use of existing water supplies. Projects are designed to minimize water losses and repayment contracts emphasize the desirability and necessity of adopting water conservation practices. The Rehabilitation and Betterment program results in significant water savings by updating old and inefficient project distribution facilities.

Applicant Eligibility: Members of the general public may acquaint Bureau of Reclamation and Congress with the need for these projects.

Legal Authority: Federal Reclamation Laws, Act of June 17, 1902, PL 57-161 and mandatory acts, project authorization acts, Rehabilitation and Betterment Act of 1949, PL-385 as amended.

Current Status/Scope of Program: FY '78 budgets:

1)	\$2.9 million	(Advance planning)
2)	\$319.7 million	(Construction)
3)	\$25.4 million	(Drainage, Minor Construction)
4)	\$6.8 million	(Rehabilitation and Betterment)

Information Contacts: Regional or Local: Regional Office of Bureau of Reclamation  
Headquarters: Office of the Commissioner  
Bureau of Reclamation  
18th and C Streets, N.W.  
Washington, D.C. 20240 Telephone: (202) 343-4159

#### EMERGENCY FUND (Bureau of Reclamation)

Type of Assistance: Emergency funding

Nature of Program: Funds are provided to existing Reclamation systems to defray expenses incurred because of unusual or emergency conditions and so assure the continuous operation of irrigation and power systems. This enables projects to return to normal operating status more quickly and so assists in conserving water.

Applicant Eligibility: Funding to existing reclamation projects only; members of the general public may acquaint the Bureau of Reclamation with the need for these funds.

Legal Authority: Emergency Fund Act of 1948, PL 80-790.

Current Status/Scope of Program: FY '78 budget--no new appropriation--\$8.6 million carryover.

Information Contacts: Regional or Local: Regional Office of Bureau of Reclamation  
Headquarters: Office of the Commissioner  
Bureau of the Commissioner  
18th and C Streets, N.W.  
Washington, D.C. 20240 Telephone: (202) 343-4159

#### GENERAL INVESTIGATIONS (Bureau of Reclamation)

Type of Assistance: Information and planning assistance, technical assistance.

Nature of Program: Planning and evaluation of potential developments for the conservation and utilization of water and related land resources throughout the 17 western states.

Water Conservation Provisions: Studies with significant impact on water conservation include:  
1) Comprehensive plans for the resource development of various river basins which form the basis of recommendations to Congress for authorization of construction. Subjects which

**GENERAL INVESTIGATIONS (Bureau of Reclamation) (continued)**

have been included are:

- hydroelectric development
  - integration of solar and wind resources into existing hydroelectric facilities
  - pump storage facilities
  - irrigation
  - municipal and industrial water supply
  - recreation
  - fish and wildlife enhancement
- 2) Geothermal investigations which include developing a fresh water supply from geothermal sources to replace or supplement existing sources.
  - 3) General engineering and research studies to improve efficiency of bureau programs and projects, including:
    - weather modification to augment water supplies
    - pump storage research
    - water supply and conservation
    - irrigation and farming methods, with technical assistance to farmers
  - 4) The Water Conservation Opportunities Study, conducted with the Bureau of Indian Affairs, studies Reclamation and Indian irrigation projects with possibilities for water conservation through improved distributionsystems and irrigation practices.

**Applicant Eligibility:** Depending on program; information available to the general public.

**Legal Authority:** Federal Reclamation Laws, Act of June 17, 1902. PL 57-161 as amended. Emergency Dought Act of 1977.

**Current Status/Scope of Program:** FY '78 budgets of:

- 1) \$16.8 million
- 2) \$3.4 million
- 3) \$12.0 million
- 4) \$0.4 million

**Information Contacts:** Regional or Local: Regional Office of Bureau of Reclamation

Headquarters: Office of the Commissioner  
Bureau of Reclamation  
Department of the Interior  
Washington, D.C. 20240 Telephone: (202) 343-4157

**LOAN PROGRAM (Bureau of Reclamation)**

**Type of Assistance:** Loans and project grants

**Nature of Program:** This includes two programs: Small Reclamation Projects--provides loans and/or grants to non-federal organizations for construction of small water resource projects. The Distribution Systems Loans Program--provides loans to organizations for the construction of irrigation and municipal and industrial water distribution systems on authorized federal reclamation projects.

**Water Conservation Provisions:** Improving or rehabilitating existing distribution systems reduces water losses within a project and thus conserves the available water supply. The construction of new projects permit a more efficient use of existing water supplies through the use of storage and distribution facilities.

**Applicant Eligibility:** Federal and non-federal organizations, depending on program.

**Legal Authority:** Distribution Systems Loans Act, PL 84-130, Small Reclamation Projects Act, PL 84-984 as amended.

**Current Status/Scope of Program:** FY '78 budget is \$27.8 million.

**Information Contacts:** Regional or Local: Regional Office of Bureau of Reclamation

Headquarters: Office of the Commissioner  
Bureau of Reclamation  
18th and C Streets, N.W.  
Washington, D.C. 20240 Telephone: (202) 343-4157

**OPERATION AND MAINTENANCE (Bureau of Reclamation)**

Type of Assistance: Not applicable.

Nature of Program: This program provides for the continuous operation and maintenance of reclamation projects including water conservation related activities such as:

- .irrigation
- .water supply
- .hydroelectric power
- .flood control
- .water quality control
- .recreation
- .fish and wildlife enhancement

Applicant Eligibility: Not applicable.

Legal Authority: Federal Reclamation Laws, Act of June 17, 1902, PL 57-161, and mandatory acts.

Current Status/Scope of Program: FY '78 budget is \$78.4 million.

Information Contacts: Regional or Local: Regional Office of Bureau of Reclamation

Headquarters: Office of the Commissioner

Bureau of Reclamation

18th and C Streets, N.W.

Washington, D.C. 20240 Telephone: (202) 343-4157

## FISH AND WILDLIFE SERVICE

## COOPERATIVE INSTREAM FLOW SERVICE GROUP (Fish and Wildlife Service)

Type of Assistance: Technical assistance, planning, training and advice; information transfer

Nature of Program: The Instream Flow Group is primarily involved in developing methodology to determine instream flow needs and conducting training and other information transfer activities.

Water Conservation Provisions: The Group's activities primarily relate to specifying water use requirements in the stream bed, and recently participated on an interagency task force on Irrigation Efficiency. These activities have an indirect effect on water use and conservation by providing tools, technical assistance, criteria and procedures for evaluation. The Cooperative Instream Flow Service Group is available to:

- 1) provide direct services to Federal agencies and States to:
  - train field personnel
  - generate specific instream flow recommendations on request through application of methodologies
  - prepare and circulate a regular instream flow newsletter
  - make recommendations on request, regarding appropriate methodologies to use in particular circumstances
- 2) conduct or support applied research to evaluate the various methodologies
- 3) stay abreast of the state-of-the-art and inform practitioners regarding new developments
- 4) stay abreast of legal and decisional developments in the field of instream flow requirements
- 5) maintain, update, and distribute a handbook on instream flow methodologies.

Applicant Eligibility: Information is available to the general public; assistance is available to State or local Fish and Wildlife agencies depending on the situation.

Legal Authority: Receives 3 three year funding from the Environmental Protection Agency, with personnel support from other agencies.

Current Status/Scope of Program: Annual budget of \$250,000.

Information Contacts: Instream Flow Service Group  
 U.S. Fish and Wildlife Service  
 Room 206, Federal Building  
 Fort Collins, Colorado 80521  
 Telephone: (303) 493-4275

## DIVISION OF NATIONAL FISH HATCHERIES (Fish and Wildlife Service)

Type of Assistance: Information and Advice

Nature of Program: The system includes fish hatcheries, development centers and biologist laboratories. Fish are produced to support sport fishing, commercial fishing, and research laboratories and specialists are available to assist FWS, State and commercial fish farmers with disease cultural problems. Techniques have been employed to reduce the amounts of water necessary to produce fish in four main categories: 1) operational adjustments 2) engineering improvements 3) rehabilitation activities and 4) new construction.

Applicant Eligibility: General public

Legal Authority: Numerous individual authorizations for the establishment, operation and maintenance of fish hatcheries.

Current Status/Scope of Program: FY 78 budget is \$16 million

Information Contacts: Division of National Fish Hatcheries  
 Fish and Wildlife Service  
 Department of the Interior  
 Washington, D.C. 20240  
 Telephone: (202) 343-5634



**FEDERAL AID PROGRAM (Fish and Wildlife Service)**

Type of Assistance: Project Grants

Nature of Program: Federal grant funds are allocated to State fish and wildlife agencies to restore and manage fish and wildlife populations for the preservation and improvement of sport fishing, hunting and for other uses of these resources in the public interest. Major activities include the acquisition of wildlife habitat, management of habitats for the protection of fish and wildlife, fish and wildlife stocking, and survey and research to develop more effective ways to manage fish and wildlife.

Water Conservation Provisions: Significant activities in the wildlife program include:

- levees, dams and dikes for waterfowl impoundments
- chaining, burning and brush clearing to create openings and reduce transpiration

Activities in the fish program include:

- building fishing lakes
- insuring permanent pools in reservoirs for fish
- stream bank stabilization and watershed management to reduce erosion
- research to determine the minimum water flows needed in streams to support fish and other aquatic life
- surveillance of streams to identify and reduce pollution
- studies to determine freshwater inflows necessary to sustain fishes and aquatic organisms in San Francisco Bay
- reduce pollution from State fish hatcheries
- development of re-circulating water systems in hatcheries to reduce water needs
- improving fish ladders to reduce amounts of water needed for fish passage.

Applicant Eligibility: State fish and wildlife agencies

Legal Authority: Federal Aid in Wildlife Restoration Act of 1933 (PL 75-415)  
Federal Aid in Sport Fish Restoration Act of 1950

Current Status/Scope of Program: FY 78 budget: \$62.9 million for wildlife restoration projects  
\$24.3 million for fish restoration

Information Contacts: U.S. Fish and Wildlife Service  
Department of the Interior  
Washington, D.C. 20240

Telephone: (202) 343-5634

**LAND AND WATER RESOURCES DEVELOPMENT PROGRAM (Fish and Wildlife Service)**

Type of Assistance: Technical assistance and advice

Nature of Program: The Fish and Wildlife Service provides leadership to conserve, protect, and enhance fish and wildlife and their habitat by influencing various activities in three ways: 1) technical assistance for federal projects 2) review of permits and licenses and 3) area-wide planning.

Water Conservation Provisions: This program attempts to conserve water resources to a degree that meets the needs of fish and wildlife resources. Methods include:

- .minimum flow requirements
- .establishment of fish and wildlife management areas
- .wetland preservation
- .control of the discharges toxic to fish and wildlife

Consultation is given to agencies involved in water development projects from the initial stage of planning through construction.

When an activity requires a federal license, lease, or permit (such as a 404 permit) the Service reports on the effect of the action on fish and wildlife, habitat, and related resources and makes recommendations.

Applicant Eligibility: Technical assistance<sup>is available</sup> to State and Federal agencies involved in water resource development; information is available to the public.

Legal Authority: The Fish and Wildlife Coordination Act of 1958, as amended (16 U.S.C. 661-667e)

Current Status/Scope of Program: FY 78 budget is \$12,468,000.

Information Contacts: Land and Water Resources Development Program  
Fish and Wildlife Service  
Department of the Interior  
Washington, D.C. 20240

Telephone: (202) 343-5634

**RESEARCH (Fish and Wildlife Service)**

Type of Assistance: General Information and research results

Nature of Program: Research is conducted on numerous aspects of fresh water and anadromous fisheries of the U.S. Studies include fish diseases, chemical pollutants and other effects on aquatic ecosystems, etc. Research is generally non-consumptive of water, but some labs are investigating conservation techniques such as water reuse and pond lining.

Applicant Eligibility: General public

Legal Authority: Fish and Wildlife Act of 1956; Fish and Wildlife Coordination Act, Fish-Rice Rotation Farming Program Act of 1958; Federal Aid in Fish Restoration Act

Current Status/Scope of Program: FY 78 budget is \$8.1 million

Information Contacts: Fish and Wildlife Service  
Department of the Interior  
Washington, D.C. 20240

Telephone: (202) 343-5634

**NATIONAL WILDLIFE REFUGE SYSTEM (Fish and Wildlife Service)**

Type of Assistance: A resource management program

Nature of Program: This program is a widespread network of federal lands which provide valuable habitat for the nation's migratory waterfowl and other wildlife. The system is comprised of 386 refuges and 131 Waterfowl Production Areas across the country.

Water Conservation Provisions: Primary benefits relating to water conservation result from the management of wetland habitats and related conservation practices. Also, on some refuges where water is difficult or expensive to acquire, planning of both facilities and operations takes into consideration ways to reduce water usage and water loss.

Applicant Eligibility: Not applicable.

Legal Authority: National Wildlife Refuge System Administration Act of 1966; Endangered Species Act of 1973.

Current Status/Scope of Program: FY 78 budget: \$69,000,000.

Information Contacts: National Wildlife Refuge System  
Fish and Wildlife Service  
Department of the Interior  
Washington, D.C. 20240

Telephone: (202) 343-5634

## WATER RESOURCES DIVISION (U.S. Geological Survey)

Type of Assistance: Data and information.

Nature of Program: Data and information that may be of assistance to states for managing instream flow, groundwater and safe drinking water, and other water programs are available in published reports, office files, and in related automatic data processing form. Program areas include:

- Baseline hydrologic data: Continuous record stream discharge stations; partial-record stream stations; lake and reservoir stations; sites for groundwater levels and/or pumpage; quality of water stations; sediment stations.
- Water resources appraisals: River quality assessments; regional aquifer system analyses; groundwater recharge studies; subsurface waste storage investigations; flood hazard analysis; estuarine studies, salt water intrusion evaluations.
- Water-Use Data: Withdrawals, consumption, returns, effects on water quality, and purpose of use. Program to extend to 28 states in FY 1979; full implementation for the nation anticipated by FY 1982.
- Energy-related Programs: Nuclear waste investigations, oil-shale hydrology, coal hydrology, including impact assessments of mining, reclamation, conversion, and transport on water availability and quality.
- National Water Data Exchange (NAWDEX): index and referral service to water-data holdings of some 150 member organizations in FY '79.
- Hydrologic research: Basic and problem-solving research studies on many phases of hydraulics, chemistry, geology, and hydrology.

Applicant Eligibility: Information to the public; more specialized services to state and local agencies depending on situation.

Legal Authority: Clean Water Act of 1977, (PL 95-217); Surface Mining Control and Reclamation Act of 1977 (PL 95-87) and others.

Current Status/Scope of Program: Estimated FY '80 budget level as \$107.5 million.

Information Contacts: Regional or Local: The most direct means to determine what programs are in operation in a particular state is to contact the appropriate District Office of the U.S. Geological Survey. To locate the one nearest you, contact one of the following regional offices:

(Regional)

Regional Hydrologist  
Northeastern Region  
U.S. Geological Survey  
National HQ - STOP 433

Telephone: (703) 860-6985

Regional Hydrologist (Southeastern Region)  
1459 Peachtree Street, N.E. Suite 200  
Atlanta, Georgia 30392

Telephone: ((404) 881-4395

Regional Hydrologist (Central Region)  
Box 25046, STOP 406  
Denver Federal Center  
Denver, Colorado 80225

Telephone: (303) 234-3661

Regional Hydrologist (Western Region)  
345 Middlefield Rd.  
Menlo Park, California 94025

Telephone: (415) 323-8111 ext. 2337

Headquarters:  
Water Resources Division  
U.S. Geological Survey  
12201 Sunrise Valley Drive  
Reston, Virginia

Telephone: (703) 860-7000

**FLOODPLAIN AND WETLAND EXECUTIVE ORDERS (Heritage Conservation and Recreation Service)**

Information on the water conservation potential of this program had not been received at the time this draft was published.

**INSTREAM FLOW STUDIES (Heritage Conservation and Recreation Service and Fish and Wildlife Service)**

See Fish and Wildlife Service listing for: COOPERATIVE INSTREAM FLOW SERVICE GROUP.

**LAND AND WATER CONSERVATION FUND -- NON-STRUCTURAL FLOOD CONTROL (Heritage Conservation and Recreation Service)**

Information on the water conservation potential of this program had not been received at the time this draft was published.

### OFFICE OF STRIP MINING RECLAMATION AND ENFORCEMENT

#### ABANDONED MINE RECLAMATION & CONTROL OF THE ENVIRONMENTAL IMPACTS OF SURFACE COAL MINING (Office of Strip Mining Reclamation and Enforcement)

Type of Assistance: Technical, project grants, planning assistance

Nature of Program: Various activities necessary to protect society and the environment from the adverse effects of surface mining and the promotion of the reclamation of mined areas. This is a federal program which helps states set up regulatory and planning programs and can assume responsibility for areas not covered by state action. An assortment of grants and other assistance is available.

Water Conservation Provisions: This program provides for the restoration or improvement of water quality and quantity where degraded by past coal mining activities including:

- sealing of mines and shafts
- liming acid waters
- land shaping and grading
- critical area planting
- diversions
- waterways
- grade stabilization structures
- sediment basins
- temporary irrigation to establish new vegetative cover

Applicant Eligibility: States or other appropriate public agencies.

Legal Authority: Titles IV and V, PL 95-87, 91 Stat. 456.

Current Status/Scope of Program: FY '78 budget authorization is \$30,880,000.

Information Contacts: Office of Surface Mining and Enforcement  
Department of Interior  
South Interior Building, Room 219  
Washington, D.C. 20240

Telephone: (202) 343-4057

### OFFICE OF WATER RESEARCH AND TECHNOLOGY

WATER RESOURCES RESEARCH AND DEVELOPMENT (Office of Water Research and Technology)

SALINE WATER RESEARCH AND DEVELOPMENT (Office of Water Research and Technology)

TECHNOLOGY AND INFORMATION TRANSFER (Office of Water Research and Technology)

Type of Assistance: Dissemination of research data and technology transfer.

Nature of Program: Administration of research and development undertaken by others through grants and contracts provided by Office of Water Research and Technology). Some research is performed by designated Water Research Centers or Institutes, usually located at land grant colleges. Other research is performed by private research and development firms. The dissemination of research data and technology transfer is also a major function, and has included pamphlets, conferences and seminars.

Water Conservation Provisions: Office of Water Research and Technology has funded and distributed information about many research projects related to water conservation. Subjects have included:

- irrigated agriculture
  - drip and sprinkler irrigation to conserve water
  - measurement and timing of water delivery to make it most effective
  - incentives for conservation
  - use of anti-transpirants
  - use of salt or drought resistant plants
- use of industrial or municipal effluent
- improved management system
- tail-water reuse
- domestic water use, quality and quantitative studies
- water reuse, especially of municipal and industrial effluent
- water desalination
- cooling water for electric power generation
- minimum low flows in rivers and streams
- environmental quality

Applicant Eligibility: General public.

Legal Authority: PL 88-379 as amended; PL 92-60 as amended.

## WATER RESOURCES RESEARCH AND DEVELOPMENT

## SALINE WATER RESEARCH AND DEVELOPMENT

## TECHNOLOGY AND INFORMATION TRANSFER (Office of Water Research and Technology) (continued)

Current Status/Scope of Program: Principal budget items for 1978 are:

- water resources research and development: \$12.3 million
- saline water research and development: \$11.2 million
- technology transfer and information dissemination \$ 1.6 million
- general program support: \$ 2.8 million

Information Contact: Office of the Director  
Office of Water Research and Technology  
Department of the Interior  
Washington, D.C. 20240

Telephone: (202) 343-5975

## ENVIRONMENTAL PROTECTION AGENCY

<u>Page</u>	<u>Program</u>
	<u>Office of Regional and Intergovernmental Operations</u>
57	Interstate Cooperation and Uniform Laws
	<u>Office of Research and Development</u>
58	Safe Drinking Water Research and Demonstration Grants
58	Water Pollution Control Research, Development, and Demonstration Grants
	<u>Office of Water and Waste Management</u>
59	Clean Lakes Demonstration Grants
60	Construction Grants for Wastewater Treatment Works
62	Sections 104(o), 105(e)(1), 105(d)(2), and 214 of the Clean Water Act of 1977
62	State and Areawide Waste Treatment Management
63	State Pollution Control Program

## OFFICE OF REGIONAL AND INTERGOVERNMENTAL OPERATIONS

INTERSTATE COOPERATION AND UNIFORM LAWS (Office of Regional and Intergovernmental Operations)

Type of Assistance: Advisory services and counseling.

Nature of Program: The purpose of this program is to encourage the enactment of improved and, so far as practicable, uniform state and local laws; and to encourage cooperative interstate, interlocal, and regional activities by state and local governments in environmental management. This includes the development of effective environmental quality legislative action programs, management laws, and compacts, to be consistent with other state and regional programs in furtherance of a strong cooperative national program.

Water Conservation Provisions: The promotion of water conservation measures can be facilitated by coordinated regional, state and local programs.

Applicant Eligibility: State and local environmental protection or pollution control agencies; other appropriate state, regional and local authorities; committees, members, or staffs of state legislatures; compact commissions, other interstate and regional groups. This program is available to each state, territory and possession of the U.S., including the District of Columbia.

Legal Authority: Clean Air Act, as amended, 42 U.S.C. 7401 et seq.; Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.; Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976; 42 U.S.C. 6901; Federal Insecticide, Fungicide, and Rodenticide Act, as amended, 7 U.S.C. 135-135k; 1954 Atomic Energy Act, as amended, 42 U.S.C.; Noise Pollution and Abatement Act of 1970, 42 U.S.C. 1858 et seq (1970).

Current Status/Scope of Program: Not applicable.

Information Contacts: Regional or Local: Appropriate EPA regional administrator

Headquarters: Director

Office of Regional and Intergovernmental Operations

Environmental Protection Agency

Washington, D.C. 20460

Telephone: (202) 755-0444

OFFICE OF RESEARCH AND DEVELOPMENT

## SAFE DRINKING WATER RESEARCH AND DEMONSTRATION GRANTS (Office of Research and Development)

Type of Assistance: Project grants

Nature of Program: The purpose of this program is to conduct research relating to the causes, diagnosis, treatment, control, and prevention of physical and mental diseases and other impairments of man resulting directly or indirectly from contaminants in water or to the provision of a dependably safe supply of drinking water. The development and demonstration of any project which will demonstrate a new or improved method, approach, or technology for providing a dependably safe supply of drinking water to the public or which will investigate and demonstrate health implications involved in the reclamation, recycling, and reuse of waste waters for drinking and/or the preparation of safe and acceptable drinking water is included in this program.

Water Conservation Provisions: Water conservation is increased to the extent that water supplies are recycled and reused.

Applicant Eligibility: This program is available to each state, territory and possession of the U.S., including the District of Columbia, for public, private state colleges and universities, public agencies, state and local governments, other organizations and individuals. Profit-making organizations are not eligible.

Legal Authority: Public Health Service Act as amended by the Safe Drinking Water Act, PL 95-190.

Current Status/Scope of Program: The projected average grant for FY '79 is \$90,000. To date for FY '78 the range of financial assistance is \$30,000 to \$112,339. The average funding is \$64,439. It is anticipated that 70 grants will be made in FY '78. The same number of grants is estimated for FY '79.

Information Contacts: Regional or Local: Individuals are encouraged to communicate with the appropriate EPA Regional Administrator.

Headquarters: For information concerning grant applications and procedures, contact:

Environmental Protection Agency  
Grants Administration Division, PM 216  
Washington, D.C. 20460

For program information contact:

Mary Holland  
Office of Research Program Management, RD-674  
Office of Research and Development  
Environmental Protection Agency  
Washington, D.C. 20460 Telephone: (202) 426-2275

## WATER POLLUTION CONTROL RESEARCH, DEVELOPMENT, AND DEMONSTRATION GRANTS (Office of Research and Development)

Type of Assistance: Program grants

Nature of Program: The purpose of this program is to support and promote the coordination and acceleration of research, development, and demonstration projects relating to the causes, effects, extent, prevention, reduction and elimination of water pollution.

Water Conservation Provisions: Water pollution control programs can promote water conservation by promoting techniques which recycle, reuse or otherwise reduce the use of water and wastewater.

Applicant Eligibility: This program is available to each state, territory and possession of the U.S., including the District of Columbia, for public, private state colleges and universities, public agencies, state and local governments, other organizations and individuals. Profit-making organizations are not eligible.

Current Status/Scope of Program: The projected average grant amount in FY '79 is \$100,000. No grant awards were made in FY '78. Projections of FY '79 include average research grants of \$75,000; average demonstration grants of \$100,000. To date in FY '78 the range of research



WATER POLLUTION CONTROL RESEARCH, DEVELOPMENT, AND DEMONSTRATION GRANTS (Office of Research and Development) (continued)

grants has been from \$6,900 to \$245,066, with the average amount being \$81,844. In FY '77 the range of demonstration grants was \$30,000 to \$349,200; the average was \$115,625. No demonstration grants were awarded to date in FY '78.

Information Contacts: Regional or Local: Individuals are encouraged to communicate with the appropriate EPA Regional Administrator.

Headquarters: For information concerning grant applications and procedures, contact:  
Environmental Protection Agency  
Grants Administration Division, PM 216  
Washington, D.C. 20460

For program information contact:  
Mary Holland  
Office of Research Program Management, RD-674  
Office of Research and Development  
Environmental Protection Agency  
Washington, D.C. 20460 Telephone: (202) 426-2275

OFFICE OF WATER AND WASTE MANAGEMENT

CLEAN LAKES PROGRAM (Office of Water and Waste Management)

Type of Assistance: Project grants to support and promote the coordination and acceleration of demonstration and evaluation projects relating to the causes, effects, extent, prevention, reduction and elimination of water pollution in publicly owned freshwater lakes.

Nature of Program: Under Section 314 of the Clean Water Act, financial assistance may be provided to states to implement methods and procedures to restore publicly owned freshwater lakes. Although grants may only be awarded to states, intergovernmental agreements are allowed whereby states, where appropriate, may delegate all or certain portions of the required work to municipalities or local agencies. Only projects for publicly owned freshwater lakes that the state has prioritized and certified as being in accordance with the State Water Quality Management Plan are eligible for grant assistance.

The Clean Lakes Program provides for Phase I grants and Phase 2 grants. The purpose of a Phase I grant is to conduct a diagnostic-feasibility study to determine a lake's characteristics, and evaluate and recommend a feasible course of action to address identified problems for the restoration and preservation of the quality of the lake. Phase I grants are awarded up to \$100,000 per grant, with a 70% federal/30% grantee match. A Phase 2 grant is for the implementation of recommended pollution control or lake restorative methods and procedures. The federal share of Phase 2 matching grants is 60%, with the grantee paying 40%. The award of a Phase I grant is not a prerequisite for a Phase 2 grant. However, a Phase 2 grant application for a proposed project not studied under a Phase I grant must contain required diagnostic and feasibility information.

All applications for Phase I and Phase 2 grants are evaluated and awarded on the basis of merit and national competition in accordance with the proposal review factors and available appropriations for the clean lakes program. The proposal review factors include technical feasibility, public benefit, reasonableness of proposed costs, environmental impact, and the state's priority ranking of the lake project.

Before awarding grant assistance, the Regional Administrator must determine that pollution control measures in the lake watershed required by section 201, approved 208 planning, and section 404 of the Clean Water Act are in place, or progressing according to an approved plan or discharge permit by the time of project completion. Clean lakes funds may not be used for the control of point source discharge of pollutants where the issuance of municipal or industrial permits under section 402 of the Act or the planning and construction of wastewater treatment facilities under section 201 of the Act will lead to alleviation of the cause or causes of pollution.

# CLEAN LAKES PROGRAM (Office of Water and Waste Management) (continued)

Water Conservation Provisions: Water conservation is promoted to the extent that water supplies are maintained with a minimum of pollution. Methods of pollution control are applied to lakes, allowing greater use or conservation of water resources.

Applicant Eligibility: State, city and county governments or other locally and municipally constituted authorities. This program is available to each state, territory and possession of the U.S., including the District of Columbia.

Legal Authority: Section 314 of the Clean Water Act of 1977, PL 95-217.

Current Status/Scope of Program: Estimated funding of FY '78 is \$17,073,000 and for FY '79: \$15,383,000. Lake restoration grants range from \$11,710 to \$1,718,000; the average is \$306,000.

Funded projects demonstrate a number of different methods for lake restoration including lake drawdown, flushing nutrients from lakes, diverting nutrients and sediments from lakes, removing nutrients within lakes through dredging, and shoreline stabilization. Projects also include hypolimnetic aeration.

Information Contacts: Regional or Local: Individuals are encouraged to communicate with the appropriate EPA Regional Administrator.

Headquarters: For information concerning grant applications and procedures, contact:

Environmental Protection Agency  
Grants Administrative Division, PM 216  
Washington, D.C. 20460

For program information contact:

Mary Holland  
Office of Research Program Management, RD-674  
Office of Research and Development  
Environmental Protection Agency  
Washington, D.C. 20460 Telephone: (202) 426-2275

## CONSTRUCTION GRANTS FOR WASTEWATER TREATMENT WORKS (Office of Water and Waste Management)

Type of Assistance: Project grants to assist and serve as an incentive in construction on municipal sewage treatment works which are required to meet state and federal water quality standards.

Nature of Program: EPA's Construction Grants Program is the major pollution abatement program of the federal government in partnership with state and municipal governments. Grants are for the construction of municipal wastewater treatment works including privately owned individual treatment systems, if a municipality applies on behalf of a number of such systems. Such works may serve all or portions of individual communities, metropolitan areas, or regions. A project may include, but may not be limited to, treatment of industrial wastes. The grantee must require pretreatment of any industrial wastes which would otherwise be detrimental to efficient operation and maintenance, or grantee must prevent the entry of such charges, and in addition, recover from industry capital costs associated with the treatment of industrial wastes. (Industrial cost recovery payments have been suspended until July 1, 1979.)

Funds are obligated through project grants to any municipal, intermunicipal, state, inter-state agency, or Indian Tribe having jurisdiction over disposal of wastes. Grant awards within individual states are limited by the funds which have been allocated to each state. The grant is for 75% of eligible project costs. If certain requirements are met, including the use of innovative and alternative technologies, the federal share could be increased to 85%. The remaining costs are the responsibility of the grant recipient.

As mandated by law, the goal of the program is to abate water pollution and enhance water quality in order to provide for the protection and propagation of fish, shellfish and wildlife and increase the recreational uses of our nation's waterways.

Water Conservation Provisions: Key provisions of this program promote and encourage water conservation measures:

- 1) Encouraging innovative and alternative treatment processes (techniques which foster recycling and reuse of water and waste materials, energy conservation and recovery

# CONSTRUCTION GRANTS FOR WASTEWATER TREATMENT WORKS (Office of Water and Waste Management (continued))

and cost reduction). New provisions for innovative and alternative technology include:

- a) "(EPA shall not make grants...to any state, municipality, or inter-municipal or inter-state agency for the erection, building, acquisition, alteration, remodeling, improvement, or extension of treatment works unless the grant applicant has satisfactorily demonstrated to (EPA) that innovative and alternative wastewater treatment processes and techniques...have been fully studied and evaluated..." (excerpt from 1977 Clean Water Act)
  - b) Federal grants for innovative and alternative facilities will provide 85% of construction costs rather than the normal 75%.
  - c) To provide funds for the increase from 75% to 85% grants, two percent of construction grant funds allocated to each state (three percent in fiscal 1981) must be set aside for innovative and alternative facilities--with at least one-half of one percent earmarked for innovative facilities.
  - d) To help speed deployment of innovative and alternative technology, projects using alternative or innovative techniques are to be given preference and qualify for the 85% grant if their life cycle cost under a cost effectiveness analysis does not exceed the life cycle cost of the most cost effective conventional alternative by more than 15%.
  - e) The amendments provide an "insurance policy" -- EPA will pay 100% of the costs of modifying or replacing any innovative or alternative facility which does not meet design performance standards, and shows significantly increased operation and maintenance costs. (100% grants are also available for technical evaluation and dissemination of information.)
  - f) States are empowered to modify their priority systems for allocating federal grant funds to give higher priority ratings to design of innovative and alternative facilities.
  - g) Four percent of grant funds allotted to each state with a rural population of 25% or greater "shall be available only for alternatives to conventional sewage treatment works for municipalities having a population of 3,500 or less, or for the highly dispersed sections of larger municipalities."
  - h) The federal government is to play a leadership role in utilizing innovative and alternative technologies. After September 30, 1973, construction may not be initiated on any wastewater treatment works at a federal property or facility unless innovative or alternative techniques are utilized; this requirement does not apply, however, if the costs of innovative and alternative techniques are more than 15% above the most cost-effective alternative.
  - i) On the industrial side, the 1983 best available technology deadline may be extended until July 1, 1987, for an industry installing an innovative pollution control system.
- 2) New costs effectiveness guidelines: These emphasize identification and selection of cost effective alternatives which provide for recycling and reuse of effluents, pollutants, and sludges.
- a) The new amendments provide a 15% cost effective bonus for application of innovative and alternative technology.
  - b) The guidelines have undergone a major revision redirecting their emphasis to non-conventional solutions which include innovative and alternative processes.
  - c) The guidelines promote flow reduction measures by imposing more stringent reserve capacity requirements.

Applicant Eligibility: Any municipal, intermunicipal, state, interstate agency, or Indian Tribe having jurisdiction over disposal of wastes. This program is available to each state, territory and possession of the U.S., including the District of Columbia.

Legal Authority: Title II of the Federal Water Pollution Control Act, as amended, PL 92-500; amendments under the Clean Water Act of 1977, PL 95-217.

Current Status/Scope of Program: In FY '77 4,357 new projects were assigned. In FY '78, 5,600 will be assigned. Grant funding in FY '77 totalled \$6,669,100,000. Estimated FY '78 funding is \$4,500,000,000 and estimated FY '79 is \$5,000,000,000.

Information Contacts: Regional or Local: Information regarding appropriate waste treatment requirements and state and federal assistance may be obtained from the state water pollution control agency. Individuals may also communicate with appropriate EPA Regional Administrators.

Headquarters: Director

Municipal Construction Division (WH-547)

Office of Water Programs Operations

Environmental Protection Agency

Washington, D.C. 20460

Telephone: (202) 426-8986

SECTIONS 104(o), 105(d)(2), 105(e)(1), and 214 OF THE CLEAN WATER ACT OF 1977, P.L. 95-217  
(Office of Water and Waste Management)

The following programs under the 1977 Clean Water Act, P.L. 95-217 have extensive water conservation potential. They are listed as programs that the Office of Water and Waste Management, Environmental Protection Agency, is considering for higher priority.

- 1) Section 104(o) of the Clean Water Act of 1977 states that the Agency shall conduct research and investigations on water conservation devices, incentives, pricing policy, and other methods of reducing the total flow of sewage, including, but not limited to, unnecessary water consumption in order to reduce the requirements for, and the cost of, sewage and waste treatment services.
- 2) Section 105(d)(2) requires the Agency to conduct research and development on alternative methods of wastewater reclamation and reuse.
- 3) Section 105(e)(1) requires the Agency to conduct research and development on alternative methods of reducing agricultural discharges.
- 4) Section 214 requires the Agency to conduct a continuing program of public information and education on sewage/flow reduction, and wastewater/reclamation wastewater (including sludge) and reuse, and the use of land treatment. Such activities, except for land treatment, have thus far been assigned a low priority.

EPA is considering the following options:

- conducting studies quantifying the benefits of agricultural, industrial and municipal water conservation measures; especially differentiating the benefits of reducing withdrawals vs. reducing consumption.
- conducting studies establishing, for each industry subject to Section 302 provisions, available water conservation measures, the effects of such water conservation on pretreatment and municipal treatment efficiencies, and feasible levels of wastewater flow reduction resulting from the implementation of such measures.
- developing wastewater effluent quality requirements for industrial, agricultural, and landscaping uses, and groundwater recharge.
- conducting seminars on case studies where municipalities, industry and agriculture have implemented water conservation programs with associated costs, benefits and impacts.
- conducting studies on the degree of reuse of water by industry in relation to the availability or value of water and to the cost of waste treatment.
- conducting studies on the costs and benefits of water system metering as a basis for establishing user charge system surcharges, increasing block rate structures or peak use surchargers.

#### STATE AND AREAWIDE WASTE TREATMENT MANAGEMENT (Office of Water and Waste Management)

Type of Assistance: Project grants

Nature of Program: The State and Areawide Waste Treatment Management Program is a component of the Water Quality Management Program. The Water Quality Management program is an umbrella program coordinating water pollution abatement activities funded under Section 106, Section 208, Section 314, and part of Section 205(g) of the Act and also satisfying requirements of Section 303(e) of the Act.

Under the State and Areawide Waste Treatment Management Program, states and areawide planning agencies designated by the Governor receive grants from the Environmental Protection Agency for the development of water quality management plans for the abatement of water pollution in order to achieve the goals of the Clean Water Act of water suitable for swimming, fishing, and protection of wildlife by 1983, where attainable. Participating agencies receive grants (up to 75% under Section 208) to conduct water quality assessments; identify water quality and source control problems and priorities; and determine effective point and non-point source controls to be implemented by designated state, areawide and local agencies. Plans must provide for the development of institutional processes, including fiscal and management structures, to make and implement coordinated state and areawide water quality management decisions. At a minimum, award of sewage treatment plant construction grants and issuance of discharge permits must be consistent with approved water quality management plans.

## STATE AND AREAWIDE WASTE TREATMENT MANAGEMENT (Office of Water and Waste Management) (continued)

The available funding for a given fiscal year is divided among the ten Environmental Protection Agency regional offices in accordance with a ratio weighted according to land area and population of the planning areas in the regions. States and areawide planning agencies with a given EPA region negotiate their specific grant amounts with the EPA regional office.

Water quality management decisions made in developing and implementing water quality management plans affect the use of water. There is a close relationship between water quality and water quantity. Decisions leading to higher water quality lead to increased utility of water for various uses.

Water Conservation Provisions: The proposed water quality management regulations contain no disincentives to water conservation. The only explicit incentive is the requirement that water conservation needs be considered in determining wastewater treatment facilities needs. (See 40 CFR Part 35, 1519-6(d)(1)). Best management practices for control of non-point source water pollution which are implemented as a result of water quality management plans often conserve water, although to date, that effect has not been explicitly recognized.

Applicant Eligibility: This program is available to each state, territory and possession of the U.S., including the District of Columbia. An applicant must be a Regional Planning Agency designated by the Governor or appropriate local officials pursuant to Section 208(a)(2)-(4), and approved by the Administrator of EPA as the official areawide waste treatment management planning agency for the area; or a state agency identified by the Governor pursuant to Section 208(a)(6).

Legal Authority: Sections 208 and 303(e) of the Clean Water Act of 1977, P.L. 95-217.

Current Status/Scope of Program: An estimated 125 grant awards are to be made in FY'78, totaling an estimated \$19,000,000. The range of grants is \$300,000 to \$3,000,000. The average grant size was \$1,250,000. FY '79 figures are not available.

Information Contact: Regional or Local: Environmental Protection Agency Regional Offices  
Headquarters: Acting Director  
Water Planning Division  
Environmental Protection Agency  
Washington, D.C. 20460 Telephone: (202) 426-7764

## STATE POLLUTION CONTROL PROGRAM (Office of Water and Waste Management)

Type of Assistance: Project grants to states and interstate agencies to assist them in administering programs for the prevention, reduction, and elimination of pollution, including enforcement directly or through appropriate state law enforcement officers or agencies.

Nature of Program: The 106 program is a component of the water quality management program. The water quality management program is an umbrella program coordinating water pollution abatement activities funded under Sections 106, 208, 314, and part of 205(g) of the Act and also satisfies requirements of Section 303(e) of the Act.

Section 106 authorizes grants to be made to states and interstate agencies for the purpose of assisting them in administering programs for the prevention, reduction and elimination of pollution. Grants under 106 provide assistance for federal and state priority activities including water quality standards review and revision; monitoring and reporting; administration of delegated wastewater facility management; National Pollutants Discharge Elimination System (PDDES) permitting and enforcement programs; emergency response programs; water quality management planning coordination; and other appropriate priorities.

Funding is allocated to state and interstate agencies on the basis of the extent of the pollution problem. State allotment ratios are based on a count of pollution sources for each state compared to a count of the pollution sources in the nation. Interstate allotment ratios are based on the level of funding received in fiscal year 1973.

Section 106 grants can be used for a variety of purposes. According to the Act, these grants are authorized "to states and to interstate agencies to assist them in administering programs for the prevention, reduction, and elimination of pollution." Present regulations list nine major program elements which can be funded by Section 106. Other water pollution control activities are also eligible. Among those areas with most relevance to the encouragement of water

## STATE POLLUTION CONTROL PROGRAM (Office of Water and Waste Management) (continued)

conservation are the following:

- 1) National Pollution Discharge Elimination System (NPDES). This program regulates the discharge of pollutants from point sources into the waters of the United States. All such discharges are unlawful in the absence of an NPDES permit. Often a permit is obtained for a discharge not in compliance with all permit terms and conditions and is unlawful. NPDES permits are issued by the Director of an approved state NPDES program, or, where there is no approved state program, by the EPA Enforcement Director. Such permits may specify maximum concentrations of pollutants, performance criteria or other appropriate limitations.
- 2) 305(b) Water Quality Report. Section 305(b) reports, which must be prepared biannually by the states, are concerned with assessing water quality problems and their causes; progress toward meeting the 1983 goals of the Act; and the social, economic, and environmental impact of meeting these goals. The information developed in the Report is part of the problem assessment required in water quality management plans; an annually updated five-year state strategy must address problems identified in the assessment.

More specifically, Section 305(b) requires states to provide the following information:

- a description of current water quality relative to the fishable/swimmable goals of the Act.
  - projections of water quality conditions after implementation of the control programs specified in the Act.
  - an estimate of the environmental, social and economic impacts of achieving or not achieving the goals of the Act.
  - an assessment of nonpoint source problems, along with recommendations for their control.
  - an evaluation of the effectiveness of existing pollution control programs and recommendations for future modifications to those programs, if needed.
- 3) Water Quality Standards. Water quality standards are an essential part of the state water quality management (WQM) system.
    - publicly define the state's water quality objectives, and hence form the basis for its planning.
    - serve as the basis for determining National Pollution Discharge Elimination System (NPDES) permit effluent limitations for pollutants which are not specifically addressed in the effluent guidelines or the pollutants for which the effluent guidelines are not stringent enough to protect desired uses.
    - serve as a basis for evaluating and modifying Best Management Practices (BMP) for control of nonpoint sources.
    - serve as a basis for judgement in other water quality related programs, including water storage for regulation of stream flow, water quality inventories, control of toxic substances, thermal discharges, cooling lakes, aquaculture, and dredged and fill activities.
    - contain the state's antidegradation policy.

Standards must be reviewed and revised where appropriate at least once every three years to assure that the standards are consistent with the Act and regulations.

EPA strongly supports the establishment of water quality standards which will support the protection and propagation of fish, shellfish and wildlife and recreation in and on the water. In furtherance of this objective, EPA believes that water quality standards should be established at levels consistent with the national water quality goal of Section 101(a)(2) of the Act for every stream segment wherever those levels are attainable.

- 4) State/EPA Agreement (SEA). Preparation of the SEA is funded in part by Sections 106 and 208, which cover some program administrative costs. More significantly, the SEA will be the mechanism for states to decide how to solve their priority environmental problems with available federal funds (including those allocated under Section 106) as well as matching state funds.

The SEA is negotiated annually between the Regional Administrator and the Governor. It identifies water quality management problems and objectives, describes coordination with other environmental programs, summarizes major work program outputs, and includes a detailed annual work program for water quality management. In FY 1979 EPA is requiring all regions and

## STATE POLLUTION CONTROL PROGRAM (Office of Water and Waste Management) (continued)

and states to develop comprehensive SEA's covering all Clean Water Act programs. Beginning in FY 1980, SEA's will intergrate and coordinate environmental programs in all states creating joint planning and implementation of Safe Drinking Water Act, Resource Conservation and Recovery Act, and Clean Water Act program.

The SEA will be a decision document which reflects important decisions on environmental and programmatic problems, priorities, timing, responsibilities, and allocation of funds. It will be a management tool which focuses top management attention on the evaluation and accomplishment of major environmental objectives. Finally, it will be a communication and information document useful to local governments, areawide agencies, affected or interested publics, and others.

Applicant Eligibility: Project grants to states and interstates to assist them in administering programs for the prevention, reduction, and elimination of pollution, including enforcement directly or through appropriate state law enforcement officers or agencies.

Legal Authority: Section 106 of the Clean Water Act of 1977 (P.L. 95-217).

Current Status/Scope of Program: Funding is appropriated annually. Funding for FY '73-79:  
1973 - \$40.0 million; 1974 - \$40.0 million; 1975 - \$48.5 million;  
1976 - \$50.0 million; 1977 - \$50.0 million; 1978 - \$52.4 million, 1979 - \$52.4 million.

The range of financial assistance is \$85,400 to \$3,086,000; the average funding is \$938,000.

Information Contact: Regional or Local: Contact appropriate EPA Regional Administrator.  
Headquarters: Chief  
Program Management Branch  
Water Planning Division  
Office of Water and Waste Management  
Environmental Protection Agency  
Washington, D.C. 20460 Telephone: (202) 755-2117

EXECUTIVE OFFICE OF THE PRESIDENT

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COUNCIL ON ENVIRONMENTAL QUALITY (Executive Office of the President)

Type of Assistance: Information; research; contracts; advocacy and advice aimed at other agencies.

Nature of Program: Located within the Executive Office of the President, the Council on Environmental Quality (CEQ) works in a variety of ways, including conducting research and publishing reports to improve the performance of federal agencies in environmental protection and to recommend national policies to promote environmental improvement. One of CEQ's missions is to review and comment on Environmental Impact Statements prepared by other federal agencies, describing the environmental impact of major federal actions likely to affect the environment. This responsibility can be, and is frequently, exercised in such a way as to encourage other agencies to improve their water conservation performance. CEQ is currently sponsoring some research on water conservation, including a review of recent experiences during the California drought.

Applicant Eligibility: Published reports and information are available to the general public. Qualified individuals and groups might also be eligible to do research work at CEQ under contract.

Legal Authority: National Environmental Policy Act of 1969, 42 U.S.C. 4321 et seq; Environmental Quality Improvement Act of 1970; 42 U.S.C. 4372.

Information Contact: Council on Environmental Quality  
Executive Office of the President  
722 Jackson Place, N.W.  
Washington, D.C. 20006 Telephone: (202) 633-7027

WATER RESOURCES COUNCIL

PRINCIPLES AND STANDARDS REVISION (Water Resources Council)

(Information to be included in the next publication of the Directory.)

PLANNING GRANTS TO STATES (Water Resources Council)

(Information to be included in the next publication of the Directory.)



## RIVER BASIN COMMISSIONS

### GREAT LAKES RIVER BASIN COMMISSION (River Basin Commissions)

The Great Lakes River Basin Commission is preparing a basin-wide plan for the best use and conservation of the Basin's resources. One of the issues being addressed is an assessment of the potential for water conservation in the Great Lakes. This issue is separated into municipally supplied areas, agricultural concerns and industrial recycling/reuse.

The municipally supplied portion is in a revised draft form; the other two portions of water conservation are just being initiated and initial results are expected soon. Also available are the proceedings of a water conservation conference held in December 1977.

For further information contact: Louis Meyer, Charles Job and Dr. Paul Nickel  
Great Lakes River Basin Commission  
3475 Plymouth Road  
P.O. Box 999  
Ann Arbor, Michigan 48106 Telephone: (313) 668-2300

### MISSOURI RIVER BASIN COMMISSION (River Basin Commissions)

The MRBC was established in 1972 under the authority of the Water Resources Planning Act of 1965. It is the principal agency for the coordination of federal, state, interstate, local and non-governmental plans for the management of water and related land resources in the Missouri River Basin.

Commission planning activities are conducted in accordance with adopted federal principles and standards incorporating economic and environmental considerations and the President's recent policy directives for water conservation. Results of the Commission's programs provide decision-makers with information required to properly manage the water and related land resources in the Missouri Basin. Commission activities are funded from federal and state sources. There are no grant or loan provisions for activities outside of Commission programs.

The Commission's adopted regional water plan contains several elements dealing with improved methods of water conservation primarily for agricultural purposes. These include cooperative state-federal data collection programs, numerous water conservation studies conducted at university research centers and other state-and federally-led programs aimed at improving efficiency in water use. In the near future, the Commission is proposing to conduct a Missouri River Basin hydrology study and sponsor an irrigation water conservation program, both addressing water conservation. In its activities, the MRBC continues to advocate the conservation of the Basin's scarce water resources.

Information on the Commission's activities may be obtained from Dr. Millard W. Hall, Chairman.  
Missouri River Basin Commission  
10050 Regency Circle  
Suite 400  
Omaha, Nebraska 68114

### NEW ENGLAND RIVER BASIN COMMISSION (River Basin Commissions)

Type of Assistance: While not a source of water conservation financial assistance per se, the Commission's strength lies in its ability to provide sound water and related land information, including information focusing on water conservation. Two new projects, recent additions to the Commission's program will emphasize: 1) urban water problems as they relate conservation as a viable alternative to new water supplies in New England and 2) will study the feasibility of water conservation measures in New England -- to what extent they will prove efficient, in what time frame, and at what costs.

Public participation and input into these projects will be beneficial not only to those making inquiries but to those in the Commission who are undertaking the studies.

Nature of Program: As a state-federal partnership, NERBC is responsible for coordinating the water and related land resource plans for New England. Its major objective is the wise planning and management of the region's water and related land resources. The Commission accomplishes its coordination tasks by undertaking a series of studies which help the region to define its major water and related resource problems and then recommends solutions to these problems in a

## NEW ENGLAND RIVER BASIN COMMISSION (River Basin Commissions) (continued)

variety of water related areas: through informational overviews of the region's major river basins; studies of hydroelectric power potential and the water resource characteristics related to power plant siting; concerns on coastal resource issues; and through regular assessments of the region's major water and related land resource problems. The information provided by the Commission includes the results of its own studies to which the research of other agencies and groups constantly contributes. Information from the Commission can appear in major reports, regular annual reports, and quarterly reports designed especially for the interested "lay" public, as well as in news releases, frequent workshops and seminars, and through the Commission's extensive library which is open to the public. No audience is barred from taking advantage of the Commission's informational resources. For those interested in water conservation, the Commission can provide not only sound background information but a wealth of suggestions on where additional information can be found in the region, both in terms of technical and non-technical information.

Applicant Eligibility: There are no restrictions on eligibility of persons seeking information that the Commission can provide.

Legal Authority: The Commission is not a policy-making body, but in terms of the representation on the Commission (six New England states and New York, 9 federal agencies, and six inter-state agencies), decisions made by the Commission represent a consensus by all members. Directions for forming new legislation or revising old may come directly or indirectly from the Commission's decisions. NERBC legal authority emanates from Title II of P.L. 89-90, the Water Resources Planning Act of 1965.

Current Status/Scope of Program: The Commission's jurisdiction covers the entire New England region. For the FY July 1, 1978 to June 30, 1979, the Commission's total budget was \$2,378,000. This figure represents an operational budget of \$582,000 provided by a combination of state and federal funds, and a separate funding budget of \$1,796,000 (funds provided by other federal agencies for special projects).

Information Contacts: John R. Ehrenfeld, Chairman  
Robert D. Brown, Staff Director  
Frances B. King, Public Information Officer  
New England River Basin Commission  
53 State Street, First Floor  
Boston, MA 02109

Telephone: (617) 223-6244

## OHIO RIVER BASIN COMMISSION (River Basin Commissions)

(Information to be included in the next publication of this Directory.)

## PACIFIC NORTHWEST RIVER BASIN COMMISSION (River Basin Commissions)

(Information to be included in the next publication of this Directory.)

## UPPER MISSISSIPPI RIVER BASIN COMMISSION (River Basin Commissions)

(Information to be included in the next publication of this Directory.)

## GENERAL SERVICES ADMINISTRATION

WATER CONSERVATION AT FEDERAL FACILITIES**WATER CONSERVATION AT FEDERAL FACILITIES**

Type of Assistance: Information and advice to the public.

Nature of Program: The General Services Administration has taken a number of internal administrative steps towards conserving water in its facilities. These programs and activities include:

- 1) Two emergency plans:
  - The Water Use Reduction Contingency Preparation Plan: an inventory of all water consuming equipment in a building or facility, with each item assigned a sequence of priority. This sequence represents the order in which the equipment is to be shut down, regulated or curtailed.
  - The Water Use Reduction Action Plan for Emergency Situations: the plan for mandatory actions necessary to completely implement the previous plan.
- 2) Several activities aimed at increasing water conservation through more efficient hardware and equipment in new construction and retrofitting:
  - Accumulation and evaluation of information about the latest plumbing, heating, and air-conditioning equipment having water saving characteristics. Recommendations were then made on what equipment should be included in General Service Administration buildings.
  - A survey was conducted during 1977-78 to determine the total volume of water used for each building that year, to establish the base level of use.
  - On March 27, 1978, a directive was sent to all regional offices ordering them to establish a greater degree of preventive maintenance for their plumbing fixtures, to achieve more efficient operations of air-conditioning equipment, and to minimize their use of water for gardening and irrigation. The objective is to achieve a 10% reduction in water use in General Service Administration facilities. Results will be available approximately Jan. 1, 1979.
  - Information on recommended "Flow Rates and Water Pressures for Plumbing Fixtures" for economical water usage was distributed and required for all retrofitting, etc.
  - A retrofitting program having water conservation as a goal is planned for 1980-1982 under the Repair and Alteration Program.
- 3) Several studies are recommended by the General Services Administration to gather more information and create further ideas for water conservation techniques:
  - An evaluation study to assess the demands for water within GSA and federal agency facilities in areas of water shortage or potential water shortage, and the effect that shortage will have on ongoing federal operations in these facilities.
  - Evaluation of the opportunity for water recycling in office buildings, particularly of "greywater" (non-sewage water, e.g. from washing, etc.) which may represent as much as 40% of all water used in a building according to some unconfirmed estimates.
  - A basic study of the most efficient pipe sizes to be used to transport water in General Services Administration buildings.
  - A study to investigate the economics of retrofitting old buildings to utilize rain water. Rain water is used for irrigating lawns and shrubbery, and for flushing toilets and urinals. In buildings where this is done, savings of up to 30% in water consumption have been achieved.
  - A study to determine the most efficient means of using water for custodial cleaning operations (floor scrubbing, etc.).
  - A study to determine more efficient methods of water use in food operations: vegetable cleaning, dishwashing, etc.; and a study of possible ways to recycle this water for other uses.
  - An ongoing program must be carried out to evaluate new equipment and devices that are reaching the market.

Applicant Eligibility: Not applicable.

Legal Authority: Administrative changes in existing authorization.

Current Status/Scope of Program: Applies to all General Services Administration facilities, and is recommended for all other federal facilities.

Information Contact: Harold Pavel  
General Services Administration Building  
19th and F Street, N.W., Room 4341  
Washington, D.C. 20410

Telephone: (202) 566-0971

## NATIONAL SCIENCE FOUNDATION

<u>Page</u>	<u>Program</u>
70	Applied Science and Research Applications
70	Science and Society Program

## APPLIED SCIENCE AND RESEARCH APPLICATIONS

Type of Assistance: Project grants; research contracts

Nature of Program: This National Science Foundation program supports research and related activities which contribute to the understanding and resolution of significant problems facing the Nation. The nine areas of research include Problem-Focused Applications, which itself includes the problem area of community water management.

Water Conservation Provision: Analysis of community water management is likely to include a focus on water conservation.

Applicant Eligibility: Public and private colleges and universities, nonprofit institutions, State and local governments, profit-making institutions including small businesses, and agencies.

Legal Authority: National Science Foundation Act of 1950, amendments through August 15, 1977, P.L. 81-507.

Current Status/Scope of Program: Estimated funding for FY 78 is \$57,903,000 and for FY 79: \$73,900,000. The range of financial assistance is \$1,000 to \$2,006,000; the average is \$99,000. Approximately 585 awards are estimated to be made in FY 78; 625 awards in FY 79.

Information Contacts: Regional or Local: None

Headquarters: Dr. Gordon Jacobs  
National Science Foundation  
1800 G St., NW  
Washington, D.C. 20550

Telephone: (202) 632-5924

## SCIENCE AND SOCIETY PROGRAM

Type of Assistance: Project Grants

Nature of Program: This National Science Foundation program is aimed to improve public understanding of the ways in which scientific information and understanding are developed, and the contributions that science and technology make to modern society; to increase understanding of the interactions between the scientific enterprise where science and technology affect public issues, values or objectives or where social values and objectives have important implications for science and technology policies and priorities; and to encourage and facilitate interactions between scientists and the general public on issues having a significant science and technology content.

Water Conservation Provisions: Water conservation is one of the many issues that could be looked at in this program.

Applicant Eligibility: Public and private colleges and universities, independent nonprofit organizations, professional societies, and for-profit organizations (in special cases).

Legal Authority: National Science Foundation Act of 1950, amendments through August 15, 1977.

Current Status/Scope of Program: Estimated funding for FY 78 is \$5,388,000 and for FY 79 is: \$6,400,000. The range of financial assistance is \$5,000 to \$225,000; the average is \$42,000. In FY 77, 97 grants were awarded; in FY 78 approximately 139 grants will be awarded; in FY 79 approximately 130 grants will be awarded.

Information Contacts: Regional or Local: None

Headquarters: Director  
Office of Science and Society  
National Science Foundation  
1800 G St. NW  
Washington, D.C. 20550

Telephone: (202) 282-7770

## SUSQUEHANNA RIVER BASIN COMMISSION

Type of Assistance: Information and advice to the public

Nature of Program: The SRBC is one of two river basin commissions funded directly by Congress as an independent agency (the other being the Delaware River Basin Commission). One representative from each of the member states (New York, Pennsylvania, and Maryland) and a Federal representative form the Commission; and each member has an equal vote. The Commission's basic goals and directions are outlined in a Comprehensive Basin Plan against which all government and private and public water development plans or proposals are evaluated. Specific activities and responsibilities of the Commission which affect water conservation include:

- An instream flow needs survey
- A non-point source pollution survey which will provide data needed to find solutions to protect water quality and reduce runoff
- Regulations to encourage water conservation in off-stream withdrawals, including requirements for power plants to replace all water used in time of low flows
- the SRBC works with state agencies in setting water quality standards and controlling discharges of hazardous wastes, and performs an oversight role in these activities, with ultimate authority to reject a permit application.
- A conservation policy for any project using groundwater requires that the user must implement whatever measures are available to ensure conservation, including metering and flow reduction devices.

Applicant Eligibility: General public

Legal Authority: Susquehanna River Basin Compact of 1970, P.L. 91-575

Current Status/Scope of Program: FY 78 budget is approximately \$920,000.

Information Contacts: Executive Director's Office  
Susquehanna River Basin Commission  
1721 North Front St.  
Harrisburg, Pennsylvania 17102

Telephone: (717)238-0422

## T E N N E S S E E   V A L L E Y   A U T H O R I T Y

## TENNESSEE VALLEY AUTHORITY

Type of Assistance: Information and advice to the public.

Nature of Program: Congress created the Tennessee Valley Authority (TVA) for the unified development of the natural resources in the Tennessee River Valley and adjoining areas. TVA is a corporation wholly owned by the federal government. Its programs are financed from three sources: appropriations by Congress, proceeds available from power operations, and proceeds from non-power activities. The TVA is a unique agency which is involved in supplying electricity as a utility and responsible for the comprehensive management of resources in the region including soil and water. TVA is conducting research and development projects in the areas of electrical power generation, energy conservation, and fertilizer development, among others.

Water Conservation Provisions: Broad program areas of the TVA which have an impact on water resources and conservation include:

- Energy Conservation: while most efforts in this area have been concerned with reducing electrical power demands, these activities can have an indirect effect on water conservation. Many aspects of generating and supplying electricity involve use of the water resource, e.g. hydroelectric impoundments, cooling towers, etc.
- Water heat utilization: less than 50% of the heat from power plant boilers is used in generating electricity, and the resulting waste heat must be managed to prevent damage to receiving aquatic systems. TVA is studying ways to use this resource in agriculture (greenhouses), aquaculture, and in cogeneration of power with other industries which can use this heat.
- Pollution control: approximately \$600 million was spent in 1977 on measures for air and water pollution control, including control of discharges of water from coal burning power plants and thermal discharges from nuclear plants.
- Water quality studies: TVA has conducted studies on thermal pollution effects on fisheries, control of obnoxious aquatic plants, and tohens.
- the River Reclamation Project on the French Broad River is designed to restore the recreational value of various river segments.
- Environmental Radiation Monitoring is carried out at nuclear sites to detect and examine any effects on the surrounding environment.
- Strip Mine Reclamation: by reducing non-point source pollution, the reclamation of mines has important water quality and supply benefits.
- Environmental Education: especially at the Land Between the Lakes project, environmental education can have important long range benefits towards resource conservation and improvement.
- Water Resources Development: TVA is responsible for a broad range of water projects and resource management areas, including:
 

<ul style="list-style-type: none"> <li>·navigation</li> <li>·flood control (involving both structural and non-structural measures)</li> <li>·water quality</li> <li>·recreation (including stream and lake boating and fishing)</li> </ul>	<ul style="list-style-type: none"> <li>·fisheries and wildlife (including management of 175,000 acres of wetlands)</li> <li>·agriculture, forest, and mineral resources</li> <li>·related economic and industrial development</li> </ul>
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Applicant Eligibility: General public.

Current Status/Scope of Program: FY '77 budget level \$125,930,000.

Information Contacts: Tennessee Valley Authority  
1426 H Street, N.W.  
Washington, D.C. 20011      Telephone: (202) 566-1401

Tennessee Valley Authority  
Knoxville, Tennessee      Telephone: (615) 632-2101