

**To
Governor George S. Mickelson
and the
Sixty-Seventh Session, Legislative Assembly
1992**

**1992 STATE WATER PLAN
and
1991 ANNUAL REPORT**

**Board of Water and Natural Resources
January 1992**

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**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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**Governor George S. Mickelson
and Members of the Legislature
Sixty-Seventh Legislative Session**

Transmitted herewith is the 1992 State Water Plan and the 1991 Annual Report of the Board of Water and Natural Resources. The State Water Plan outlines the projects in the State Water Facilities Plan and gives the recommendations on projects for inclusion in the State Water Resources Management System. The Annual Report describes the past year's water resources management activities throughout the state.

As I begin the second year of my appointment as the Secretary of the Department of Environment and Natural Resources, I am constantly reminded of how important our role is in the state. Our activities have a bearing on the lives of every South Dakotan in one form or another.

In 1991 we have focused our efforts on "protecting South Dakota's tomorrow...today". In April the Department's name was changed by executive order to reflect the broader environmental issues that we work with every day. With that change we focused our agenda on the "Ten To Do by '92". Some of the major issues were water development, infrastructure financing, non-point source pollution control, lake restoration, and groundwater research and public education.

In the area of major water project development, the Mni Wiconi rural water system received a congressional appropriation of \$2.15 million. The Belle Fourche irrigation project received over \$7.8 million for rehabilitation efforts. The WEB rural water project celebrated the completion of its multi-year construction project.

The Lake Andes-Wagner/Marty II irrigation and Mid-Dakota rural water projects introduced revised federal legislation in 1991. Congressional hearings were held on both projects in June of 1991. The Mid-Dakota and Lake Andes-Wagner/Marty II legislation passed the U.S. House in June of 1991, but did not pass the U.S. Senate.

The U.S. Army Corps of Engineers was awarded \$235,000 for continued efforts on the James River Environmental

Initiative. Additionally, the Corps of Engineers was active in four flood control projects: one on the Vermillion River, two on the Big Sioux River, and one near Aberdeen. The Corps received \$145,000 for the Vermillion River, \$280,000 for the Sioux Falls/Big Sioux study, \$314,000 for the Watertown/Big Sioux study, and \$96,000 for the Aberdeen study.

The Department was successful in getting the Bureau of Reclamation involved in the Black Hills Hydrology Study. The Bureau of Reclamation also received study appropriations for two rural water systems.

The Board of Water and Natural Resources continued efforts to move forward with upgrading the Oahe and Ft. Randall dams and retained financial consultants to analyze opportunities to fund the \$35 million effort. The staff and Board members met with public and private power officials to discuss the merits of the upgrade projects.

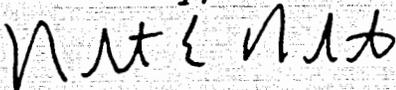
In addition to the major project accomplishments, 29 water and wastewater projects totaling over \$8 million were funded using state and local funds.

The lake restoration program implemented 11 Lake Assessment Studies in South Dakota lakes and continued work on 4 lake restoration projects. The non-point source program continued efforts on 23 projects statewide.

Finally, the new Groundwater Research and Public Education Program funded 7 projects totaling \$316,633.

We will continue to work toward the successful implementation of these programs. With your help we can protect the environment for all South Dakotans.

Sincerely,



Robert E. Roberts
Secretary

TABLE OF CONTENTS

Preface	iv
STATE WATER PLAN	
Overview	1
Purpose	1
Structure	1
◦ State Water Facilities Plan	2
◦ State Water Resources Management System	3
Planning Process	3
◦ State Water Facilities Plan	3
◦ State Water Resources Management System	7
ANNUAL REPORT	
Board of Water and Natural Resources Report	10
1991 Water Development Legislation	11
◦ Federal Legislation	11
◦ State Legislation	12
Water Facilities Construction Fund - Progress Report	13
◦ Consolidated Water Facilities Construction Fund	13
◦ Solid Waste Management Program	15
◦ State Water Resources Management System	15
Belle Fourche Irrigation Project	16
Big Sioux Flood Control Study	17
Black Hills Hydrology Study	17
Brennan Reservoir	18
CENDAK Irrigation Project	18
Dakota Dunes	18
Dakota Lakes Research Project	19
Garrison Extension Study	19
Gregory County Pumped Storage Project	19
James River Improvement Program	21
Lake Andes-Wagner/Marty II Irrigation Unit	21
Lake Herman Restoration Project	22

Mid-Dakota Rural Water System	22
Missouri River National Recreational River	23
Mni Wiconi Rural Water System	24
Pick-Sloan Riverside Irrigation	24
Sioux Falls Flood Control Project	25
Slip-Up Creek	25
Lewis and Clark Rural Water System	26
Vermillion Flood Control Project	26
Water for Energy Transport (WET)	27
WEB Pipeline Project	27
West River Aqueduct	27
◦ State Revolving Fund	28
Environmental Protection Agency Wastewater Facilities Construction Grants Program	32
Lake Restoration/Nonpoint Source Pollution Program	32
Groundwater Research and Public Education Program	33

TABLES

1. State Water Facilities Plan (Planning Stage)	4
2. State Water Facilities Plan (Funded Stage)	5
3. State Water Resources Management System	8
4. 1991 Water Facilities Construction Fund	13
5. 1991 Construction Loan Program	14
6. 1991 Consolidated Grant Awards	15
7. State Water Resources Management System Funding Summary	16
8. Study Loan Program Status	16
9. State Revolving Fund Loans	29
10. Intended Use Plan	30
11. 1991 EPA Construction Grants	32
12. 1991 Lake Restoration/Nonpoint Source Projects	33
13. Groundwater Research and Public Education Fund	34

Appendixes

- A) BWR State Water Resource Management System Resolutions
- B) Water Facilities Construction Fund Condition Statement
- C) Water Facilities Construction Fund Statement and Schedules

Preface

The purpose of this document is to fulfill the statutory requirements placed on the Board of Water and Natural Resources (BWNR). These requirements are generally outlined as follows:

- * *SDCL 46A-2-2 To prepare and submit to the Legislature and Governor a yearly progress report on the State Water Plan*
- * *SDCL 46A-1-10 To make recommendations to the Governor and Legislature concerning projects for the State Water Resources Management System*
- * *SDCL 46A-1-14 To make an annual report on all activities during the preceding*

year and funding recommendations necessary to implement the water plan

The report consists of two principal sections: the 1992 State Water Plan and the 1991 Annual Report. The first section sets forth the state water planning process and those projects enumerated within the process. Also it sets forth recommendations for the State Water Resources Management System and for the funds necessary to implement the State Water Plan. The second section is the annual report which provides the progress report on each project and Board activities during 1991.

PART I
1992 STATE WATER PLAN

STATE WATER PLAN

Overview

In 1972 the State Legislature entrusted the South Dakota Conservancy District with the development of a Comprehensive State Water Plan. The plan was to be based on a study of possibilities for creative and innovative utilization of South Dakota's water resources. At the same time the Legislature passed the South Dakota Water Resources Management Act to serve as the vehicle for implementing the Comprehensive State Water Plan. The 1972 Act provided two approaches for implementing items in the Comprehensive State Water Plan: (1) categorical grant and loan programs, and discretionary bonding authority for small water development projects; and (2) State authorization and bonding for large water development projects.

In 1980, the South Dakota Conservancy District abandoned its efforts to create a general management plan in favor of a more functional planning approach that emphasized specific project development. The State Water Plan continues to evolve as the State's needs evolve or change.

Purpose

The State Water Plan is intended to implement State policy on water resources management, to serve as the principal guide for State policies and priorities, and to identify areas for project assistance.

The South Dakota Legislature established the State Water Plan in 1982. At that time, the Legislature in SDCL 46A-1-1 generally defined the plan's statewide goal:

Statewide Goal

To obtain the optimum over-all benefits of the State's water resources for the general health, welfare, safety and economic well-being of the people of South Dakota through the conservation, development, management, and use of those resources.

The Legislature placed the responsibility upon the Board of Water and Natural Resources to develop a state water plan which would further this goal. SDCL 46A-2-2, established objectives to assist the Board in its efforts to develop this plan.

As required by SDCL 46A-1-7, the Board of Water and Natural Resources established statewide policies for water resources management. The Board recognizes that water resources management encompasses many areas including economic development, irrigation, water conservation, domestic water, tourism, rural water systems, lake restoration, recreation, flood control, watershed management, erosion control, drainage, water quality, and water supply. All of these areas, combined with many other economic and social factors, are necessary to build a healthy rural and business economy.

Structure

The State Water plan, as established in SDCL 46A-1-2, consists of two components - the State Water Facilities Plan (SWFP) and the State Water Resources Management System (SWRMS). In order to be considered for the State Water Plan, projects must meet certain eligibility criteria established by the Board of Water and Natural Resources (BWNR). These eligibility criteria are used as guidelines for the BWNR, the Department

of Environment and Natural Resources (DENR), and the Water Development Districts when considering the projects for inclusion onto the State Water Plan.

The **State Water Facilities Plan** identifies those projects such as rural and municipal water supply, industrial water supply, dam safety, storm water, water conservation, lake restoration/nonpoint source pollution control, solid waste planning, solid waste management, groundwater contamination, pollution prevention or remediation, and wastewater facilities. The Board of Water and Natural Resources is responsible for approving all projects which are placed onto the State Water Facilities Plan. With sufficient funding, the Board can directly finance certain projects. But equally important, the Board can significantly influence federal categorical grant decisions or funding decisions from other state agencies. Therefore, any project which needs state support for funding should be included on the SWFP.

Four DENR funding programs exist under the State Water Facilities Plan: the Consolidated Water Facilities Construction Program (SDCL 46A-1-63.1); the State Water Pollution Control Revolving Fund Program, commonly known as the State Revolving Fund (SDCL 46A-1-60.1); the Groundwater Research and Public Education Program (SDCL 46A-1-85); and the Solid Waste Management Program (SDCL 46A-1-83).

The *Consolidated Water Facilities Construction Program (CWFCP)* provides loans/grants to projects on the SWFP for the purpose of constructing or improving water supplies or distribution, wastewater treatment, dam safety, water conservation, or lake restoration/nonpoint source pollution con-

trol. These are normally projects which can be accomplished within two years from receiving funding. A project must be on the SWFP to be considered for funding.

The *State Revolving Fund Program (SRF)* provides low interest loans to municipalities, sanitary districts, and watershed districts for the purpose of constructing sanitary/storm sewer projects. SRF applicants must also be on the State Water Facilities Plan.

The *Groundwater Research and Public Education Program (GRPEP)* was established by Governor Mickelson's Centennial Environmental Protection Act and provides funding for projects that study groundwater contamination, provide information on sound groundwater management, and develop methods for groundwater pollution prevention. Applicants that are awarded a GRPEP grant are automatically placed onto the SWFP.

The *Solid Waste Management Program (SWMP)* was also established by Governor Mickelson's Centennial Environmental Protection Act and provides assistance to cities and counties for the development of comprehensive solid waste planning and management programs. Public agencies working in cooperation with cities and counties are eligible to apply. Preference will be given to solid waste management programs which: are high on the waste management policy hierarchy; reduce the cost and number of landfills through shared facilities or use of innovative or alternative techniques; involve areas which are subject to groundwater or surface water contamination; or will reduce long-term operating, closure, or post-closure costs. Projects must be on the SWFP to be eligible for funding.

The **State Water Resources Management System (SWRMS)** identifies typically large, costly water projects that require specific state or federal authorization and/or financing. These projects are established by the Governor and the Legislature from recommendations made by the Board of Water and Natural Resources as necessary goals for water resource management in South Dakota according to SDCL 46A-1-10. The SWRMS will serve as the preferred priority list to accomplish optimum water resources management in the State. Once a project is placed onto the SWRMS list, it remains on the list until it is removed by Legislative action.

State Water Planning Process

In 1988, the Department established a Division of Water Resources Management (WRM). The goal of the Division is to improve the quality of the waters of the State, meet water supply needs of the citizens of the State, and to effectively manage the water resources of the State in order to protect and enhance the public health, the environment, and the economic vitality of the State.

One way to achieve these goals is to continually update the water planning process to meet the needs of the State, the local project sponsors, and the planning and water development districts and to incorporate the goals and mission statements of the Division into the process. This unified planning process is designed to eliminate confusion and to enable DENR staff to more closely communicate with project sponsors prior to Board review. WRM annually publishes a **STATE WATER PLANNING PROCESS** document which assists project sponsors in

submitting applications for the State Water Plan.

The Board reviews these applications on an annual basis. The Board approves or denies applications for the SWFP and makes recommendations to the Governor and Legislature for projects eligible for the SWRMS component of the State Water Plan.

State Water Facilities Plan

Projects which receive funding from the Groundwater Program are automatically placed onto the SWFP. Projects which require funding through other State programs or through other funding sources, such as Farmers Home Administration, must be approved for the SWFP by the Board. Those projects funded through the GRPEP program in 1991 may be found on Page 21, Table 12. No project has received funding through the SWMP.

At its November meeting, the Board reviewed 73 applications for the SWFP. Based on water development district and DENR staff recommendations, the BWRN approved 62 projects totaling over \$37 million for inclusion onto the 1992 State Water Plan (see Table 1).

Projects which have received funding are placed onto the funded portion of the State Water Plan and remain on the Plan until the project is completed. The State Water Facilities Plan currently has 93 projects which have received funding from either the Consolidated Water Facilities Construction Program, the State Revolving Fund, the Community Development Block Grant Program, or a combination of these funds.

TABLE 1
1992
STATE WATER FACILITIES PLAN
PLANNING STAGE

Project Sponsor	Project Description	Total Cost
Aberdeen Development Corp	Industrial Park Water/Sewer Expansion	\$ 204,000
Artesian	Wastewater Facilities Improvements	223,100
Avon	5 Year Water System Improvement Plan	100,000
Big Sioux Community Water	Treatment Plant	4,020,000
Bridgewater	Water Distribution System Improvements	532,700
Bristol	Wastewater Treatment Facility	319,575
Britton Development Corp	Water/Sewer Industrial Park Upgrade	188,500
Brookings-Deuel RWS	System Expansion	1,443,000
Brown County Commission	Sewer Expansion into Brown County Fairgrounds	86,365
Buffalo Gap	Water/Sewer Improvement Project	1,314,800
Burke	Burke Lake Dredge Project	412,000
B-Y Water District	Douglas County Expansion	1,664,000
Canton	Sanitary/Storm Sewer Improvement Project	671,000
Centerville	Water Distribution System Improvement Project	399,000
Chamberlain	Water Treatment Plant/King Street Improvements	148,800
Chamberlain	Water and Sewer Line Replacement	672,000
Colton	Wastewater Treatment Facility Improvements	635,000
Doland	Water Improvement Project	122,270
Eden	Water Distribution Upgrade	77,562
Garretson	Rural Water Procurement Project	1,334,900
Gary	Rural Water System Connection	215,000
Groton	East Sanitary Sewer Extension	138,700
Hanson Rural Water System	Supplemental Source Project	965,800
Hayti	Sewer Lift Station Project	82,000
Hitchcock	Water System Improvements	61,000
Huron	James River Water Line	93,500
Kadoka	Water System Improvements	542,000
Kadoka	Sewer System Improvements	101,700
Kimball	Water Line Improvement	518,000
Kingbrook RWS	Expansion - subproject 3	3,050,000
Lake Preston	Water System Improvements	700,000
Langford	Waste Treatment and Collection Upgrade	352,700
Lennox	Water Procurement Project	1,042,655
Leola	Wastewater Treatment Plant Upgrade	137,200
McCook County	Hanson RWS Water Tower Project	440,000
McCook Lake	Dredge Project	312,505
Mina Lake Sanitary Dist	Wastewater Collection System Expansion	103,501
Minnehaha County	Wall Lake Dredge	408,750
Oacoma	Water Line Rehab	79,500
Pennington County	Rapid Valley Drainage Improvements	300,000
Platte	Water System Rehab Project - Phase 4	99,200
Pollock	Wastewater Treatment Facility	965,200
Punished Woman's Assoc	Dredge Project	200,000
Randall Community Wtr Dis	Water Treatment Plant and Transmission Line	1,621,000
Rapid City	5 Year Wastewater Expansion and Rehab	1,138,200
Rapid Valley Wtr Svc Co.	Water Distribution System Improvement Project	661,200
Roberts County Commission	Big Stone Lake Restoration	299,497
Sioux Falls	Water/Sewer Improvement Projects	1,955,000
Sisseton	Water Distribution Improvements	259,075
Sisseton	Water System Improvements	493,400
South Brown Conserv Dist	Richmond Lake Project	1,037,090
Spearfish	Sewer Interceptor Extension	388,100
Spearfish	Water System Extension	84,100
Tea	Water Line/Storm Drainage Project	630,000
Timber Lake	Wastewater Treatment Facility Upgrade	150,280
Tripp	Water Main Replacement	55,050
Tripp County Wtr Usr Dist	Water System Upgrade	2,310,600
Tyndall	Valkering USA, Inc. Sewer Extension	62,600
T-M Rural Water District	Supply Well #4	390,600
Weblen	Wastewater Treatment Facility Expansion	308,129
Watertown	Wastewater Treatment Facility Improvement	3,000,000
Watertown	Water Distribution Improvements - Phase II	270,000
Waubay	Water/Sewer Expansion to Blue Dog Lake	1,134,428
Wentworth	Wastewater Facility Refinance	127,000
Worthing	Lagoon Sealing Project	262,000
TOTAL		\$42,114,832

TABLE 2
1992
STATE WATER FACILITIES PLAN
FUNDED STAGE

SPONSOR	PROJECT DESCRIPTION	CDBG AWARDS	CWFCP AWARDS	SRF LOANS	GRPEP AWARDS	PROJECT COST
Alexandria	Water	\$ 232,787	\$	\$	\$	\$ 423,249
Alpena	Water	90,000				149,800
Aurora	Water	100,000				263,000
Aurora-Brule RWS	Water Reservoir	142,000				284,500
Belle Fourche	WW Treatment	95,275	95,000			1,205,745
Belle Fourche	Geothermal Well	172,500	50,000			370,000
Belle Fourche	Collection			253,000		278,000
Big Sioux RWS	Water Treatment	500,000				4,020,000
Bison	Water	95,000				190,000
Box Elder	Refinance			648,600		648,600
Brandon	Storm Sewer			105,000		160,692
Brandon	Well		10,000			64,445
Brookings	Sewer Interceptor			188,065		310,760
Butte-Meade RWS	Expansion		79,480			965,800
B-Y RWS	Douglas Co Ext		50,000			1,664,000
Camelot	Water System		20,000			217,200
Canistota	WW Treatment		20,000			294,145
Chamberlain	Water & Sewerline	60,000				672,000
Chancellor	WW Treatment		40,000			215,040
Chancellor	RWS Connection	20,000				55,000
Clay County	RWS Expansion	100,000				413,000
Clear Lake	Wastewater	140,000		370,000		885,000
Codington County	Sioux RWS	200,000				800,000
Colton	Wastewater	65,000				627,000
Custer	Collection			182,000		915,500
Custer	Water	300,000	50,000			761,252
Custer (golf course)	Irrigation			430,000		430,000
Davison County	Davison RWS	200,000				617,500
Dolton	RWS - TM	67,505				163,440
Douglas County	RWS - B-Y	400,000				1,664,000
Douglas County	RWS - Randall	300,000				825,200
Eden	WW Treatment		26,500			134,044
Ethan	WW Improvement		50,000			157,100
Fort Pierre	Water	191,480				513,700
Garretson	Rural Water	669,800				1,334,900
Gettysburg	Water	100,000				234,388
Gregory County	RWS - Tripp	218,000				310,000
Hartford	RWS Hookup	650,000	50,000			1,832,000
Hazel	Water-Wastewater	110,000				345,550
Hill City	Water	50,000				158,500
Hudson	RWS - RV	60,000				125,010
Humboldt	WW Treatment		25,000			258,760
Huron	Treatment			1,656,000		4,149,000
Huron	Storm Sewer			750,000		750,000
Igloo-Provo	Water	200,000	58,000			799,020
Kennebec	Lake Byre Dam	52,182	20,000			275,000
Kingbrook RWS	Expansion		100,000			3,778,000
LaBolt	WW Treatment		70,000			304,735
Lake Andes	WW Expansion		30,000			208,170
Lake Cochrane San Dist	Refinance			80,000		80,000
Lake Madison	Wastewater Refinance			330,000		330,000
Lake Norden	Wastewater	300,000				1,209,100
Lake Preston	WW Treatment	300,000	70,000			1,250,000
Lead	Sewer			500,770		500,770
Lead	Separation			186,409		186,409
Lead-Deadwood	Equipment			106,855		106,855
Lemmon	Refinance			427,100		427,100
Lemmon	Water	100,000				474,300
Letcher	Wastewater	30,000	30,000			214,916
Madison	Water/Wastewater		17,000	150,000		250,000
McCook County	Hanson RWS	175,000				440,000
McCook Lake	Wastewater			641,935		1,260,114
Miller	Water & Sewer		15,000			82,610
Minnehaha County	Wall Lake dredge		60,000			408,750
Minnehaha County	Water-Wastewater	218,017				789,537
Mission	Riprap Lagoon		18,000			118,000
Mitchell	Dam Repair		21,000			148,200
Mobridge	Treatment			1,500,000		1,687,500

TABLE 2 (Continued)

SPONSOR	PROJECT DESCRIPTION	CDBG AWARDS	CWFCP AWARDS	SRF LOANS	GRPEP AWARDS	PROJECT COST
Montrose	Water Tank	30,000	40,000			152,000
Oacoma	Water		70,000			535,000
Philip	Wastewater	160,000				1,184,396
Pierre	Treatment			600,000		1,893,600
Platte	Water	66,000				135,800
Punished Woman's Assoc	Dredge		50,000			200,000
Randall RWS	Water		50,000			932,000
Rapid City	Collection			2,637,000		3,063,600
Rapid Valley	Collection			614,000		838,600
Roberts County	Big Stone		60,000			295,819
S Brown Con Dist	Lake Restoration		30,000			239,076
S Lincoln RWS	Expansion		30,000			418,000
Sioux Falls	Rehabilitation			845,000		845,000
Sioux Falls	Storm Sewer			1,200,000		1,200,000
Sioux Falls	Collection			3,316,310		3,772,550
Sioux Falls	Collection			454,000		454,000
South Shore	Dredge		50,000			250,000
Stanley Co Con Dist	River Rehab		30,000			260,000
Sturgis	Water	70,000				969,000
Tea	Water		30,000			273,800
Tripp Co WUD	Expansion		30,000			298,000
Tri-County	Howes Addition	191,500				801,500
Tyndall	Water	100,000				306,700
Utica	Water	42,300				72,300
Vermillion	Collection			125,000		144,000
Wakonda	WW Treatment		10,000			166,925
Wall Lake	WW Treatment		50,000			779,155
Watertown	Water	100,000				660,000
Watertown	Wastewater			2,000,000		3,000,000
Whitewood	WW Treatment	88,800	40,945			435,636
Dr. Rice	Baseline Organics				16,087	98,713
Dr. Rahn	Aquifer Permeability				50,130	66,840
J. Bischoff	Soil Type/Land Use				37,304	54,305
Dr. Hellickson	Fert & Pest Use				46,512	62,148
J. Siegel	Groundwater Protect.				48,500	341,660
Dr. Mott	Petroleum Removal				55,221	77,345
Dr. Schaefer	Feedlot Clay Liner				53,604	79,764
A. Ehlers	Water Fact Sheets				20,000	198,600
R. Kohl	Road Ditch Contamin.				34,555	74,440
D. Rickerl	Nitrate Removal				35,000	70,000
Drs. Clay & Schumacher	Nitrogen Reduction				13,00	26,000
Dr. Roggenthen	Seismic Reflection				24,561	32,748
Drs. Clay & Schumacher	Alachlor Degradation				95,180	138,530
Dr. Clay	Tillage Microrelief				57,910	109,626
Drs. Webb & Rahn	Hazards Mining Sites				62,519	71,149
S. Lauritsen	Groundwater I&E Proj				30,050	62,552
J. Siegel	GIS Education Prog.				15,000	25,152
Dr. Davis	Nitrate Degradation				31,413	41,884
TOTAL		\$7,553,146	\$1,645,925	\$20,297,044	\$726,546	\$72,393,819

State Water Resources Management System

The State Water Resources Management System (SWRMS) is the priority system established by the Legislature and the Governor to achieve needed objectives for optimum water resource development in South Dakota. These projects may require specific federal or State authorization and financing and may be developed in phases or take several years because of their design or cost. Each project must be reviewed by the water development district having jurisdiction over it, receive a positive recommendation from the Board, and be approved by the Legislature and the Governor before it may be included in the SWRMS.

Recommendations for SWRMS

The Board passed resolutions (Appendix A) requesting that the Legislature authorize the construction of the Mni Wiconi and Mid-Dakota rural water systems, the Sioux Falls and Watertown flood control projects, and the Lake Andes/Marty II irrigation project. The BWNR requested that the Legislature authorize the James River Restoration program and the Black Hills Water Management and Hydrology studies. In addition to requesting legislative authorization, the resolutions provide a total project cost estimate and recommend non-federal cost share commitments through either state grants or loans.

In accordance with the South Dakota Water Resources Management Act, as

amended, and the State water planning process, the Board of Water and Natural Resources on November 13, 1991 took action to recommend one new project for the State Water Management System and maintain all other projects that are currently in the SWRMS component of the State Water Plan. Those projects currently authorized and recommended for retention in the System are listed in Table 3. The project being recommended for inclusion in the system is:

FALL RIVER COUNTY RURAL WATER SYSTEM

The Fall River County Rural Water System is a proposed domestic water system which will provide high quality Madison aquifer water to people in portions of Fall River County. The service area lies south and east of the Angostura Reservoir and covers 470,000 acres. The design population is 500 people and includes the town of Oelrichs. Additionally, the system would provide water to Game, Fish & Parks' Angostura recreation area and for nearly 18,000 livestock units.

The anticipated project facilities include 2 Madison aquifer wells, 5 reservoirs, and 250 miles of distribution pipelines. The total project cost planning estimate is \$4,900,000. Organizers anticipate the formation of a water project district. The project is sponsored by Fall River County and coordinated by the Black Hills Council of Local Governments.

TABLE 3**STATE WATER RESOURCES MANAGEMENT SYSTEM**

<u>Project</u>	<u>Project Description</u>
Belle Fourche Irrigation Project	Rehabilitation of Belle Fourche project
Big Sioux Flood Control Study	Watertown Flood Control Dam
Black Hills Hydrology Study	Hydrologic study of the Black Hills
Brennan Reservoir	Management of water flows in Rapid Creek
CENDAK Irrigation Project	Irrigation project in central SD
Dakota Dunes	Planned community in Union County
Dakota Lakes Irrigation Research Farm	Irrigation research project
Fall River County Rural Water System	Proposed rural water system in Fall River Co.
Garrison Diversion Unit Extension	Study of effects of North Dakota Garrison unit
Gregory County Pumped Storage Site	Multi purpose water utilization
James River Improvement Program	Study of improvement program on James River
Lake Andes-Wagner/Marty II Irrigation Unit	Irrigation projects in Charles Mix County
Lake Herman Restoration Project	Lake restoration and watershed management project
Mid-Dakota Rural Water System	Proposed rural water system in central South Dakota
Missouri River National Recreational River	Stabilization & enhancement of Mo. River Rec area
Mni Wiconi Rural Water System	Proposed rural water system for western South Dakota
Pick-Sloan Riverside Irrigation	Pick-Sloan integration of irrigation
Sioux Falls Flood Control Project	Increased flood protection
Slip-Up Creek	Reservoir near Sioux Falls
Southeastern SD Water Supply System	Supplemental water supply system
Vermillion Flood Control Project	Flood control study on Vermillion River
Water for Energy Transport (WET) System	Water for energy transport system
WEB Pipeline Project	Construction of rural water system
West River Aqueduct	Water supply system for western South Dakota

PART II
1991 ANNUAL REPORT

ANNUAL REPORT

An annual report of the Board of Water and Natural Resources is statutorily required under SDCL 46A-1-14 and SDCL 46A-2-2. The report is presented in four sections:

- I. Board of Water and Natural Resources Report
- II. 1991 Water Development Legislation Report
- III. Water Facilities Construction Fund - Progress Report
 - State Water Facilities Plan
 - Consolidated Water Facilities Construction Program
 - Solid Waste Management Program
 - State Water Resources Management System
- IV. State Revolving Fund
- V. Environmental Protection Agency Wastewater Facilities Construction Program
- VI. Lake Restoration/Nonpoint Source Pollution Control Program
- VII. Groundwater Research and Public Education Program

Each section shows the progress on the State's water development projects and in the various financing programs within the Board's purview.

BOARD OF WATER AND NATURAL RESOURCES REPORT

Although a portion of the Water Development goals and objectives were accomplished in 1991, Board efforts to effectively address the needs of the State's infrastructure were hampered due to the lack of funds for the Consolidated Water Facility Construction Program. The Board was able

to partially fund only 2 projects as compared to 29 projects in 1990.

The Board funded 7 groundwater protection grant requests and held public hearings regarding the rules governing these grants. The Board revised rules relating to indirect cost and submission dates for proposals for funding.

The Board approved a loan for the first year operating costs for the Vermillion Basin Water Development District which was formed in 1990. Through coordination and cooperation with the State's water development districts, the Board continued to assure the protection of the orderly development of the State's water resources.

The Board continued to maintain an active role in the investigation of hydropower opportunities in South Dakota. Ungerma Engineering and EWI Engineering were retained to investigate the technical feasibility of hydroelectric upgrading at Oahe & Ft. Randall dams. The investigations revealed that both projects are feasible. The Board retained PaineWebber Inc. in association with Neufeld Consulting to identify financing alternatives for the \$35 million proposal. Additionally, Board representatives met with federal agency representatives and private and public power representatives to discuss the proposed project.

The Board submitted its final report to the Federal Energy Regulatory Commission (FERC) for the Gregory County Pumped Storage Project. The BWNR will not pursue licensing the project until further environmental studies can be completed and utilities

are identified to participate in the project development.

The Board passed resolutions requesting that the Legislature authorize the construction of the Mni Wiconi and Mid-Dakota rural water systems, the Sioux Falls and Watertown flood control projects, and the Lake Andes/Marty II irrigation project. The BWRN requested that the Legislature authorize the James River Restoration program and the Black Hills Water Management and Hydrology studies. In addition to requesting legislative authorization, the resolutions provide a total project cost estimate and recommend non-federal cost share commitments through either state grants or loans.

The Board approved 9 loans totaling in excess of \$5 million from the State Water

Pollution Control Revolving Fund (SRF) for wastewater construction and refinancing projects.

Additional activities undertaken by the BWRN are presented in detail throughout the context of the Annual Report.

1991 WATER DEVELOPMENT LEGISLATION

This section gives a brief summary of the federal and state legislation passed during 1991.

Federal Legislation

The federal fiscal year 1992 energy and water appropriations bill (H.R. 2427) was approved by Congress in July 1991. The funding levels for South Dakota water projects are listed in the table below.

Bureau of Reclamation

Construction	
Belle Fourche Rehabilitation	\$ 7,885,000
Mni Wiconi rural water system	2,150,000
Rapid Valley project	100,000
General Investigations	
Technical assistance to SD	25,000
Black Hills hydrology study	200,000
Mid-Dakota rural water system	50,000
Lewis & Clark rural water system	100,000
Operation and Maintenance - SD facilities	529,000

Corps of Engineers

Construction	
Missouri National Recreation River	\$ 50,000
General Investigations	
Aberdeen & Vicinity flood control	96,000
James River Environmental	235,000
Vermillion River Basin flood control	145,000
Lake Sharpe wildlife restoration	60,000
Lake Oahe wildlife restoration	140,000
Pre-construction	
Sioux Falls flood control project	280,000
Big Sioux (Watertown & Vicinity) flood control project	314,000
Operation and Maintenance	
Missouri River mainstem dams	26,443,000
Other SD dam facilities	342,000
Missouri National Recreation River	200,000
Missouri River Master Manual Review	973,000

On June 20, 1991, the United States House of Representatives passed H.R. 429, the Reclamation Projects Authorization and Adjustment Act of 1991. Title XIX of the Act provides for the federal authorization of the Mid-Dakota rural water system. The cost sharing provisions provide for \$85 million in federal grants, \$15 million in federal treasury rate loans to the local sponsor, and \$8.4 million in State grants.

Title XX of the Act authorized the Lake Andes-Wagner/Marty II research demonstration program. The 5-year, \$30 million field demonstration program will address drainage needs in glacial till soils, selenium management techniques, and best management practices for irrigation. The House decided not to authorize the full irrigation project until the demonstration program has been completed and analyzed.

Senate action on H.R. 429 was pending when Congress adjourned on November 22, 1991 due to concerns regarding Reclamation Reform issues. The Senate will consider action on H.R. 429 during the 2nd Session of the 102nd Congress.

State Legislation

The 1991 Legislature enacted several bills affecting water development in South Dakota. The Omnibus Water Development Bill, SB 174, authorized the following expenditure of funds from the Water Facilities Construction Fund (WFCF):

- Consolidated Water Facilities Construction Program - \$110,000 to provide grants for lake improvement projects;
- James River Restoration project - \$125,000 grant for implementation of channel clean-out activities and other restoration activities;

- Mid-Dakota Rural Water System - \$145,000 grant to initiate engineering design work and to seek congressional authorization;
- Hydro Upgrade - \$100,000 grant to the Board of Water and Natural Resources (the Board) to develop a non-federal sponsorship proposal to upgrade the Oahe and Ft. Randall hydroelectric facilities;
- Big Sioux Flood Control Project - \$50,000 grant to provide non-federal cost share to complete a Corps of Engineers feasibility study of proposed flood control structures in the Watertown area;
- Sioux Falls Flood Control Project - \$20,000 grant to provide non-federal cost share to complete a Corps of Engineers feasibility study to upgrade flood control structures in Sioux Falls;
- Black Hills Hydrology Study - \$100,000 grant to provide non-federal cost share for ongoing hydrological studies of the Black Hills;
- Southeastern South Dakota Water Supply System - \$75,000 grant to continue a feasibility study of a southeastern South Dakota water supply system;
- Lake Andes-Wagner/Marty II Irrigation project - \$880,000 loan to seek congressional authorization of the LA-W/M II project and to implement the LA-W/M II research demonstration program;
- Mni Wiconi Rural Water Supply System - \$1,000,000 grant to provide non-federal cost share for construction of the Mni Wiconi project; and
- Brennan Reservoir - \$25,000 grant to complete a feasibility study of a Brennan reservoir.

SB 175 authorized the expenditure of funds from the Groundwater Protection Fund (GPF). SB 175 authorized \$500,000 for grants under the state Groundwater Research

and Education Program, \$100,000 for the Department of Environment and Natural Resources to conduct a toxic cleanup day pilot program, and \$30,000 for the Department of Agriculture to conduct research on the alternative practice of biological pesticides. SB 175 added Brennan Reservoir and deleted the Turkey-Clay Watershed project from the State Water Resources Management System and authorized the Board to convert study loans to grants. The conversion to grants is limited to projects determined to be non-feasible or to have insufficient repayment capabilities or for use as non-federal matching requirements.

HB 1153 amended SDCL 9-21-11 to permit a municipality to enter into a contract with a rural water system, water user district, sanitary district, water project district or like organization for the purchase of water. HB 1158 amended SDCL 46A-3B-9 to clarify water development district board of director vacancies occurring through resignation or if no successor qualifies for the office. HB 1205 amended SDCL 46A-9-52 to require water user districts to follow competitive bidding laws.

The Department of Water and Natural Resources was renamed the Department of Environment and Natural Resources by Executive Order 91-4, the Executive Reorganization Order of 1991.

WATER FACILITIES CONSTRUCTION FUND (WFCF) - PROGRESS REPORT

The Board of Water and Natural Resources administers the Water Facilities Construction Fund (Appendix C) into which all legislative appropriations, interest on investments, principal and interest on loans, and funds accruing to the South Dakota Conservancy District are deposited. From this fund, the BWNR is legislatively authorized to administer several programs including the Consolidated Water Facilities Construction Program (CWFCP), the State Water Resources Management System (SWRMS), and the Solid Waste Management Program (SWMP). Table 4 describes the breakdown of the funds appropriated by the 1991 Legislature to be used for these programs.

The BWNR also has authority to issue tax-exempt bonds in connection with its water resources management duties. Under SDCL

**TABLE 4
1991 WATER FACILITIES CONSTRUCTION FUND**

	Amount Authorized by Legislature	Amount Contracted
Hydro Upgrade	\$ 100,000	\$ 30,000
Consolidated Water Facilities Construction Program	110,000	110,000
State Water Resources Management System	<u>2,420,000</u>	<u>660,000</u>
TOTAL	\$2,630,000	\$800,000

46A-1-29 to 30, the BWNR may issue long-term bonds, upon Legislative approval, for the construction of projects within the State Water Resources Management System or for the purpose of funding a revolving fund program under the federal Clean Water Act. As well, the BWNR has discretionary bonding authority for small bond issues under \$5 million. Under SDCL 46A-1-17 to 27, the BWNR has authority to issue short-term (interim) notes for water resources projects within the State Water Resources Management System and the State Water Facilities Plan.

In addition to the programs the BWNR administers, the DENR administers one federal water development grant program - the Environmental Protection Agency Wastewater Facilities Construction Program.

The following reports are detailed accounts of all expenditures made in 1991 in each program.

Consolidated Water Facilities Construction Program - (CWFCP)

The 1986 State Legislature established the Consolidated Water Facilities Construction Program to provide grants or loans for water development projects included in the State Water Facilities Plan. The Consolidated Program replaced the construction loan programs (Table 5) and several smaller programs, in an effort to simplify the State's financing process for small water projects.

The BWNR established program rules to govern the program. Under these rules, projects on the current State Water Facilities Plan are eligible to apply for available funds. The application cycle has been set up on a quarterly basis with applications due on the first day of June, September, December, and March.

During 1991, the BWNR approved \$110,000 in CWFCP grants for two projects

TABLE 5
1991
CONSTRUCTION LOAN PROGRAM

PROJECT	AMOUNT AUTHORIZED	CURRENT PRINCIPAL BALANCE	TOTAL PRINCIPAL REPAID	TOTAL INTEREST PAID
BDM RWS	\$ 500,000	\$ 456,497	\$ 43,503	\$ 200,654
B-Y RWS	200,000	188,346	11,654	61,279
Clark RWS	380,000	339,062	40,938	193,246
Davison RWS	200,000	183,837	16,163	69,451
Deadwood	400,000	205,568	194,432	103,591
East Gregory	25,383	23,021	2,362	9,217
Keystone	120,000	108,836	11,164	49,859
McIntosh	100,000	91,951	8,049	33,403
Minnehaha RWS	120,000	110,984	9,016	37,684
South Lincoln RWS	100,000	88,797	11,203	44,058
TM RWS	<u>400,000</u>	<u>367,675</u>	<u>32,325</u>	<u>148,955</u>
TOTAL	\$2,545,383	\$2,164,574	\$380,809	\$951,397

with a total cost of \$658,000 (Table 6). These projects were ongoing lake restoration projects at Wall Lake and Punished Woman's Lake. The Board also rescinded a \$65,000 grant made in 1990 to Mina Lake Sanitary District because the District received a grant

from the Environmental Protection Agency to fund the replacement of their failed wastewater treatment system. The Board approved an amendment to a 1990 grant made to the Town of Oacoma for \$65,000 to cover increased costs and project expansion.

TABLE 6
1991 CONSOLIDATED GRANT AWARDS

SPONSOR	DESCRIPTION	CWFCP FUNDS	PROJECT COST
Minnehaha County	Wall Lake Dredge	\$60,000	\$408,000
Punished Woman's Assoc.	Dredge	50,000	250,000
TOTAL		\$110,000	\$658,000

Solid Waste Management Program (SWMP)

The 1989 State Legislature established the Solid Waste Management Program to provide grant assistance to cities and counties for the development of comprehensive solid waste planning and management programs. The Board of Water and Natural Resources established rules to govern the program.

The 1990 Legislature appropriated \$100,000 for the preparation of a statewide comprehensive solid waste management plan to assess the existing solid waste situation in the state and the projected solid waste treatment, storage, and disposal needs for the next 15 years. The Board of Minerals and Environment adopted this statewide comprehensive solid waste management plan in January, 1991.

The 1991 Legislature appropriated \$100,000 from the Groundwater Research and Public Education Fund to conduct a toxic

Cleanup Day pilot program. The purpose of the program was to collect and dispose of small amounts of hazardous wastes from residences, schools, small businesses, and farms.

The pilot program was held in Brookings County on May 18, 1991, at a cost of \$80,173. The Department is preparing a report for the 1992 Legislature summarizing the event and recommending whether the program should be continued, expanded, or discontinued.

State Water Resources Management System

This section reports the progress of the authorized projects in the 1991 State Water Resources Management System (SWRMS). Tables 7 and 8 are provided on to show project authorizations for 1991. A brief summary of each project and its status is presented below.

TABLE 7
STATE WATER RESOURCES MANAGEMENT SYSTEM
FUNDING SUMMARY
1991

PROJECT	LEGISLATIVE APPROPRIATION	AGREEMENT AMOUNT	TYPE OF AGREEMENT
Big Sioux Flood Control	\$ 50,000	\$ 50,000	Grant
Black Hills Hydrology	100,000	100,000	Grant
Brennan Reservoir	25,000	25,000	Grant
James River Restoration	125,000	125,000	Grant
Lake Andes-Wagner/Marty II	880,000	120,000	Loan
Lewis & Clark RWS	75,000	75,000	Grant
Mid-Dakota RWS	145,000	145,000	Grant
Mni Wiconi RWS	1,000,000		Grant
Sioux Falls Flood Control	<u>20,000</u>	<u>20,000</u>	Grant
TOTAL	\$2,420,000	\$660,000	

TABLE 8
STATE WATER RESOURCES MANAGEMENT SYSTEM
STUDY LOAN PROGRAM STATUS
DECEMBER 31, 1991

PROJECT	CUMULATIVE LEGISLATIVE APPROPRIATIONS	AMOUNT UNDER AGREEMENT	OUTSTANDING LOAN BALANCE
BHC	\$ 150,000	\$ 150,000	\$ 0*
CENDAK	1,375,000	1,375,000	1,375,000
Gregory County	150,000	150,000	150,000
Lake Andes-Wagner	1,710,000	950,000	835,610
Mid-Dakota RWS	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
TOTAL	\$3,485,000	\$2,725,000	\$2,460,610

* BWN R converted loan to grant

Belle Fourche Irrigation Project (SWRMS 1981)

- * The original Belle Fourche Irrigation project was authorized by Congress in 1904 and completed in 1914 to deliver irrigation water to 57,000 acres in Butte County.
- * A \$48.8 million rehabilitation project received Congressional authorization in 1983.
- * Rehabilitation of the delivery system will reduce operation and maintenance costs, conserve water, provide safety features, lessen risk of system failure, reclaim

agricultural lands affected by seepage losses, and protect the economic welfare of the area.

- * Federal appropriations began in 1984 and the project has received \$33,684,000 in federal appropriations through FFY92.

Rehabilitation efforts on the Diversion Dam and distribution system are expected to be completed in 1995. The Bureau of Reclamation is being requested to conduct a feasibility analysis study of a storage dam on Indian Creek to provide supplemental water to the project.

Big Sioux Flood Control Study (SWRMS 1989)

- * The federal interest in constructing a flood control project was investigated and established in a 1987 Reconnaissance Report by the Corps of Engineers.
- * The project will provide flood protection for Watertown, Lake Kampeska, and Pelican Lake through the construction of a dry dam on Mahoney Creek.
- * The project is divided into three feasibility study phases:
 - phase one efforts include hydrological, hydraulic and geotechnical studies;
 - phase two consists of investigating the social and environmental aspects of preliminary dam sites;
 - phase three entails dam design and assessment of the impacts of the selected site.
- * The total cost of the feasibility study is estimated at \$824,230 with the cost to be shared on a 50/50 federal - nonfederal basis.
- * Phase One studies were initiated in 1988 by the Corps of Engineers in cooperation with the City of Watertown, East Dakota Water Development District, Codington County, and the Department of Environment and Natural Resources.
- * Legislative appropriations have totaled \$150,000 between 1989, 1990, and 1991 to assist local sponsors in meeting the non-federal cost share requirements.

A technical and feasibility conference was held in November 1991 with Corps of Engineers representatives from the district and division offices in Omaha, Nebraska and headquarters staff in Washington, D.C. The conference allowed participating project sponsors the opportunity to review all aspects of the project.

A draft report for the Big Sioux Flood Control Study - Watertown and Vicinity is expected in January of 1992. Public meetings will be held when the report is released to allow constituency input into the final feasibility report. Current estimates for the construction of a dry dam on Mahoney Creek are \$13.4 million. A benefit to cost ratio of 1.2 has been estimated for the project. The feasibility report should be finalized by April of 1992. Congress appropriated \$314,000 in federal fiscal year 1992 for the Corps to conduct preconstruction activities.

Black Hills Hydrology Study (SWRMS 1982)

- * The objective of the project is to compile the water resource data necessary to make informed management decisions concerning the development of water resources in the Black Hills area related to the expansion of mining, municipal, recreational, and urban water development needs.
- * State legislature appropriations to the project began in 1988 with \$50,000 dedicated towards funding the establishment of a groundwater and surface water monitoring network:
 - local project sponsors contributed \$50,00 for this effort;
 - an additional \$100,000 was provided from the US Geological Survey for the network.
- * Participation at the state level continued in 1989 with a \$50,000 legislative appropriation for monitoring network efforts and \$75,000 for drilling monitoring wells in critical areas within the Black Hills to assist hydrologic evaluations.
- * A total of \$185,000 through state funding was provided in 1990. The State legislature appropriated \$50,000 and \$135,000 was contributed from the Department of

Environment and Natural Resources. Local sponsors contributed \$100,000 and the US Geological Survey provided \$200,000 during 1990.

- * Support for the US Bureau of Reclamation to develop the Black Hills Water Management Study was provided by Congress in 1990 through an \$100,000 appropriation.
- * For 1991 activities, the State Legislature appropriated \$100,000 which was matched by local sponsors.

Congressional appropriations to further the development of the Black Hills Water Management Study by the Bureau of Reclamation continued in 1991 with an additional \$200,000 for FFY92. The Black Hills Water Management Study will provide local project sponsors with a tool to assist them in making water development and management decisions. Data gathered during the Hydrology Study will be utilized in the Management Study.

A Black Hills Hydrology Steering Committee was established in 1991. Membership is comprised of individuals representing different areas within the Black Hills and from adjacent areas in Wyoming. The Steering Committee will provide local input into the development of the hydrology and management studies.

Brennan Reservoir (SWRMS 1991)

- * The Brennan Reservoir is located on Dry Creek approximately 9 miles southeast of Rapid City.
- * Unused flows in Rapid Creek could be stored for use during peak demands or winter releases from Pactola Reservoir could be stored and reused.
- * Limited flood protection may also be achieved through the diversion of storm flows into the reservoir.

- * Water stored in Brennan could also be used to irrigate about 5000 acres located in the Rapid Valley Water Conservancy District (RVWCD). This would supply over half of the current demands for RVWCD.

The 1990 State Legislature provided \$25,000 to assist local sponsors in an engineering study of the Brennan Reservoir site. Access easements to the site were obtained and four test holes were drilled with the core samples forwarded to the Bureau of Reclamation for lab testing. Additionally, Reclamation conducted an archaeological study of the site. The engineering site study is expected to be completed in March of 1992.

CENDAK Irrigation Project (SWRMS 1982)

- * This irrigation project is to supply Missouri River water to 474,000 acres in Hughes, Hyde, Hand, Spink, Beadle, and Faulk counties in central South Dakota.
- * Additional project purposes include municipal and rural domestic use, recreation, fish and wildlife enhancement, and stream flow augmentation.
- * Features of the Oahe Irrigation project would be used including the Oahe pump plant and the Pierre canal.
- * Estimated cost of the project is \$1.12 billion.

Little activity occurred on the project in 1991. South Dakota supports development of the project and will pursue development when federal policies are more supportive of large-scale irrigation projects.

Dakota Dunes (SWRMS 1989)

- * The project is intended to provide water and wastewater system construction for the development of a master planned community.

- * The project is an 1,800 acre development for residential, recreation, and business use.
- * Anticipated economic benefits to the Union County area are 5,000 jobs and a \$125,000,000 payroll.
- * The project received a \$250,000 Consolidated Water Facilities Construction Program grant in 1989.
- * Dakota Dunes was connected to Sioux City for its water source and developed its own water storage and distribution system in 1990.

In 1991, significant progress was made in business and residential development and road construction.

Dakota Lakes Research Farm (SWRMS 1987)

- * The project is a 463 acre research site adjacent to the Missouri River near Pierre designed to evaluate different farming techniques and cropping practices on irrigated and dryland crops.
- * The project mission is to research, identify, and demonstrate the best methods of stabilizing the agricultural economy through agricultural diversity, increased production efficiency, and reduced negative environmental effects.
- * The 1989 season was spent conducting necessary soil sampling, determining farm layout, constructing the water delivery system and seeding permanent field borders to grass.
- * The first year of operation began in 1990 and included the construction of a headquarters building.

Increased research operations continued in 1991. Farmer/rancher shareholders in the Dakota Lakes Research Farm corporation own the land and lease it to SDSU which

will conduct the research and disseminate the results.

Garrison Extension Study (SWRMS 1981)

- * This project is designed to modify North Dakota's Garrison Diversion Unit into a project that could provide flood control and deliver additional high quality water for irrigation, industrial, and municipal uses in South Dakota. Improved recreational opportunities within the James River basin could also be achieved.
- * In 1981, Governor Janklow appointed a five member Garrison Study Management Board to assess the Garrison Extension concept.
- * Preliminary findings were provided in a 1983 report prepared by the Garrison Study Management Board. Included in the report were project costs and recommendations.
- * H.R. 1116 was amended in 1986 and passed into law as the Garrison Diversion Unit Reclamation Reformulation Act of 1986.
- * The "James River Comprehensive Report, Garrison Diversion Unit" was released to the public in 1989. It gives a summary of all the Garrison Unit James River studies and discusses project alternatives.

Gregory County Pumped Storage Project (SWRMS 1981)

Hydroelectric Component

- * Gregory County Pumped Storage (GCPS) project is a proposed peak generation hydroelectric facility located in northern Gregory County.
- * The GCPS project will use off-peak electricity to pump water from Lake Francis Case to an upper reservoir on the river bluff over 700 feet above the lake. Peak power is generated by releasing water

from the upper reservoir through turbines back to the lake.

- * The Corps of Engineers initiated studies on the GCPS project site in the mid 1970s with an interim report and an environmental impact statement completed in 1982.
- * In 1982, the South Dakota Conservancy District filed a preliminary Federal Energy Regulatory Commission (FERC) permit application.
- * In 1986, Congress passed a \$1.39 billion authorization for construction of the project (P.L. 99-662); however, present federal policy is to provide no federal financing for new hydro development.
- * In 1988, FERC issued to the BWR the preliminary permit for the project. The preliminary permit reserves a priority for development for three years while the necessary economic, environmental, and technical studies to support an application for license are conducted.
- * The 1989 State Legislature appropriated \$50,000 for a feasibility study of the GCPS hydro component with a requirement that the state funding be matched with private funds. The Board of Water and Natural Resources entered into a contract with Ebasco Services Inc. to conduct the feasibility analysis.

The Gregory County Pumped Storage Hydroelectric Project Power Marketing Study was completed in August 1990 and the Feasibility Study was completed in January 1991. The study findings recommend the construction of a 1,200 MW facility with a construction cost of \$790 million. Construction of associated power transmission facilities is estimated at \$95 million. An additional \$1 million of engineering and environmental studies are required to prepare the FERC application for license. The State's preliminary permit expired in August 1991.

Water Supply Component

- * The project has potential to provide water for irrigation and municipal, rural, and industrial (MR&I) purposes utilizing the hydroelectric project's upper forebay as a water supply source.
- * In 1986, Congress passed a \$1.39 billion authorization for construction of the project (P.L. 99-662). Of the \$1.39 billion, \$100 million was identified for construction of MR&I water supply and irrigation features.
- * The 1987 State Legislature appropriated funds to provide a \$150,000 loan for feasibility studies of the water supply and irrigation features.
- * The Bureau of Reclamation's FY 1989 budget contained \$500,000 to conduct an appraisal level analysis of the potential development of irrigation and MR&I water supply features and potential environmental consequences. In 1989, the Bureau, State, and local sponsors executed a Gregory Unit Special Report Memorandum of Understanding (MOU) for completion of a \$638,000 study workplan.
- * In 1990, the State Legislature approved a \$15,000 grant to complete the non-federal cost share package for the appraisal level study of the associated water supply features. Local funds have been provided through in-kind services, landowner interest fees, and Southern Missouri Water Development District grants.

Approximately 18,000 acres were included in the irrigation system design and a water supply system was designed to provide MR&I water to five municipalities and two rural water systems. Reclamation compiled the various study components and completed a draft Special Report on the Gregory Unit of the Pick-Sloan Missouri Basin Program, South Dakota in August 1991. It is an-

anticipated that the special report will be completed for submission to Congress by December 31, 1991.

James River Improvement Program (SWRMS 1984)

- * This program has been designed to provide flood control as well as municipal, industrial, agricultural, recreational, and wildlife benefits.
- * In 1986 federal legislation (P.L. 99-662) authorized \$20 million for flood control and stream flow improvements.
- * A draft Environmental Impact Statement was completed in 1987 which presented four alternative plans of action for the James River:
 - no action;
 - limited channel cleanout;
 - channel restoration;
 - flood bypass.
- * The James River Water Development District adopted a three stage approach to river restoration as a result of public input to the draft EIS. These three stages are as follows:
 - limited channel cleanout;
 - tributary drainage control;
 - bank stabilization.
- * A reconnaissance report was completed in 1989 which established federal interest in conducting feasibility studies for flood protection in lower Elm River-Moccasin Creek basins and the Dry Run Creek basin with provisions for federal funding.
- * State legislative appropriations have totaled \$810,000 for 1988 through 1991. These funds have been utilized by the James River WDD to implement restoration activities including limited channel cleanout, wildlife enhancement, and recreational development. In addition, funding has been provided through the

James River WDD state appropriation to assist the City of Aberdeen and Brown County in meeting cost share requirements for their flood control feasibility study.

In 1991, the James River WDD continued in their efforts to meet the goals established in their three staged approach for river restoration. The Corps of Engineers' reconnaissance study of the James River Environmental Initiative progressed well during 1991. A final reconnaissance report is expected in February of 1992. Preliminary project sites have been identified by the Corps which may provide environmental benefits to the river basin. Plans are to continue with a feasibility study of these proposed sites in August of 1992.

Lake Andes-Wagner/Marty II Irrigation Unit (SWRMS 1975,1986)

- * The 45,000 acre Lake Andes-Wagner Irrigation project and 3,000 acre Marty II Irrigation project are proposed Pick-Sloan Missouri Basin Units located in Charles-Mix County. Estimated construction costs are \$165 million and \$24 million, respectively.
- * During the 1970's, the Lake Andes-Wagner Irrigation District approved an \$850,000 bond issue to study the feasibility of non-federal irrigation development. However, a bond issue for the development of the project failed in 1978.
- * In 1981, the Bureau of Reclamation began a re-analysis of the privately sponsored feasibility study, funded in part by a \$500,000 study loan from the South Dakota Water Facilities Construction Fund.
- * In 1985, the Bureau of Reclamation completed a Feasibility Study and Draft Environmental Impact Study on the 45,000

acre Lake Andes-Wagner Irrigation Project.

- * In 1986, the State Legislature authorized the Marty II Unit project as a SWRMS project that would seek authorization jointly with Lake Andes-Wagner.
- * A formal cost sharing package was submitted to the Bureau of Reclamation and to the House and Senate authorization committees in 1987 which included \$45,950,000 of State and local money.
- * A Congressional subcommittee hearing was held on the projects in 1989, but the identification of high levels of the element selenium during trace element investigations on both the lands and groundwaters of the projects stopped authorizing legislation from moving forward.
- * During the spring of 1990, local, state and federal agencies developed a 5000 acre research demonstration program. The research was designed to determine best management practices for irrigating glacial till soils containing selenium which will protect the environment from potential contamination.

Project sponsors are still waiting for Congressional authorization of the research demonstration program. Language is included in the Senate's version of the legislation which will fully authorize both projects contingent on favorable research results. It is expected the House will concur with the Senate version once the legislation is moved out of the Senate. The Senate failed to take action prior to Congress's adjournment for the end of 1991.

Lake Herman Restoration Project (SWRMS 1984)

- * The purpose of the project was to alleviate the degradation of water quality by the application of best management practices in the watershed (87% treated), the con-

struction of three sediment control structures on major tributaries to the lake, and riprapping a major portion of the shoreline.

- * In-lake sediment removal began in 1985 near the City of Madison.
- * Dredging was completed in 1990 with approximately 670,000 cubic yards of sediment being removed from the northeast bay, the swimming beach area of Lake Herman State Park, and the Herman Slough located in the State Park.
- * The dredging project was funded by a U.S. EPA 319 non-point source grant with local match provided by the City of Madison, Lake County, East Dakota Water Development District, S.D. Dept. of Game, Fish, & Parks, and the S.D. Dept. of Environment and Natural Resources. Additional funding was authorized by the 1986 federal Omnibus Water Resources Act (P.L. 99-662) but the State was unsuccessful in securing support for the project from the Corps of Engineers.

In 1991, a Phase III study was developed to evaluate the effectiveness of the dredging project and sediment control efforts. In addition to the development of the plan of study, data collection instruments were purchased and installed during 1991. Data will be collected in 1992 and 1993. The Phase III study is being supported by local funding and state in-kind technical assistance.

Mid-Dakota Rural Water System (SWRMS 1988)

- * Mid-Dakota is a proposed rural domestic water system which will provide high quality Missouri River water to 30,000 people in Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld, Potter, Sanborn, Sully, and small portions of Spink, Kingsbury, and Aurora Counties.
- * Estimated project cost is \$108.4 million.

- * In 1989, a detailed feasibility report was completed and authorizing legislation was introduced.
- * Mid-Dakota received State appropriations of a \$100,000 loan in 1988, a \$50,000 grant in 1989, and a \$75,000 grant in 1990.
- * Congressional subcommittee hearings were held on June 19 and June 21, 1990 in the Senate and House of Representatives respectively.

Federal authorization language for the Mid-Dakota project was contained in Title XIX of H.R. 429, the Reclamation Projects Authorization and Adjustment Act of 1991. The cost sharing provisions provide for \$85 million in federal grants, \$15 million in federal treasury rate loans to the local sponsor, and \$8.4 million in State grants. H.R. 429 was passed by the House of Representatives on June 20, 1991. Senate action was still pending when Congress adjourned on November 22, 1991.

Missouri River National Recreational River (SWRMS 1981)

- * The 59-mile reach of the Missouri River between Gavins Point Dam, South Dakota, and Ponca State Park, Nebraska, was designated a National Recreation River in 1978 by Section 707 of P.L. 95-625, which amended the Wild and Scenic River Act, P.L. 90-542. Authorized project costs were limited to \$21 million.
- * The MNRR project combines recreational development, wildlife management, cultural resource preservation, scenic preservation, protection of threatened and endangered species, and bank stabilization. In a 1981 cooperative agreement with the National Park Service, the Corps agreed to plan, design, construct, and operate this project.
- * In June 1986, a 50/50 cost sharing agreement was signed between the state of

South Dakota and the Corps for construction of a river access point at Myron Grove. Construction was completed in May 1987 at a cost of \$60,000.

- * In June 1987, a plan to develop habitat for threatened and endangered species by clearing sandbars was initiated as a 100 percent Federal activity. Since November 1987, two islands have been cleared of vegetation using various techniques. The islands will be monitored through September 1992. A Biological Assessment addressing the effects of MNRR bank stabilization and recreation on the endangered interior least tern and the threatened piping plover was initiated as part of an ongoing U.S. Fish & Wildlife Service consultation process.
- * In April 1989, a cost sharing agreement was signed between the city of Yankton and the Corps for recreational development of Riverside Park. Construction was initiated in September 1989, with total project costs estimated at \$1.2 million. In 1990, \$525,000 of federal funding was provided for completion of the redevelopment of Riverside Park
- * MNRR received \$3.48 million in federal funding for the period of 1980 through 1990.

In 1991, \$200,000 in federal operation and maintenance funding was utilized for rehabilitation of bank stabilization structures. A federal construction appropriation of \$1,060,000 was used for completion of the cost sharing commitment on the Riverside Park, island clearing activities, and biological assessment studies. An interim Biological Assessment will be completed in FFY 1992. The National Park Service has initiated a 3 to 5 year effort to update the management plan for the MNRR. The Biological Assessment will be completed in conjunction with development of the revised management plan.

Mni Wiconi Rural Water System (SWRMS 1989)

- * This project will provide high quality Missouri River water to approximately 20,000 western South Dakota citizens in an eight county area extending from Ft. Pierre through the Pine Ridge Indian Reservation.
- * Three water supply systems form the project cooperative:
 - Lyman-Jones Water Development Association Inc. (SWRMS 1981)
 - West River Rural Water Association Inc. (SWRMS 1981)
 - Oglala Sioux Water Supply System (SWRMS 1988)
- * Proposed project facilities include:
 - Intake constructed in Oahe Dam powerhouse;
 - Treatment plant near Ft. Pierre to treat 8 million gallons per day;
 - 2,300 miles of pipeline with 17 pumping stations; and
 - 6.7 million gallons of water storage.
- * Project costs:
 - \$100 million authorization level (Jan. 1987 costs);
 - \$110.7 million indexed to October 1990;
 - 65% of project costs allocated to OST system as non-reimbursable federal costs;
 - Non-federal cost share of 35% on non-Indian portion of system which amounts to \$12.5 million at 1987 costs or \$13.8 million on the 1990 index.
- * Funding recap:
 - \$300,000 in loans (1983-1988) to West River RWS & Lyman-Jones RWS which were converted to grants by the 1989 State Legislature;

- \$1.5 million grant by 1989 State Legislature;
- \$500,000 federal appropriation for FFY 1990;
- \$1.5 million federal appropriation for FFY 1991.

In 1991, West River and Lyman-Jones completed distribution systems' needs assessments, design criteria, distribution plan and cost estimates, water conservation plan, and collection of baseline environmental data under a cooperative agreement with the Bureau of Reclamation. The Oglala Sioux Tribe entered into a separate (638 Indian Preference) agreement with Reclamation and are completing the corresponding study components for the OSRWSS distribution system. The Oglala Sioux Tribe, West River, Lyman-Jones, Reclamation, and the State of South Dakota are working to establish the principles for development and operation of the common facilities to insure that each component receives their authorized project benefits.

Congress approved \$2.15 million for pre-construction activities in FFY 1992. The 1991 State Legislature provided \$1.0 million for non-federal matching requirements.

Pick-Sloan Riverside Irrigation (SWRMS 1987)

- * This proposal is an attempt to integrate existing irrigators along the Missouri River corridor into the Pick-Sloan Missouri Basin Program.
- * The project would provide irrigators with an opportunity to utilize Pick-Sloan power and the potential to obtain power revenue assistance.
- * Under this project, irrigators would be eligible for technical assistance and other

benefits associated with an authorized federal water project.

- * Several irrigation projects that utilize water from the Pick-Sloan system such as Northwest, Central Charles Mix, West Brule, and New Evarts Irrigation Districts and West Potter Water Project District have been actively pursuing Congressional authorization.

No action occurred on this project in 1991 and future activities are uncertain.

Sioux Falls Flood Control Project (SWRMS 1989)

- * The project would increase Sioux Falls' flood protection from Skunk Creek and the Big Sioux River through modification of current flood control features.
- * The existing project was authorized in 1954 and the Corps of Engineers completed construction of the flood control project in 1965. Existing flood control structures provide protection from flooding frequencies of 43 years or less.
- * The proposed project would cost \$26,923,000 and would provide Sioux Falls with 100-year protection from flooding on the Big Sioux River and Skunk Creek by:
 - raising the diversion dam;
 - raising the levees upstream from the dam along the diversion channel;
 - raising the walls of the spillway chute;
 - installing a new stilling basin;
 - raising the right-bank Skunk Creek levee and levees downstream from Skunk Creek along the Big Sioux River;
 - raising three bridges.
- * FFY 1992 appropriations of \$280,000 were authorized for the Corps of Engineers for pre-construction activities.

- * A draft feasibility report was completed in September, 1991, to determine the most cost-effective level of protection for the City. The total cost of the feasibility study is \$499,850, of which the City of Sioux Falls is paying 50 percent. The State Legislature provided two grants of \$50,000 in 1989 and 1990 and one grant of \$20,000 in 1991 for the State's cost share of the feasibility report.

Headquarters, District and Division Corps of Engineers representatives, State representatives, and City of Sioux Falls sponsors met in Omaha in November, 1991 for a feasibility and technical review of the Draft Feasibility Report. The feasibility study is expected to be completed by the spring of 1992. The final version of the report will be reviewed and sent to Congress for approval. Actual construction is expected to begin in FY 1996. The federal government will provide a maximum contribution of 75 percent of the total project costs assigned to flood control. The non-federal sponsor is required to provide a minimum contribution of 25 percent. The benefit-cost ratios are 1.4 on the Big Sioux River and 1.9 on Skunk Creek.

Slip-Up Creek (SWRMS 1981)

- * This project includes a dam, reservoir, and pumping plant on Slip-Up Creek; a pumping plant on the Big Sioux River; and pipelines connecting the river pumping plant to the reservoir and the city's water treatment plant.
- * The purpose of the project is to store Big Sioux River waters for municipal use by the City of Sioux Falls and for recreation and fish and wildlife activities.
- * Big Sioux River water would be pumped to the Slip-Up Creek site and, when needed, it would be pumped to the Sioux Falls water treatment plant.

- * After a public meeting in 1986, the City of Sioux Falls passed a resolution calling for:
 - continued development of the Sioux Falls aquifer;
 - continued planning for a reservoir in the Slip-Up Creek Valley;
 - initiation of a water education and conservation program.

No significant action took place on the project in 1991.

Lewis and Clark Rural Water System (SWRMS 1989)

- * Formerly known as the Southeastern South Dakota Water Supply System, Project membership took formal action in June of 1991 to change their name to the Lewis and Clark Rural Water System. Legislation will be introduced in 1992 to make the name change on the SWRMS list.
- * A non-profit corporation was formed in April of 1990 to provide local sponsorship in pursuing project development, an engineering feasibility study, and project authorization.
- * Lewis and Clark RWS will be a bulk delivery system of Missouri River water to communities and existing rural water systems in southeastern South Dakota, northwestern Iowa, and southwestern Minnesota for domestic use.
- * South Dakota membership includes 27 communities and nine rural water systems. Approximately 188,000 South Dakotans would receive water from Lewis and Clark.
- * State legislative appropriations have totaled \$125,000 to support development of Lewis and Clark during 1990 and 1991.
- * Congress provided \$100,000 in FFY1991, and again in FFY1992, for the Bureau of Reclamation's technical assistance in the feasibility study and project development.

Primarily, the Bureau has been involved in assisting the consulting engineering firm in the environmental assessment aspects of the feasibility report. The Bureau also provided a technical review of the feasibility report prior to its finalization.

A final feasibility report was presented to the Lewis and Clark RWS board of directors in April of 1991. In all, three diversion sites, fourteen pipeline alternatives, and three water treatment options were considered during the feasibility study. Preliminary project design includes a surface intake located in Lewis and Clark Lake behind Gavin's Point Dam. The water delivery system is designed for a peak demand of 75 MGD and an average demand of 42 MGD. Allowances for delivering treated water only or treated and raw water both by the system were also included. Cost estimates for constructing the project were approximately \$690 million. Lewis and Clark RWS members are now refining their water demand needs from the system. It is expected the overall demand will decrease dramatically and therefore, lower project costs.

In December of 1991, sponsors hosted a project management seminar aimed at allowing the membership to discuss the project's scope and establish a timeline for achieving major project goals.

Vermillion Flood Control Project (SWRMS 1987)

- * The project intends to rectify flooding problems which have become much more severe in the Vermillion River Basin area over the last 30-40 years.
- * The 1988 State Legislature appropriated \$50,000 to the Vermillion Water Project District for a flood control study of the Vermillion River Basin.

- * In 1989, the Vermillion Water Project District began actively pursuing the formation of a water development district.
- * The 1990 State Legislature approved the formation of the water development district and director elections were held in November. In 1991, the water development district received a State appropriation loan of \$45,000 from the water development special revenue fund.
- * A federal appropriation for \$100,000 was secured for FFY 1991. A Corps of Engineers General Investigations Federal appropriations of \$145,000 was secured for FFY 1992.

In 1991, the Corps of Engineers reviewed project sites within the Vermillion River Basin area to be included in the reconnaissance level report. A draft reconnaissance report is to be completed in February, 1992, with a final report expected to be completed by July, 1992.

Water for Energy Transport (WET) System (SWRMS 1981)

- * This project is a proposal to transport treated municipal wastewater from nine Black Hills municipalities to Wyoming for use in a coal slurry pipeline.
- * The WET system was advanced as an alternative to the proposal to use the Madison Aquifer as a source of water for the Energy Transportation Systems, Inc. (ETSI) coal slurry pipeline.
- * Estimated 1984 costs were \$149 million with an annual operation and maintenance costs of \$47 million.

No activity has occurred on this project since 1988. The future of the project is linked to the development of the coal industry in Wyoming and the need to transport the coal substantial distances.

WEB Pipeline Project (SWRMS 1981)

- * This project is a rural domestic water system that provides Missouri River water to 32,000 people in Walworth, Edmunds, Brown, Spink, Day, Campbell, McPherson, Faulk, Potter, Beadle, Clark, Hand, and Marshall counties in South Dakota and Emmons and Dickey counties in North Dakota.
- * The project was authorized for construction by the Rural Development Policy Act of 1980.
- * Project construction was initiated in 1983, and the first customer was served in 1986.
- * In 1988, Congress authorized an increase in the appropriations ceiling to \$117 million for the project.

Construction of the federally authorized WEB project was completed on September 30, 1991, and a project dedication was held in October 1991. Federal appropriations for the project totalled \$111.95 million including \$20.6 million in loans. Non-federal funding totalled \$7.25 million for a total project cost of \$119.2 million.

The project has over 5,000 hook-ups providing direct service to rural homes, farms, pasture taps, and residents of 21 towns. Additionally, water is provided to 53 bulk users providing service to towns and other public water supply systems.

West River Aqueduct (SWRMS 1977)

- * The West River Aqueduct was a proposed project to deliver 20,000 acre-feet of Missouri River water to Energy Transportation Systems, Inc. (ETSI) for use in a coal slurry pipeline and 10,000 acre-feet of water for delivery to rural communities and water systems in western South Dakota.

- * An agreement was reached with ETSI and legislation was passed in 1981 approving construction of the aqueduct.
- * In 1982, two lawsuits were filed against ETSI, the Dept. of the Interior, and various federal officials with the objective of halting the sale of Missouri River water to ETSI.
- * After various court decisions and appeals, the U.S. Supreme Court ruled that the Corps of Engineers was the proper authority to contract with ETSI and in May, 1985, the U.S. District Court granted a permanent injunction blocking South Dakota's sale of Missouri River water to ETSI.
- * In 1983, South Dakota filed a suit against Kansas City Southern Railroad charging conspiracy to monopolize Powder River coal traffic and tortuous interference with the ETSI contract.
- * In August, 1985, ETSI canceled its proposed \$3 billion coal slurry pipeline and as a result, South Dakota received \$5.2 million of the projected \$1.4 billion in payments from ETSI.
- * In 1988, the U.S. District Court ruled in favor of South Dakota and awarded damages of \$600 million, however, this decision was overturned by the U.S. Eighth Circuit Court of Appeals.
- * This decision was appealed to the U.S. Supreme Court which refused to hear the case.

No action has occurred on the project since the U.S. Supreme Court refused to hear the case on ETSI. No future action is expected until new interest develops in coal slurry pipelines.

STATE REVOLVING FUND

The South Dakota State Revolving Fund (SRF) Loan Program began in 1988. The Legislature authorized a one-time expenditure of \$1,200,000 for program initiation, which was ultimately used as a reserve for the fund.

The SRF is designed to provide low-interest loans to municipalities, sanitary districts, and watershed districts. The loans are to be used to upgrade wastewater treatment facilities or for nonpoint source pollution control projects.

The South Dakota Conservancy District issued \$5,785,000 in municipal revenue bonds for the first three year's State match funds on August 9, 1989. The State SRF Program received its first Capitalization Grant of \$4,577,200 from the Environmental Protection Agency (EPA) on March 6, 1989.

One loan was made in 1989. The City of Huron received \$1,656,000 for 20 years at a 3% interest rate.

The South Dakota SRF Loan Program received its second Capitalization Grant of \$4,738,000 from EPA on March 30, 1990. Seventeen loans were made by the Board of Water and Natural Resources, acting as the South Dakota Conservancy District, in 1990.

The EPA awarded the third Capitalization Grant, of \$10,074,800, to South Dakota on April 3, 1991. Nine loans have been made in 1991, as of November 30, 1991. The total dollar amount of all loans made is \$20,297,044.

The Federal Fiscal Year (FFY) 1992 Intended Use Plan (IUP) hearing was held on August 28, 1991 at the Board of Water and Natural Resources meeting in Pierre. Projects must be on the IUP to be eligible for SRF loans. The FFY 1992 IUP was voted on

and finalized at the public hearing held on August 28 in Pierre. Table 10 is a list of communities/nonpoint source pollution control projects that were approved for the FFY 1992 IUP.

Board of Water and Natural Resources voted on October 11, 1990 and October 9, 1991 to set the interest rates for SRF loans at 3% for 10 years, 4% for 15 years, and 5% for 20 years. The interest rate review is required annually according to ARSD 74:05:08:18.

Table 9 is a detailed listing of the loans made by the Board of Water and Natural Resources as of November 30, 1991. The

**TABLE 9
STATE REVOLVING FUND LOANS**

SPONSOR	PROJECT DESCRIPTION	APPROVAL DATE	SRF LOAN AMOUNT	INTEREST RATE(%)	TERM (YEARS)
Huron	Additions	11-9-89	\$1,656,000	3	20
Rapid Valley	Rehabilitation/Collection	1-11-90	614,000	3	20
Box Elder	Refinancing	4-11-90	648,600	3	20
Custer	Land Application	4-11-90	430,000	3	20
Lake Cochrane	Refinancing	4-11-90	80,000	3	20
Lemmon	Refinancing	4-11-90	427,100	3	20
Sioux Falls	Rehabilitation/Interceptors	4-11-90	3,316,310	3	20
Lead-Deadwood	Equipment	6-7-90	106,855	3	5
Vermillion	Interceptors	6-7-90	125,000	3	20
Custer	Collectors	7-11-90	182,000	3	20
Lead	I/I Correction	7-11-90	186,409	3	20
Mobridge	Additions	7-11-90	1,500,000	3	20
Sioux Falls	Rehabilitation/Equipment	7-11-90	454,000	3	10
Belle Fourche	Interceptors	8-22-90	253,000	3	20
Pierre	Treatment	11-8-90	600,000	4	15
Sioux Falls	Interceptors/Rehabilitation/Treatment	12-12-90	845,000	3	10
Sioux Falls	Storm Sewers	12-12-90	1,200,000	3	10
Rapid City	Interceptors/Rehabilitation/ Storm Sewers/Treatment/Refinancing	12-12-90	2,637,000	4	15
Lake Madison	Refinancing	3-14-91	330,000	4	15
Madison	Collection	3-14-91	150,000	3	10
Brandon	Storm Sewers	3-14-91	105,000	3	10
Brookings	Collection/Interceptors	3-14-91	188,065	4	15
Huron	Storm Sewers	6-12-91	750,000	3	10
Clear Lake	Treatment	6-12-91	370,000	4	15
Lead	I/I Correction/Rehabilitation	7-11-91	500,770	3	10
McCook Lake	Interceptors/Treatment	8-29-91	641,935	5	20
Watertown	Treatment	10-9-91	<u>2,000,000</u>	4	15
TOTAL			\$20,297,044		

TABLE 10
INTENDED USE PLAN
LIST OF POTENTIAL SRF PROJECTS
WASTEWATER FACILITIES

<u>Municipality</u>	<u>Project Description</u>
Big Stone City*	Interceptors/Treatment
Brandon	Storm Sewers/Add. to Facility
Canton	Sanitary/Storm Sewers
Chamberlain	Collection/Storm Sewers
Custer State Park	New Sanitary Sewer Collection and Treatment
Enemy Swim Sanitary District	Collection/Treatment
Hayti	Sanitary Sewer Rehabilitation
Langford	Sanitary Sewer Rehabilitation
Lead	I/I Correction/Rehabilitation
Madison	Collection/Interceptors/Storm Sewers
Milbank	Interceptors
Mina Lake*	Interceptors
Mobridge	Wastewater Facility Laboratory Refinancing
N. Sioux City	Interceptors/Treatment
Prairie Meadows Sanitary District	Sanitary Sewer Rehabilitation
Pollock*	Treatment
Rapid City	Interceptors/Rehabilitation/Storm Sewers/ Treatment/Refinancing
Rapid Valley Sanitary District	New Sanitary Sewer Collection/Sewer Rehabilitation
Saint Lawrence	Treatment
Sioux Falls	Interceptors/Rehabilitation/ Storm Sewers/Treatment
Spearfish	Treatment/Interceptors
Tea	Storm Sewers
Veblen*	Treatment
Volga	Treatment
Watertown*	Treatment
Waubay	Collection/Interceptors/Treatment
Worthing	Treatment

*Denotes enforceable project.

(Projects appearing on the Project Priority List may be added to this list at any time as required in accordance with the SRF rules adopted by the Board of Water and Natural Resources.)

**LIST OF
POTENTIAL SRF
NONPOINT SOURCE PROGRAMS**

Activities to be implemented for the control of NPS pollution in the project areas listed for consideration include:

1. Agricultural Best Management Practices such as reduced tillage, sod based crop rotation, terraces and fertilizer/pesticide management.
2. Urban Best Management Practices such as street cleaning, retention/detention basins and non-vegetative soil stabilization.
3. Sediment Control Structures.
4. Studies
 - A. Groundwater impacts from agricultural activities.
 - B. Groundwater characterization from selected aquifers.
 - C. Wellhead protection area identification.
5. Shoreline/Streambank Erosion Control.
6. Animal Waste Management Systems.
7. Shoreline Waste Management Systems.
8. Silviculture Best Management Practices such as ground cover and debris removal.
9. Mining Best Management Practices such as water diversion and block cutting.

ENVIRONMENTAL PROTECTION AGENCY WASTEWATER FACILITIES CONSTRUCTION GRANTS PROGRAM

This program was established in 1972 to provide grants to municipalities, sanitary districts, and other political subdivisions to assist them in the planning, design and/or construction of wastewater treatment facilities which qualify for federal funds under the provisions of the Federal Water Pollution

Control Act.

The program is being phased out and replaced with the State Revolving Fund. In 1990, the Department received the last appropriation of EPA grant funds (\$4,107,400) for cost share funding. Future grants will be made with funds recovered from earlier grants. Table 11 is a list of those municipalities receiving EPA grants during FFY 1991.

**TABLE 11
EPA CONSTRUCTION GRANTS
(October 1, 1990 - September 30, 1991)**

NAME	EPA GRANTS	SRF LOANS	CWFCP GRANTS	CDBG GRANTS	TOTAL LOCAL	TOTAL COST
McCook Lake San. Dist.	\$ 332,880	\$ 641,935	\$	\$	\$ 285,299	\$ 1,260,114
Colton	241,120				382,880	624,000
Timber Lake	88,800				78,110	166,910
Peever	99,420				44,926	144,346
Clear Lake	286,080	370,000			259,374	915,454
Waubay	426,020	163,487		230,750*	117,812	938,069
Highmore	200,000				200,000	400,000
Bristol	171,450				155,550	327,000
Lake Norden	293,000			300,000	616,100	1,209,100
Lyman County	172,040			249,200	188,530	609,770
Oacoma	250,855				202,245	456,100
Watertown	1,105,810	2,000,000			894,190	8,000,000
TOTAL	\$3,667,475	\$1,175,422	\$	\$779,950	\$3,425,016	\$15,050,863

* Proposed

Lake Restoration/Nonpoint Source Pollution Program

The South Dakota Clean Lakes and Nonpoint Source (NPS) Pollution Control Programs are designed to assess the status of pollution sources and their subsequent effect on water bodies throughout the State; provide technical assistance to local project sponsors in the design and implementation of individual projects; provide financial support to individual projects through the management of state and federal grants, and provide assistance in monitoring the effectiveness of implementation projects. Each program has general statewide responsibilities in the management of lakes and NPS problems and also focuses on the restoration of specific lakes and the prevention of NPS pollution in specific watershed areas.

Two lake restoration projects involving dredging received State Consolidated funding totaling \$110,000 in 1991. Wall Lake was granted \$60,000 and Punished Woman's Lake received \$50,000. In addition, the Wall Lake project was awarded \$223,310 in 1991 from the Environmental Protection Agency. A third lake dredging project, McCook Lake was partially funded by a \$52,500 grant from the Environmental Protection Agency. Additional cash and inkind contributions were provided locally for all three lake dredging projects. The final state project with a dredge was the James River Restoration Project. State appropriations to the James River Water Development District and local cash and inkind contributions were used to fund the James River project.

The Environmental Protection Agency also supplied \$53,500 for a Diagnos-

tic/Feasibility study of Lake Kampeska, \$30,000 for continuing work on the South Dakota Lakes Assessment activity, and \$20,000 for reorganization of the South Dakota State Lakes Association.

No new or ongoing NPS projects received State Consolidated funds in 1991. Four new and three ongoing projects received funds through the EPA Section 319 Program. Pickerel Lake received \$95,740 for lake protection. Burke Lake received \$60,000 for lake restoration. The Department of En-

vironment and Natural Resources received \$44,150 to continue a pesticide/nitrogen sampling of selected aquifers and \$49,900 for a statewide lakes protection program. The South Dakota Association of Conservation Districts received \$4,000 to hold a Riparian Management Workshop and \$25,368 to continue animal waste management activities. The East Dakota Water Development District received \$25,200 to continue activities concerning the Big Sioux Aquifer. All of the Section 319 funding is managed by WRM through contracts with local project sponsors.

TABLE 12
1991
Lake Restoration/Nonpoint Source Projects

PROJECT	DESCRIPTION	CWFCP	TOTAL COST
Pickerel Lake	Lake Protection	\$ 0	\$ 183,155
Burke Lake	Lake Restoration	0	252,564
Pest./Nitro. Sampling	Groundwater Monitoring	0	74,150
Lake Protection	Lake Protection	0	83,140
Riparian Workshop	NPS Pollution Control	0	6,800
Big Sioux Groundwater	Groundwater Protection	0	405,290
Animal Waste Mgt.	NPS Pollution Control	0	1,434,680
Wall Lake	Lake Restoration	60,000	290,000
Punished Woman's Lake	Lake Restoration	50,000	200,000
McCook Lake	Lake Restoration	0	105,000
Bad River	River Rehabilitation	0	260,000
Big Stone Lake	Lake Restoration	0	295,819
Richmond Lake	Lake Restoration	0	239,076
3rd Street Dam	Lake Restoration	0	200,000
		<u>\$110,000</u>	<u>\$4,029,674</u>

Groundwater Research and Public Education Program (GRPEP)

The Groundwater Research and Public Education Program was created to study groundwater contamination, to provide information on sound groundwater management, and to develop methods for preventing groundwater pollution. The Groundwater Protection Fund, which is used for funding the program, has four sources of revenue:

1) The Pesticide Groundwater Fee - For each pesticide that is registered with the Department of Agriculture, a fee of \$25 will be imposed and deposited to this fund for five years by the Department of Agriculture.

2) The Fertilizer Inspection Fee - This fee is collected by the Department of Agriculture for all commercial fertilizer distributed to nonlicensees in the state. The fund receives thirty cents per ton for five years.

3) The Petroleum Release Compensation Fund - \$100,000 is contributed from this fund annually for five years.

4) The Surface Mining Chemical Leaching Fee - A five year fee of two cents per pound of cyanide or other chemical leaching agent used to mill ore. This fee is collected by the Department of Revenue on or before June 1 each year.

There are two application and grant cycles in each fiscal year. The Secretary of the

Department of Environment and Natural Resources on March 1 and September 1 of each year. Resources must submit complete applications to the Board of Water and Natural

TABLE 13

**1992 GROUNDWATER RESEARCH
AND PUBLIC EDUCATION FUND**

PROJECT SPONSOR	AMOUNT AUTHORIZED
Davis	\$ 16,498 *
Hellickson	46,512
Rahn	50,130
Rice	16,087
Bischoff	37,304
Mellette/Todd Cons Dists	36,000 *
EDWDD	48,500
Mott	55,221
Schaefer	53,604
SDACD	20,000
Kohl	34,555
Rickerl	35,000
Clay/Clay/Schumacher	13,000
Roggenthen	24,561 **
Clay/Clay/Schumacher	95,180 **
Clay	57,910 **
Webb/Rahn	62,519 **
Mellette/Todd Cons Dists	30,050 **
EDWDD	15,000 **
Davis	<u>31,413 **</u>
TOTAL	\$779,044
*award has been closed	
**awarded in 1991	

APPENDIX A

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-41

REQUESTING THE LEGISLATURE TO AUTHORIZE THE CONSTRUCTION OF THE MID-DAKOTA RURAL WATER SYSTEM AND TO AUTHORIZE THE STATE COST SHARE OF \$8.4 MILLION FOR THE MID-DAKOTA PROJECT.

WHEREAS, Mid-Dakota Rural Water System is a proposed rural domestic water system which will provide high quality Missouri River water to 30,000 people in Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld, Potter, Sanborn, Sully, and small portions of Spink, Kingsbury, and Aurora Counties; and

WHEREAS, in 1988 the Mid-Dakota Rural Water System was made a part of the State Water Resources Management System; and

WHEREAS, the report "Mid-Dakota Rural Water System Feasibility Study and Report" dated November 1988 and revised January 1989 and March 1989, as supplemented by the "Supplemental Report for Mid-Dakota Rural Water System" dated March 1990 details the feasibility and benefits of providing safe and adequate municipal, rural and industrial water supplies as well as mitigation of wetlands and water conservation in the project area; and

WHEREAS, the estimated total cost of the project is \$108.4 million, \$8.4 million of which is the state of South Dakota portion of non-federal cost share requirements of H.R. 429; and

WHEREAS, the Board finds the Mid-Dakota Rural Water System to be a necessary project, meeting an important public need in supplying quality water for domestic uses and making effective use of this state's water resources.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the construction of the Mid-Dakota Rural Water System; and

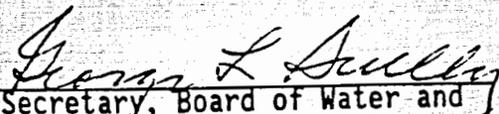
IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a grant of \$8.4 million, or so much thereof as may be necessary, to provide the state of South Dakota portion of non-federal cost share requirements.

Dated this 13th day of November, 1991.


Chairman, Board of Water and
Natural Resources

(SEAL)

ATTEST:


Asst. Secretary, Board of Water and
Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-42

REQUESTING THE LEGISLATURE TO AUTHORIZE THE CONSTRUCTION OF THE MNI WICONI RURAL WATER SYSTEM AND TO AUTHORIZE A STATE LOAN OF \$12.25 MILLION TO PROVIDE THE NON-FEDERAL COST SHARE FOR THE MNI WICONI PROJECT.

WHEREAS, Mni Wiconi Rural Water System is a proposed rural domestic water system which will provide high quality Missouri River water to 20,000 people on the Pine Ridge Indian Reservation and in the counties of Stanley, Haakon, Lyman, Jones, Jackson, Mellette, and Pennington; and

WHEREAS, in 1989 the Mni Wiconi Rural Water System was made a part of the State Water Resources Management System; and

WHEREAS, the report "1988 Planning Report and Environmental Assessment" dated February 1988 details the feasibility and benefits of providing safe and adequate municipal, rural and industrial water supplies as well as water conservation in the project area; and

WHEREAS, the estimated total cost of the project is \$100.0 million, \$12.25 million of which is the non-federal cost share requirements of P.L. 100-516;

WHEREAS, the Board finds that it is in the best interest of the Mni Wiconi Rural Water System to provide the nonfederal matching requirements as enumerated in P.L. 100-516 as amended on January 1, 1989, through loans authorized from the South Dakota water facilities construction fund; and

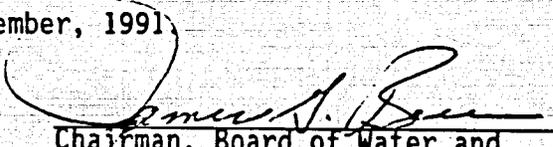
WHEREAS, the Board finds the Mni Wiconi Rural Water System to be a necessary project, meeting an important public need in supplying quality water for domestic uses and making effective use of this state's water resources.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the construction of the Mni Wiconi Rural Water System; and

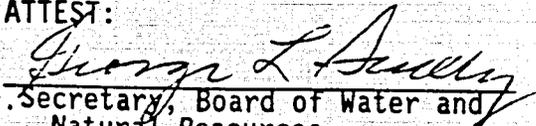
IT IS FURTHER RESOLVED, that the Legislature is hereby requested to convert to loans all grants authorized for expenditure out of the South Dakota water facilities construction fund for the Mni Wiconi Rural Water System since January 1, 1989; and

IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a loan in amounts not to exceed total loans of \$12.25 million, or so much thereof as may be necessary, to provide the non-federal cost share requirements.

Dated this 13th day of November, 1991


Chairman, Board of Water and
Natural Resources

(SEAL)
ATTEST:


Asst. Secretary, Board of Water and
Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-43

REQUESTING THE LEGISLATURE TO AUTHORIZE THE CONSTRUCTION OF THE LAKE ANDES-WAGNER/MARTY II IRRIGATION PROJECT AND TO AUTHORIZE THE STATE COST SHARE OF \$7.0 MILLION FOR THE LAKE ANDES-WAGNER PROJECT.

WHEREAS, the 45,000 acre Lake Andes-Wagner Irrigation project and the 3,000 acre Marty II Irrigation project are proposed Pick-Sloan Missouri Basin Units in Charles Mix County; and

WHEREAS, in 1975 the Lake Andes-Wagner Irrigation project was made a part of the State Water Resources Management System; and

WHEREAS, in 1989 the Marty II Irrigation project was made a part of the State Water Resources Management System; and

WHEREAS, the Lake Andes-Wagner project report "Planning Report/Final Environmental Statement" dated September 1985 and the Marty II project report "Planning Report and Environmental Assessment" dated January 1990 indicates a benefit-cost ratio of 1.06 to 1 and details the benefits of stabilizing crop and forage production in south central South Dakota to offset the effects of drought conditions which naturally devastate South Dakota's economic viability; and

WHEREAS, prior to construction of the Lake Andes-Wagner/Marty II irrigation project the Board finds it necessary and prudent to develop accurate and quantitative means of addressing the reliable drainage requirements with respect to glacial till soils and to develop sound management practices that are beneficial to all irrigation in South Dakota; and

WHEREAS, this phase of the project will hereby be referred to as the Lake Andes-Wagner/Marty II research demonstration program; and

WHEREAS, the estimated total cost of the Lake Andes-Wagner project is \$175.0 million, \$7.0 million of which is the state of South Dakota portion of non-federal cost share requirement; and

WHEREAS, the estimated total cost of the Marty II project is \$24.0 million; and

WHEREAS, the Board finds the Lake Andes-Wagner/Marty II irrigation project to be a necessary project, meeting an important public need in supplying quality water for irrigation and making effective use of this state's water resources.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the construction of the Lake Andes-Wagner/Marty II irrigation project; and

IT IS FURTHER RESOLVED, that the Legislature is hereby requested to authorize the Lake Andes-Wagner/Marty II research demonstration program which shall conclude with the acceptance of a detailed report presented to and accepted by the Legislature and the United States Congress; and

IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the

Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a loan of \$7.0 million, or so much thereof as may be necessary, to provide the state of South Dakota portion of non-federal cost share requirements.

Dated this 13th day of November, 1991.


Chairman, Board of Water and
Natural Resources

(SEAL)

ATTEST:


Asst. Secretary, Board of Water and
Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-44

REQUESTING THE LEGISLATURE TO AUTHORIZE THE CONSTRUCTION OF THE BIG SIOUX FLOOD CONTROL PROJECT AND TO AUTHORIZE THE STATE COST SHARE OF \$2.1 MILLION FOR THE BIG SIOUX FLOOD CONTROL PROJECT.

WHEREAS, Big Sioux Flood Control project is a proposed dry dam on Mahoney Creek which will provide flood control protection along the Big Sioux River and Lake Kampeska in Codington County; and

WHEREAS, in 1989 the Big Sioux Flood Control project was made a part of the State Water Resources Management System; and

WHEREAS, the report "Draft Feasibility Report and Environmental Assessment -- Flood Control for Watertown and Vicinity, South Dakota" dated September 1991 indicates a benefit-cost ratio of 1.2 to 1 and details the benefits of providing flood control protection along the Big Sioux River and Lake Kampeska in Codington County; and

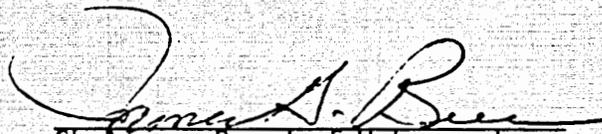
WHEREAS, the estimated total cost of the project is \$13.4 million, \$2.1 million of which is the state of South Dakota portion of non-federal cost share requirement of \$4.2 million; and

WHEREAS, the Board finds the Big Sioux Flood Control project to be a necessary project, meeting an important public need in providing flood control protection in Codington County.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the construction of the Big Sioux Flood Control project; and

IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a grant of \$2.1 million, or so much thereof as may be necessary, to provide the state of South Dakota portion of non-federal cost share requirements.

Dated this 13th day of November, 1991.


Chairman, Board of Water and
Natural Resources

(SEAL)

ATTEST:


Asst Secretary, Board of Water and
Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-45

REQUESTING THE LEGISLATURE TO AUTHORIZE THE CONSTRUCTION OF THE SIOUX FALLS FLOOD CONTROL PROJECT AND TO AUTHORIZE THE STATE COST SHARE OF \$4.6 MILLION FOR THE SIOUX FALLS FLOOD CONTROL PROJECT.

WHEREAS, Sioux Falls Flood Control project is proposed modifications of the Sioux Falls diversion channel/levee system to provide flood control protection during a 100-year flood along the Big Sioux River and Skunk Creek in Sioux Falls; and

WHEREAS, in 1989 the Sioux Falls Flood Control project was made a part of the State Water Resources Management System; and

WHEREAS, the report "Draft Feasibility Report -- Local Flood Protection Big Sioux River and Skunk Creek at Sioux Falls, South Dakota" dated September 1991 indicates a benefit-cost ratio of 1.4 to 1 for the Big Sioux River flood control structures and a benefit-cost ratio of 1.9 to 1 for the Skunk Creek flood control structures and details the benefits of providing 100-year flood control protection in Sioux Falls; and

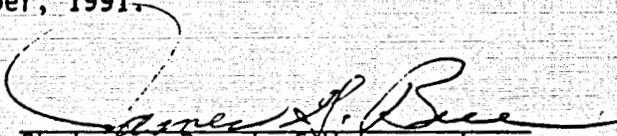
WHEREAS, the estimated total cost of the project is \$26.9 million, \$4.6 million of which is the state of South Dakota portion of non-federal cost share requirement of \$9.2 million; and

WHEREAS, the Board finds the Sioux Falls Flood Control project to be a necessary project, meeting an important public need in providing flood control protection in Sioux Falls.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the construction of the Sioux Falls Flood Control project; and

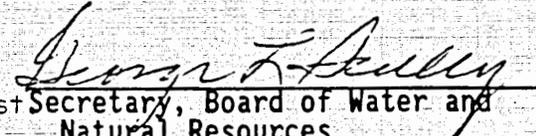
IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a grant of \$4.6 million, or so much thereof as may be necessary, to provide the state of South Dakota portion of non-federal cost share requirements.

Dated this 13th day of November, 1991.


Chairman, Board of Water and
Natural Resources

(SEAL)

ATTEST:


Asst Secretary, Board of Water and
Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-46

REQUESTING THE LEGISLATURE TO AUTHORIZE THE BLACK HILLS WATER MANAGEMENT STUDY AND THE BLACK HILLS HYDROLOGY STUDY AND TO AUTHORIZE THE STATE COST SHARE OF \$2.5 MILLION FOR THE BLACK HILLS STUDIES.

WHEREAS, Black Hills Water Management Study and the Black Hills Hydrology Study are companion studies for the purpose of assessing and meeting present and future water needs in the counties of Butte, Meade, Lawrence, Pennington, Custer, and Fall River; and

WHEREAS, in 1982 the Black Hills Hydrology Study was made a part of the State Water Resources Management System; and

WHEREAS, the "Black Hills Water Management Plan of Study" details the scope of studies and the benefits of managing the Black Hills water resources; and

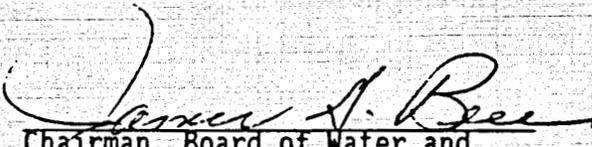
WHEREAS, the estimated total cost of the study project is \$10.0 million, \$2.5 million of which is the state of South Dakota portion of non-federal cost share requirement of \$5.0 million; and

WHEREAS, the Board finds the Black Hills Hydrology Study and the Black Hills Water Management Study to be necessary studies, meeting an important public need in developing a Black Hills water management plan.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the Black Hills Hydrology Study and the Black Hills Water Management Study; and

IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a grant of \$2.5 million, or so much thereof as may be necessary, to provide the state of South Dakota portion of non-federal cost share requirements.

Dated this 13th day of November, 1991.


Chairman, Board of Water and
Natural Resources

(SEAL)

ATTEST:


Asst. Secretary, Board of Water and
Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION # 91-47

REQUESTING THE LEGISLATURE TO AUTHORIZE THE JAMES RIVER IMPROVEMENT PROGRAM AND TO AUTHORIZE THE STATE COST SHARE OF \$2.5 MILLION FOR THE JAMES RIVER PROJECT.

WHEREAS, the James River Improvement Program is a project providing tributary drainage control, wetlands enhancement, riparian habitat development, and minimum in-stream flows in the counties of Brown, Spink, Beadle, Sanborn, Davison, Hanson, Hutchinson, and Yankton; and

WHEREAS, in 1984 the James River Improvement Program was made a part of the State Water Resources Management System; and

WHEREAS, the James River Improvement Program is federally authorized in P.L. 99-662; and

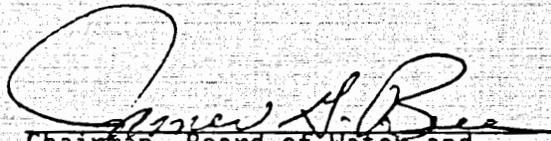
WHEREAS, the estimated total cost of the project is \$20.0 million, \$2.5 million of which is the state of South Dakota portion of non-federal cost share requirement of \$5.0 million; and

WHEREAS, the Board finds the James River Improvement Program to be a necessary project, meeting an important public need by providing tributary drainage control, wetlands enhancement, riparian habitat development, minimum in-stream flows, and making effective use of this state's water resources.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD, that pursuant to the provisions of SDCL 46A-1-11, the Legislature is hereby requested to authorize the James River Improvement Program; and

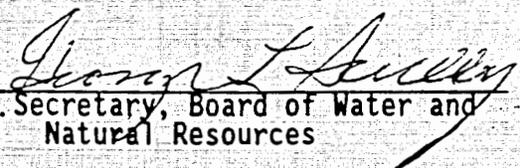
IT IS FURTHER RESOLVED, that pursuant to the provisions of SDCL 46A-1-13, the Legislature is hereby requested to authorize from the South Dakota Water Facility Construction Fund a grant of \$2.5 million, or so much thereof as may be necessary, to provide the state of South Dakota portion of non-federal cost share requirements.

Dated this 13th day of November, 1991.


Chairman, Board of Water and
Natural Resources

(SEAL)

ATTEST:


Asst. Secretary, Board of Water and
Natural Resources

APPENDIX B

WATER FACILITIES CONSTRUCTION FUND CONDITION STATEMENT

	FY90	FY91
REVENUE:		
General Fund Transfer In	\$ 300,000 b	\$ 1,180,000 c
Loan Repayments (P & I)	221,978	221,978
Investment Council Interest	384,153	542,532
Transfers to WERF from WFCF	(17,417) a	(8,273)
Wear Element Replacement Fund	39,064 a	79,368
Interest on Loan Overpayment	85	0
WERF Inv. Int.	2,049	2,611
Grant Overpayment	1,000	1,000
Mil. & Vet Affairs Drought Pay	0	49,364
89 Int on Union Pacific Settlement	96,687	0
TOTAL REVENUE	1,027,599	2,068,580
EXPENDITURES:		
Construction & Study Loans	3,374	9,000
Legislative Line Items	812,153	858,261
WPC Revolving Fund Transfer Out	0	0
Transfer from WFCF to WERF	(17,417)	(8,273)
WERF	78,093	104,637
Solid Wst Mngt. Plan	0	99,983
Consolidated Constr. Prog.	1,254,203	864,747
TOTAL EXPENDITURES	2,130,406	1,928,355
REVENUE OVER (UNDER) EXPENDITURES	(1,102,807)	140,225
BEGINNING CASH BALANCE	6,317,886	5,215,079
ENDING CASH BALANCE	5,215,079	5,355,304
CURRENT YEAR APPROPRIATIONS		
Construction & Study Loans	15,000 d	0
Legislative Line Items	635,000 d	2,520,000 e
Consolidated Constr. Prog.	1,130,000 d	110,000 e
Wear Element Replacement Fund	0	0
TOTAL APPROPRIATIONS	\$1,780,000	\$2,630,000

FOOTNOTES FOR WATER FACILITIES CONSTRUCTION FUND CONDITION STATEMENT FOR FY91.

- a. Represents the payments to WERF by the local project sponsor and the matching monies from the WFCF based on hours of use. WERF was set up as a continuously appropriated fund equal to the funds received. (SB44-FY87).
- b. Amount appropriated through 1990 SB341.
- c. Amount appropriated through 1991 SB174.
- d. The 1990 Legislature adopted SB341 which appropriated \$1,780,000 for the WFCF. Of this amount, \$300,000 is to be new state money from the general fund, and \$1,480,000 is to be from existing WFCF funds. The projects to be included are \$1,130,000 for the Consolidated Water Facilities Construction Fund Program, and \$15,000 in Study Loans, for the Gregory County Pumped Storage Study. The remaining \$635,000 is for the following projects: James River Restoration Project, \$260,000; Mid Dakota RWS Project, \$75,000; Big Sioux Flood Control - Watertown, \$50,000; Big Sioux Flood Control - Sioux Falls, \$50,000; Southeastern S.D. Water Supply System, \$50,000; Black Hills Hydrology Study, \$50,000; Drought Assistance Program, \$100,000.

- e. The 1991 Legislature adopted SB174 which appropriated \$2,630,000 for the WFCF. Of this amount, \$1,180,000 is to be new state money from the general fund, \$880,000 is reauthorization for the Lake Andes-Wagner/Marty II project, and \$570,000 is to come from existing Water Facilities Construction Fund Program, \$125,000 for James River Restoration, \$145,000 for Mid-Dakota RWS, \$100,000 for Hydro Upgrade, \$50,000 for Big Sioux Flood Control - Watertown, \$20,000 for Big Sioux Flood Control - Sioux Falls, \$100,000 for the Black Hills Hydrology Study, \$75,000 for the Lewis and Clark RWS, \$1,000,000 for Mni Wiconi, and \$25,000 for the Brennan Reservoir.

APPENDIX C

1991

WATER FACILITIES CONSTRUCTION FUND STATEMENT

DEPOSITS TO 30-JUNE-91*		WFCF OBLIGATIONS*	
ETSI & Union Pacific	\$8,763,339	Consolidated	\$4,765,000
General Funds	\$7,480,000	Construction Grants	\$4,558,489
Interest	\$4,591,548	Construction Loans	\$2,845,383
Interim Note Defeasance	\$2,261,177	Dredge/WERF	\$2,762,319
Loan Payments	\$1,622,252	Study Grants	\$4,428,052
Misc.	<u>\$177,135</u>	Study Loans	\$3,525,000
	\$24,895,451	SRF**	\$1,200,000
		Misc.	<u>\$800,000</u>
			\$24,884,243
		Unobligated Balance	<u>\$11,208</u>
			\$24,895,451

* See WFCF Expenditure Obligations worksheet

** These funds are deposited with SRF trustee as program reserve. For narrative, see page 28.

WFCF EXPENDITURE OBLIGATIONS

SCHEDULE A CONSOLIDATED WATER FACILITIES CONSTRUCTION PROGRAM

	AUTHORIZED	CONTRACTED	CURRENT RESERVE
1986 Consolidated	\$1,000,000	\$1,000,000	\$0
1988 Consolidated	1,000,000	1,000,000	0
1989 Consolidated	1,525,000	1,525,000	0
1990 Consolidated	1,130,000	1,130,000	0
1991 Consolidated	110,000	110,000	0
	<u>\$4,765,000</u>	<u>\$4,765,000</u>	<u>\$0</u>

SCHEDULE B CONSTRUCTION GRANTS

	AUTHORIZED	CONTRACTED	CURRENT RESERVE
Custer State Park/Stockade Lake	\$625,000	\$625,000	\$0
Mni Wiconi RWS	2,500,000	250,000	2,250,000
WEB Defeasance Grant	1,433,489	1,433,489	0
	<u>\$4,558,489</u>	<u>\$2,308,489</u>	<u>\$2,250,000</u>

SCHEDULE C CONSTRUCTION LOANS

	AUTHORIZED	CONTRACTED	CURRENT RESERVE
BDM RWS Loan	\$500,000	\$500,000	\$0
B-Y RWS Loan	200,000	200,000	0
Clark RWS Loan	380,000	380,000	0
Davison RWS	200,000	200,000	0
Deadwood	400,000	400,000	0
East Gregory RWS Loan	25,383	25,383	0
East Lyman RWS	50,000	0	50,000
Keystone System Loan	120,000	120,000	0
Lake Byron	100,000	100,000	0
McIntosh	100,000	100,000	0
Minnehaha RWS Loan	120,000	120,000	0
So. Lincoln RWS Loan	100,000	100,000	0
T-M RWS Loan	400,000	400,000	0
	<u>\$2,695,383</u>	<u>\$2,645,383</u>	<u>\$50,000</u>

SCHEDULE D DREDGE/WEAR ELEMENT REPLACEMENT FUND (WERF)

	AUTHORIZED	CONTRACTED	CURRENT RESERVE
1984 Dredge Purchase	\$600,000	\$600,000	\$0
1985 Dredge Program	1,000,000	1,000,000	0
1986 Dredge Purchase	1,400,000	1,400,000	0
1987 WERF	1,449	1,449	0
1988 Dredge Operation	100,000	100,000	0
1988 WERF	39,806	39,806	0
1989 WERF	38,334	38,334	0
1990 WERF	78,093	78,093	0
1991 WERF	104,637	104,637	0
	<u>\$3,362,319</u>	<u>\$3,362,319</u>	<u>\$0</u>

**SCHEDULE E
STUDY GRANTS**

BHC *	\$150,000	\$150,000	\$0
Big Sioux Hydrology	827,352	827,352	0
Black Hills Hydrology	381,875	381,875	0
Brennan	25,000	25,000	0
GCPS	81,022	81,022	0
James River	1,185,000	1,185,000	0
Lewis & Clark	125,000	125,000	0
Lyman-Jones RWS *	150,000	150,000	0
Marty II Irrigation	200,000	200,000	0
Mid-Dakota	270,000	270,000	0
MRCRA	100,000	80,708	19,292
Pick-Sloan	50,000	50,000	0
Sioux Falls FC	120,000	120,000	0
Solid Waste Mgmt Plan	100,000	100,000	0
Turkey-Clay	12,803	12,803	0
Upgrade	150,000	80,000	70,000
Vermillion Flood Control	50,000	50,000	0
Watertown Flood Control	150,000	150,000	0
West River RWS *	150,000	150,000	0
	<u>\$4,278,052</u>	<u>\$4,188,760</u>	<u>\$89,292</u>

* Converted to grants from loans by Legislature/BWNR action

**SCHEDULE F
STUDY LOANS**

CENDAK	\$1,375,000	\$1,375,000	\$0
GCPS Feasibility Study	150,000	150,000	0
Lake Andes-Wagner Irrigation Project	1,600,000	840,000	760,000
Mid-Dakota	100,000	100,000	0
	<u>\$3,225,000</u>	<u>\$2,465,000</u>	<u>\$760,000</u>

**SCHEDULE G
MISC.**

Drought Disaster Program	\$100,000	\$100,000	\$0
WDD Subdistrict Fund	200,000	200,000	0
WR Aqueduct Legal fees	500,000	500,000	0
	<u>\$800,000</u>	<u>\$800,000</u>	<u>\$0</u>
SRF	\$1,200,000	\$1,200,000	\$0
OBLIGATION TOTAL	\$24,884,243	\$21,734,951	\$3,149,292

WFCF REVENUE

1982 ETSI Payment	\$2,000,000	
1983 ETSI Payment	3,000,000	
1983 ETSI Payment	263,339	
1989 Union Pacific	<u>3,500,000</u>	
	\$8,763,339	
1984 General Funds	\$5,000,000	
1988 General Funds	1,000,000	
1990 General Funds	300,000	
1991 General Funds	<u>1,180,000</u>	
	\$7,480,000	
1982 Interest	\$119,808	
1983 Interest	361,789	
1984 Interest	379,267	
1985 Interest	445,267	
1985 Interest Correction	(37,013)	
1986 Interest	597,099	
1987 Interest	606,508	
1987 Interest - Operating budget	267,000	
1988 Interest	473,062	
1989 Interest	355,304	
1990 Interest	480,925	
1991 Interest	<u>542,532</u>	
	\$4,591,548	
1985 Interim Note Defeasance	\$6,757	
1985 Interim Note Defeasance	780,000	
1987 Interim Note Defeasance	40,931	
1988 Interim Note Defeasance	<u>1,433,489</u>	
	\$2,261,177	
1982 Loan Payments	\$28,300	
1983 Loan Payments	27,550	
1984 Loan Payments	71,035	
1985 Loan Payments	120,796	
1986 Loan Payments	363,948	
1987 Loan Payments	129,184	
1988 Loan Payments	215,871	
1989 Loan Payments	221,612	
1990 Loan Payments	221,978	
1991 Loan Payments	<u>221,978</u>	
	\$1,622,252	
1987 WERF	\$16,188	
1987 WERF	(16,188)	
1988 WERF	34,069	
1988 WERF	(16,786)	
1989 WERF	74,713	
1989 WERF	(61,627)	
1990 WERF	41,113	
1990 WERF	(17,417)	
1991 WERF	81,979	
1991 WERF	(8,273)	
1991 Mil & Vet Affairs	<u>49,364</u>	
	\$177,135	
REVENUE TOTAL		\$24,895,451
UNOBLIGATED BALANCE		\$11,208