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To
Governor George S. Mickelson
and the
Sixty-Fifth Session, Legislative Assembly
1990

1990 STATE WATER PLAN
and
1989 ANNUAL REPORT

Board of Water and Natural Resources
January 1990

SOUTH Dakota Department of
Water & Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Governor George S. Mickelson
and Members of the Legislature
Sixty-fifth Legislative Session 1990

Transmitted herewith is the 1990 State Water Plan and the 1989 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 Board's recommendations concerning projects for the State Water Resources Management System. The Annual Report describes the past year's water resource management activities throughout the State.

During the past year, the drought, State Revolving Fund, water supply, and water quality issues have received widespread public attention. While many of these types of issues have required intense work and planning, I believe that the Department of Water and Natural Resources has acted in a timely and positive manner and has addressed these diverse issues. Of course, this would not have been possible without the support of the State Legislature, the Governor, a dedicated professional staff, good relationships with the other State agencies, local governments, and project sponsors and the commitment of our citizen board - the Board of Water and Natural Resources (BWNR).

In regard to water development, the Mni Wiconi rural water system received a congressional appropriation for $500,000. The Missouri River Cost Recovery Authority presented its revenue stream options to the Legislature. The Department is working closely with the Mid-Dakota Rural Water System project sponsors to prepare that project for the congressional authorization process. Governor Mickelson presented testimony before a Senate subcommittee on behalf of the Lake Andes-Wagner/Marty II irrigation project. The James River Development District is pursuing restoration of the James River through the Corps of Engineers, and several other projects are under study.

In addition, the BWNR continues to assist water projects through the State's financial programs. Together with local project sponsors approximately $12 million of state, local and federal funds have been obtained to advance the smaller projects in the State Water Facilities Plan. The Board, also provided $200,000 to the Drought Disaster Water Supply Assistance Program. These matching grant dollars helped alleviate water supply problems to 127 rural landowners.

The Board made great strides in accomplishing the Governor's mandate to eliminate all State and EPA violations for water and wastewater. The Board made grants to fifteen projects totalling $652,500 to address State and EPA violations. This resulted in nearly $8.5 million in construction in the State. With adequate funding a majority of the violations will be corrected in the following year. In addition the State Revolving Fund was capitalized at $5,600,00 for 1989 and another $5,900,000 is expected to be added in 1990.

The Department through its nonpoint source pollution control program found ways to provide financial assistance to areas in the Black Hills which address problems caused by ash residue and possible runoff or erosion problems caused by fire damage to the forests. Problems caused by heavy rains could prove disastrous to the water supplies or could cause flooding to the communities near the burn areas. The Clean Lakes program is assisting local lake associations in conducting intensive studies on eight lakes and are monitoring implementation activities at several other lakes.

We have pursued an ambitious agenda in 1989 and have made great strides in promoting water development and protecting our natural resources. I have no doubt that 1990 will present even greater challenges for us as a Department and for the overall state. I am confident, with your support, that we can meet these challenges, and I look forward to working with you for the benefit of all South Dakotans.

Sincerely,

Floyd Matthew, Secretary
Department of Water and Natural Resources

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Preface

The purpose of this document is to fulfill the statutory requirements placed on the Board of Water and Natural Resources. 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 1990 State Water Plan and the 1989 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 recommendations 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 1989.

PART I

1990 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 achieve 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 are interrelated with many other economic and social factors necessary to build a healthy rural and business economy.

Structure

The State Water Plan consists of three programs: the State Water Facilities Plan (SWFP), the State Water Resources Management System (SWRMS), and the Groundwater Research and Public Education Program (GRPEP).

The State Water Facilities Plan identifies those priority projects such as rural and municipal water supply, industrial water supply, storm water, water conservation, lake restoration/nonpoint pollution control, and wastewater facilities. These are projects which can normally be developed within two years through the Board's discretionary authority. With sufficient funding, the Board can directly finance certain projects; but equally important, the Board can significantly influence federal categorical grant decisions. Projects in the Water Facilities Plan are authorized by the Board of Water and Natural Resources.

To be eligible for the Consolidated Water Facilities Construction Program, the State Revolving Fund, or Nonpoint Source (319) funds, or ground water research and education funds a project must be included in the State Water Facilities Plan. In addition,

any project which needs state support for categorical grant and loan funding should be included in the State Water Facilities Plan.

The State Water Resources Management System (SWRMS) identifies typically large, costly water projects that require specific state or federal authorization and 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.

SWRMS projects are those which need State support for Congressional authorization or are seeking significant financial support from the State. The Board of Water and Natural Resources recommends to the Governor and the Legislature those portions of the State Water Plan necessary for the general needs and welfare of the people of the State and requests that the Legislature establish these needs as the State Water Resources Management system according to SDCL 46A-1-10. The system will serve as the preferred priority objectives to accomplish optimum water resources management in this State.

The purpose of the Groundwater Research and Public Education Program is to study groundwater contamination, provide information on sound groundwater management, and develop methods for groundwater pollution prevention. The program is funded through the Groundwater Protection fund.

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 for each element of the plan. These eligibility criteria are used as guidelines for the water development districts and the State to follow when ranking projects in the plan.

State Water Planning Process

In 1988, the Department of Water and Natural Resources established a Division of Water Resources Management. 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 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. The unified planning process is designed to eliminate confusion about the program and to allow the Department staff to more closely communicate with sponsors prior to placement on the plan.

The State water planning process is comprised of four stages: (see figure 1)

1. Stage I - The Formulation Component

This is the beginning stage for most projects, at this phase a project may be a problem, a need, or an idea. Projects may approach either their water development districts or planning districts to obtain assistance in addressing preliminary requirements. They will advise the sponsor regarding water plan policies and prerequisites. Once the project has addressed the preliminary criteria, the local sponsor and the water development district will submit the project concept plan to DWNR.

If the local project is not located in a water development district, the sponsor may bring the conceptual idea directly to the State.

2. Stage II - Planning/Feasibility Component

After the project has been submitted to the Department of Water and Natural Resources, it will be assigned an appropriate DWNR staff contact person who will analyze the feasibility and need, local ability to complete the project, and alternatives in order to advise the sponsor and the water development district what will be needed in order to proceed with the project.

An evaluation of the project is sent to the water development district, the planning district and the project sponsor. If needed, changes or further necessary action will accompany that

evaluation along with suggestions for preparing a plan of action.

The local sponsor or the preparing entity and the water development district will propose a plan of action and complete a preliminary engineering plan or diagnostic/feasibility study. All projects will submit a cost analysis of the project with the appropriate plan of action to DWNR. DWNR will complete the technical screening of the plan and the cost analysis. When there is agreement between DWNR and the local sponsor on the plan, the project will proceed to the third stage.

3. Stage III - State Water Plan Selection Component

DWNR submits those projects to be placed on the SWFP that have met the requirements of the first two stages of the planning process to the water development districts. At this point, the Department staff have examined the project for technical merit and applicable state water plan criteria. The local sponsor and the water development district have provided all the information to meet the technical merit and state water plan criteria.

The water development districts review and rank the projects for funding priority based on district need and project readiness. The water development districts submit these priority rankings to the Board of Water and Natural Resources. The Board of Water and Natural Resources will review and approve those eligible projects to be placed on the State water plan.

4. Stage IV - Implementation Component

Once the Board has approved a project for inclusion, the project will attempt to secure funding from the applicable funding sources. Once funded, the projects will complete the final engineering and formulate final designs, plans and specifications.

The Department reviews plans and specifications, suggests changes, and upon approval of the BWNR regarding the project concept the project can be constructed and funding program closeout requirements completed.

State Water Resource Management System projects do not follow the normal State Water Planning Process. With the unusual circumstances and size of the projects in most instances, the department staff, the local project sponsor, and the appropriate water development district will coordinate efforts and create a strategy to secure federal or State authorization and appropriations for project construction.

Amendments

The water planning process is an orderly system established to annually identify water resource problems and implement the necessary solutions. During the year, however, some problems and projects may need an immediate response. An amendment process is included in the State water plan to meet that immediate need. On a quarterly basis, amendments will be accepted following the normal process and will not have to meet the emergency criteria.

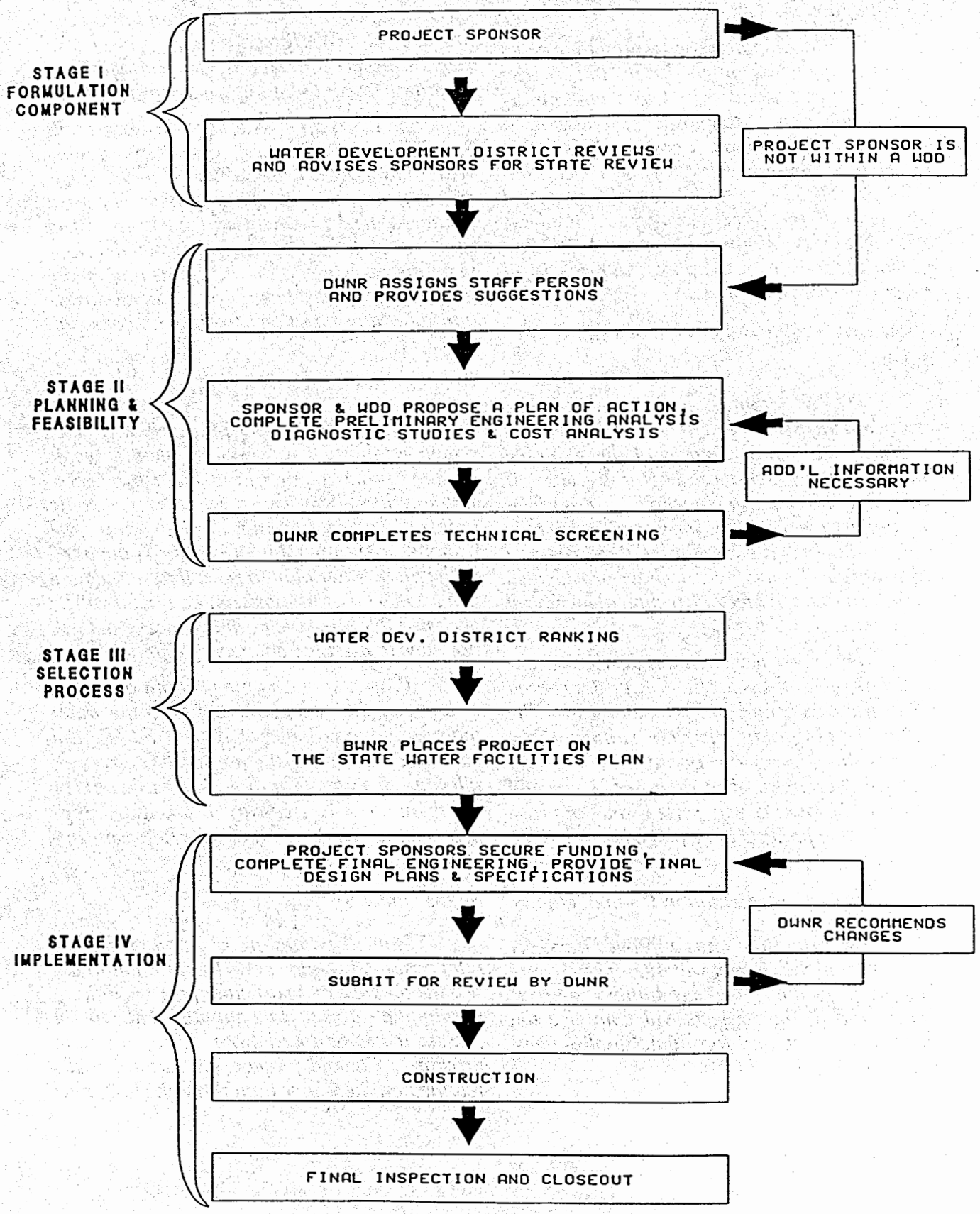
Project sponsors may submit an emergency application amendment onto the water plan during any Board of Water and Natural Resources meeting if the proposed project will alleviate or mitigate a dire physical health or safety threat or is necessary to take advantage of an unexpected economic development opportunity.

Status Updates

Status Updates are required on an annual basis. This allows the Department to assess the progress of a particular project. Failure to submit a status update annually will cause a project to be removed from the appropriate program. Funded projects are automatically retained on the Water Plan through close out.

Figure 1

STATE WATER FACILITIES PLANNING PROCESS



Groundwater Research and Education Program

The Groundwater Research and Public Education Program was established by Governor Mickelson's Centennial Environmental Protection Act. The Groundwater Research and Public Education Program will consist of groundwater research and public education proposals which meet the guidelines established in the Groundwater Research and Public Education Grants rules, and have been approved by the Board of Water and Natural Resources. The rules for the Groundwater Research and Public Education Program were modeled after the Consolidated Water Facility Construction Program. The State water planning process for the Groundwater Research and Public Education Program comprises four stages, and is part of the State water planning process, with a few additions as follows:

1. Stage 1 - The Formulation Component

This is the beginning stage of a proposal. At this phase, a proposal may be a problem, a need, or an idea. The department will provide an applicant with the rules that must be met before the proposal is submitted to the department for a procedural completeness review. An applicant may approach their water development district to obtain assistance in addressing preliminary requirements. The water development district may advise the sponsor regarding water plan policies and prerequisites.

The department will assign the proposal to the appropriate staff member. The department has 30 days to respond to the applicant as to the completeness of the proposal plans submitted.

2. Stage II - Planning and Feasibility Component

After the proposal has been determined to be procedurally complete, the assigned staff member will continue to technically screen the project, and advise the applicant on what will be needed in order to proceed with the proposal.

If needed, suggested changes or further necessary action will be sent to the applicant. The applicant, at this stage, must also submit a cost analysis of the project.

3. Stage III - Selection Process

The department must send the Secretary's recommendation to the applicant after the project has been determined procedurally complete. If the recommendation is for Board denial, the recommendation must contain the reasons for denial.

The department submits procedurally complete proposals that have met the requirements of the first two stages to the Groundwater Research Information and Advisory Group and water development districts for review and comment. At this point, the department has examined the project for procedural completeness, technical merit, the ability to meet the goals established in the Centennial Environmental Protection Act of 1989, the guidelines established in the Groundwater Research and Public Education Grants rules, and other applicable State water plan criteria.

The department will rank the projects for funding priority based on the need, the ability to meet the goals, match effort, technical merit, and program factor. The department submits procedurally complete applications with recommendations and the department priority rankings to the Board of Water and Natural Resources. The Board will review and approve those project eligible to be placed on the State water plan.

4.Stage IV - Implementation

Once the Board has approved a project, the project is placed on the Groundwater Research and Public Education portion of the State Water Plan, and the applicant must secure funding from the applicable source. The department reviews the final plans and suggests changes. When the department has approved the final plans, the proposal begins and funding program closeout requirements are completed.

State Water Facilities Plan

The State Water Facilities Plan is comprised of priority water development projects which can be implemented using the authority of the Board of Water and Natural

Resources and the programs administered by the Department of Water and Natural Resources. Unlike the larger projects in the State Water Resources Management System, water facilities plan projects do not require specific legislative authorization.

During the water planning process, over 100 projects were submitted to the State and water development districts for review. To be considered for the plan, projects must meet the State Water Plan criteria, have a completed preliminary engineering report, and must be ready for construction within two years.

Based upon the water development district recommendations and the eligibility criteria, the Board included 74 projects totaling over $55 million in the State Water Facilities Plan (see Table 1).

Table 1

1990 State Water Facilities Plan (Planning Stage)

Project Sponsor	Project Description	Total
Alexandria	Water Main Distribution	$ 276,542
Alpena	Water System Improvement	442,250
Armour	Wastewater Improvements	341,200
Aurora-Brule RWS	System Improvements	275,800
Belle Fourche	Wastewater Treatment	1,200,800
Box Elder	Wastewater Treatment	693,000
Brant Lake	Shoreline Stabilization	114,227
Brook-Deuel RWS	System Improvements	1,443,000
Brook-Hamlin WPD	Sioux River Improvement	18,800
Bruce	Hookup to RWS	90,250
Canton	Water System Expansion	360,000
Chamberlain	Water Main Improvement	145,000
Custer	Rocky Knolls Irrigation	430,000
Custer	Water Supply and Treatment	865,798
Custer	Wastewater Collection	74,737
Davison RWS	System Improvements	211,250
Deadwood	Sewer and Water Replacement	751,200
Dimock	Lake Dimock Restoration	91,100
Dolton	Hookup to RWS	163,440
Douglas RWS	System Construction	1,663,665
East Dakota WDD	Sioux R Aquifer Protection	60,000
Faulkton	Waterline Replacement	16,500
Fort Pierre	New Water Storage	462,200
Freeman	Water Line Replacement	91,000
Hartford	RWS Hookup	1,644,000
Hazel	Sewer Collection and Treatment	297,500
Hermosa	Sewerline Extension	55,855
Hill City	Water and Sewer Improvements	151,770
Hudson	Hookup to RWS	121,712
Humboldt	Wastewater Treatment	256,760
Huron	Wastewater Treatment	4,149,000
Java	Wastewater Treatment	266,164
Kennebec	Lake Byre Dam	275,000
Kingbrook RWS	New Member Additions	4,100,000
Lake Andes	Wastewater Treatment	173,000
Lake Cochrane SD	Sewer Project	214,000
Lead	Sewerline Replacement	299,300
Lemmon	Water Dist. Improvements	475,960
Lemmon	Wastewater Refinance	370,000
Miller	Flood Control	70,550
Miller	Water and Sewer Expansion	82,610
Miller	Water Storage Facility	213,600
Minnehaha Co	Wall Lake Dredge	252,262
Minnehaha RWS	Coachman's Manor	8,129
Mitchell	Dam Rehabilitation	150,400
Mobridge	Wastewater Treatment	1,687,500
New Underwood	Water Storage and Dist.	75,392
New Underwood	Sewer Line Extension	35,356
Oahe Plains	Improve Intake	94,461
Parkston	Main Street Improvement	220,000
Pennington Co	Rapid Valley Drainage	300,000
Platte	Water Main Improvement	77,000
Randall RWS	System Improvements	658,700
Rapid City	Rapid Creek Equalization	855,000
Rapid City	Madison Well Project	1,125,000
Rapid City	Wastewater Construction	8,685,000
Rapid Valley SD	Sewer Rehabilitation	723,000
Redfield	New Storage Reservoir	508,000
S Lincoln RWS	System Additions	418,000
SDSU	Huron Groundwater Recharge	1,121,300
Sioux Falls	Sewer System	3,541,491
Sioux Falls	Empire Elevated Storage	557,100
Sioux RWS	East Area Improvement	1,225,000
Sioux RWS	Added Users	800,000
Sisseton	Water Dist. Improvements	259,075
Tea	Waterline Replacement	282,014
Tripp Co. WUD	System Expansion	320,000
Tyndall	Water Storage Improvement	306,700
Utica	Water Dist. Replacement	72,300

Volga	Wastewater Treatment	1,509,700
Wakonda	Wastewater Treatment	219,955
Watertown	Water Supply	5,125,000
Waubay	Sewer and Water Extension	910,580
White River	Sewer and Water Extension	134,073
Total		$55,153,403

TABLE 2

State Water Facilities Plan (Funded Stage)

Project Sponsor	Project Description	Award Amount	Total Proj. Cost
Ashton	Wastewater Treatment	$ 35,000	$ 251,047
Avon	Wastewater Treatment	34,000	170,900
Belle Fourche	Wastewater Treatment	90,000	1,205,745
Box Elder	Sewerline Extension	50,523	294,523
Brant Lake	Shoreline Restoration	33,000	99,000
Butte-Meade RWS	System Expansion	79,480	965,800
Camelot	Water Supply	20,000	217,200
Canistota	Wastewater Treatment	20,000	294,145
Chancellor	Wastewater Treatment	40,000	229,050
Clark RWS	System Expantion	100,000	1,050,000
Custer	Wastewater Collection	85,000	684,206
Custer Co. CD	Stockade Dredge	95,000	317,500
Dakota Dunes	Water Supply	250,000	503,500
Doland	Wastewater Treatment	30,000	397,900
Eden	Wastewater Treatment	26,500	134,044
Eureka	Wastewater Treatment	60,000	972,571
Fredrick	Wastewater Treatment	30,000	201,830
Igloo-Provo	System Acquisition	58,000	799,020
Kimball	Wastewater Treatment	20,000	593,158
Kingbrook	System Expansion	100,000	3,778,000
Labolt	Wastewater Treatment	70,000	304,735
Lake Cochrane	Wastewater Treatment	60,000	715,400
Lake Poinsett	Flood Control	54,480	95,800
Lake Poinsett	Wastewater Treatment	40,000	930,000
Lake Preston	Wastewater Treatment	70,000	1,250,000
McIntosh	Wastewater Treatment	20,000	130,840
Minnehaha Co.	Wall Lake Dredge	50,000	252,268
Ravinia	RWS Hookup	30,000	40,000
Reliance	Wastewater Treatment	25,000	173,330
Roslyn	Wastewater Treatment	28,000	180,022
S. Lincoln RWS	System Expansion	30,000	418,000
Stickney	Wastewater Treatment	55,000	994,000
Tripp Co. WUD	System Expansion	30,000	298,000
Valley Springs	Water Extension	43,500	107,000
Wall	Sewer Collection	30,935	127,340
Wall Lake	Wastewater Treatment	50,000	779,155
Wessington	Wastewater Treatment	38,432	308,633
Whitewood	Wastewater	40,945	435,636
Winner	Drainage	25,000	907,500
	Total	$2,098,255	$22,527,621

State Water Resources Management System

The State Water Resources Management System (SWRMS) is the priority system established by the Legislature and the Governor as needed objectives for optimum water resources 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 System.

Recommendations for SWRMS

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 December 13 took action to recommend one new project for the State Water Resources Management System, delete three projects and to maintain all other projects that are currently on the SWRMS component of the State Water Plan.

The one project being recommended for inclusion in the system is:

DAKOTA DUNES

Dakota Dunes is a 1,800 acre, mixed use development in the southeastern corner of South Dakota. The project is intended to provide for water system construction during the development of a master planned community that will enhance the quality of life and attract jobs to the region. Highlights of these economic benefits are an estimated 5,000jobs in the office park and as much as $125,000,000 in annual payroll.

The project sponsor will request $1,400,000 of State funds over eight years. The Board of Water and Natural Resources approved a Consolidated Water Facilities Construction Program grant of $250,000 in 1989.

The three projects being recommended for deletion from SWRMS are:

BIG SIOUX RIVER BASIN STUDY

The Big Sioux River Basin Study is an umbrella program which has been broken into component parts with the inclusion of the Big Sioux Flood Control Project, the Sioux Falls Flood Control Project, and other smaller projects; therefore, it is no longer necessary to include this project on the SWRMS component of the State Water Plan.

BIG SIOUX HYDROLOGY STUDY

The Big Sioux Hydrology Study was a six-year study costing $3.2 million. The study was designed to analyze the long and short term effects of differing rates of groundwater recharge, storage and withdrawal of ground and surface water supplies in the Big Sioux River Basin. The study is essentially complete and can be deleted from the SWRMS component of the State Water Plan.

MISSOURI RIVER RECREATION AND FISHERY DEVELOPMENT PLAN

The project involved Corps of Engineers cost sharing in the development of recreation and fishery resources on the Missouri River main stem lakes in South Dakota. All the goals of this project have been met and all facilities completed. The concluding reports for this program were completed in 1989 and the project can be deleted from the SWRMS component of the State Water Plan.

Those projects currently authorized and recommended for retention in the System are shown on Table 3.

TABLE 3

STATE WATER RESOURCES MANAGEMENT SYSTEM

Project	Project Description
Belle Fourche Irrigation Project	Rehabilitation of Belle Fourche project
Big Sioux Flood Control Study	Watertown Flood Control Dam
Black Hills Hydrology Study	Hydrologic study in Black Hills
CENDAK Irrigation Project	Irrigation project in central SD
Dakota Dunes	Planned community in Union County
Dakota Lakes Irrigation Research Farm	Irrigation research project
Garrison Extension Study	Study of effects of Garrison unit in ND
Gregory County Pumped Storage Site	Multi purpose water utilization
James River Improvement Program	Study of improvement program in James River
Lake Andes-Wagner/Marty II Irrigation Unit	Irrigation projects in Charles Mix county
Lake Herman Restoration Project	Lake restoration & watershed mgmt project
Mid-Dakota Rural Water System	Proposed rural water system in central South Dakota
Missouri River National Recreational River	Stabilization & enhancement of Mo. R. in SE
Mni Wiconi Rural Water System	New 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 on Big Sioux River near Sioux Falls
Southeastern South Dakota Water Supply System	Water Supply
Turkey Clay Watershed	Flood control & watershed mgmt project
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	Rural water system for western South Dakota

PART II

1989 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 six sections:

- Board of Water and Natural Resources Report
- 1989 Water Development Legislation
- State Water Resource Management System - Progress Report
- State Water Facilities Plan - Progress Report
- Water Development Financing Programs

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

Substantial progress was made in 1989 toward accomplishing the State's water development goals and objectives. Recognizing the different water needs, the Board has encouraged maintenance of the State's quality of life through infrastructure development which directly stimulates statewide economic development.

Since the demise of the conservancy subdistricts in 1984, the Board has been settling all outstanding financial obligations. Two subdistricts, Oahe and CENDAK, remain functional in 1989 having longterm contractual commitments until the 1990's. Of the two, the Oahe Conservancy Subdistrict is the only subdistrict in which the Board must collect taxes to meet the contractual commitment for WEB. This should be the last year to collect taxes in the Oahe Conservancy Subdistrict.

The state's six water development districts have been in operation for the past five years. The districts are instrumental in developing and coordinating the water development needs within their borders. The Board relies heavily upon the districts for input into the State Water Plan and development of the plan's projects.

In 1985 the Legislature established a new type of single purpose district to act as local water project sponsors. This year three new water project districts were formed:

* Igloo-Provo Water Project District was formed to acquire and operate a rural water system.
* Terry Valley-Trojan Water Project District was formed to acquire and operate a rural water system.
* Lake Poinsett Water Project District was formed to provide improvements to the lake.

These districts were formed by an election of local landowners and approved by the Board of Water and Natural Resources. At present, several other groups are working to form water project districts.

Additional Board of Water and Natural Resources' activities are described in detail throughout the body of the annual report.

1989 Water Development Legislation

This section gives a brief summary of the federal and State legislation passed during 1989.

Federal Legislation

The federal fiscal year 1990 energy and water appropriations bill (H.R. 2696) was approved by Congress in September 1989. The funding levels for South Dakota water projects are as follows: WEB rural water development project - $14.3 million; Belle Fourche rehabilitation project - $6,765.000; Mni Wiconi rural water supply project - $500,000; James River Basin flood control study - $175,000; Watertown and vicinity flood control study - $171,000; and Big Sioux River flood control study (Sioux Falls) - $89,000.

The U.S. Bureau of Reclamation reprogrammed $2.2 million of unexpended

FFY 1989 funds to the WEB rural water development project. The FFY 1990 appropriation level along with the reprogrammed funds will complete construction of the WEB rural water system. The FFY 1990 funding for the Mni Wiconi rural water supply project is the project's initial construction appropriation.

South Dakota's FFY 1990 allocation for the Environmental Protection Agency construction grants program is still pending. It is estimated the appropriation will be about $4.9 million for the final year of the construction grants program.

On September 14, 1989, the Senate Water and Power Subcommittee heard testimony on the Lake Andes-Wagner/Marty II unit legislation (S.202). The subcommittee, chaired by Sen. Bradley (D-N.J.), heard testimony from Governor Mickelson, Senator Daschle, Senator Pressler, Yankton-Sioux Tribe Chairman Stephen Cournoyer, project sponsors, and others.

Legislation (S.1546) to authorize the planning and construction of Mid-Dakota rural water system was introduced by Senator Pressler and Senator Daschle in August 1989. The legislation contains a provision to provide power designated for the Pick-Sloan Missouri River Basin Program to the Mid-Dakota Rural Water System for lift pumping and trunk line pressurization. The power provision was the result of an agreement signed in July between the Mid-Dakota Rural Water System and the Midwest Electric Consumers Association – an association of Missouri River basin states consumer-owned electric systems. Under the terms of the agreement, Mid-Dakota would utilize low-cost federal hydro power May through October and power supplied by local rural electric cooperatives during the remainder of the year.

State Legislation

The 1989 legislature enacted several bills affecting water development in South Dakota. The Omnibus Water Development Bill (S.B.186) authorized funding and other transactions from the Water Facilities Construction Fund for several projects, including $1,500,00 to the Mni Wiconi Rural Water System for engineering design and preconstruction activities, $50,000 to Gregory County Pumped Storage Multipurpose Project for conducting a comprehensive study required to develop the preliminary FERC permit, $200,000 to the James River Restoration Project for implementation of Stage I clean-out activity, $50,000 to Mid-Dakota Rural Water System for feasibility studies and authorization activities, $50,000 to Lake Andes-Wagner/Marty II Irrigation Project for a loan to local sponsors to be used to seek congressional authorization, $50,000 to the Fort Randall Dam Hydropower Facility for studies of upgrading hydropower production, $50,000 to the Black Hills Hydrology Study for continued hydrology studies and $75,000 for a Black Hills groundwater monitoring network, $50,000 to the Big Sioux Flood Control Program for a feasibility study of a Watertown dam, and $50,000 to the Sioux Falls Big Sioux River Flood Control Project for preparation of a feasibility study of flood control in Sioux Falls. SB 186 also included the Southeastern South Dakota Water Supply System, Sioux Falls Flood Control, and Big Sioux Flood Control in the SWRMS component of the State Water Plan.

SB 138 passed in 1988 authorized the establishment of the Missouri River cost recovery authority and identified projects for federal support for settlement of South Dakota's claims under the Pick Sloan Missouri basin program. The cost recovery authority presented its final report to the Governor in 1989.

SB 181 allows the creation of drainage basin utility districts. A drainage basin utility district could only be formed in counties with a population of 45,000 or more. The district is formed through a petition process of landowners within a drainage basin to address drainage problems. It also has the ability to assess landowners to address these problems. The Board has the ability to form a district under this legislation if petitioned by local landowners to address a severe drainage problem.

HB 1291 - Governor's Centennial Environmental Protection Act of 1989 established the Groundwater Research and Public Education Program. The purpose of the Program is to study groundwater contamination, provide information on sound groundwater management, and develop methods for groundwater pollution prevention. The program is funded through the Groundwater Protection Fund, which will provide funds over the next five years. The following fees contribute to the Fund; an annual pesticide groundwater fee of $25 per each pesticide label registered with the South Dakota Department of Agriculture, an annual fertilizer inspection fee of $0.30 per ton, an annual contribution of $100,000 from the Petroleum Release Compensation Fund, and a surface mining operation cyanide or other chemical leaching agent fee of $0.02 per pound (payable after the Comprehensive Environmental Evaluation for gold mining in the Black Hills has been funded). It is estimated that approximately $500,000 per year will be collected and available for the Groundwater Protection Fund.

The Groundwater Research and Information Advisory Group was also established as part of the program. The advisory group adopted guidelines for the direction of the program. The BWNR adopted rules to award grants for the purpose of groundwater research and public education in accordance with the guidelines established by the advisory group. Under the rules, projects which meet the guidelines and are listed on the State Water Plan are eligible to apply for available funds. The application cycle has been set up on a biannual basis with applications due on the first day of September,and March. A factoring system is included in the rules to help the Board in its decision making process. It is expected that the first of the grant funds will be available by March 1990.

The legislation also established the South Dakota Environment and Water Resources Trust Fund as a separate trust subfund within the Water Facilities Construction Fund. The trust is established to provide a perpetual source of revenue to serve all the purposes for which funds may be expended from the Water Facilities Construction Fund. Only interest from the trust will be used for projects. A solid waste disposal fee of three dollars per ton will be imposed on any solid waste disposal facility permitted for more than 150,000 tons of solid waste annually to fund the trust.

HB 1111 - This bill clarifies the election process for the water development districts and removes the BWNR from oversight responsibility of the water development district budgets.

State Water Resources Management System – Progress Report

This section reports the progress of the authorized projects in the 1989 State Water Resources Management System. A brief summary containing information on the description and status of each project is presented below.

Belle Fourche Irrigation Project

The Belle Fourche Irrigation Project was authorized by the State Legislature as part of the State Water Resources Management System in 1981. The original project was authorized by Congress in 1904 and completed in 1914, providing irrigation water for over 57,000 acres in Butte County. This project was one of the first Bureau of Reclamation projects completed in the nation. Approximately 200,000 acre-feet of water is diverted annually from the Angostora reservoir for irrigation; however, only about 67,000 acre-feet is delivered to the field. This water loss is indicative of the need to modernize and update the delivery system. Rehabilitating the facilities 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.

Approximately $48.8 million will be needed to rebuild or improve the old diversion structure and various canals and laterals. The project was authorized for rehabilitation in 1983. In September 1984, the local sponsor, Belle Fourche Irrigation District, com-

pleted contract negotiations with the Bureau of Reclamation which was overwhelmingly approved by the district membership. With the aid of a special $710,000 federal appropriation in 1984, rehabilitation was initiated.

Project funding for the rehabilitation effort has progressed as follows:

1984	$ 710,000
1986	$2,500,000
1987	$2,700,000*
1988	$ 900,000**
1989	$4,200,000
1990	$6,765,000

* Reduced from $3.9 million by Reclamation budget cuts

** Reduced from $5.9 million by Reclamation budget cuts

Big Sioux Flood Control Project

The Corps of Engineers completed a reconnaissance report titled "Flood Control for Watertown and Vicinity" in 1987. This report showed that there is a federal interest in flood control for this area through the construction of a dam at either a Mahoney Creek or Still Lake site. The proposed project would provide flood protection in excess of the 100 year event for Watertown, Lake Kampeska and Pelican Lake.

The East Dakota Water Development District cooperating in conjunction with the City of Watertown, Lake Kampeska Water Project District, Codington County and the State entered into agreement with the Corps of Engineers to conduct a feasibility study. The total cost of this study is $824,230 and is cost shared on a 50/50 federal - non federal basis. This feasibility study is in Phase One of the three phase process. Presently, surveying has been completed and hydrological, hydraulic and geotechnical studies are nearing completion. This data will enable a damage assessment to be made so that a benefit/cost ratio can be determined. To date, approximately $110,000 of local effort in cash and in-kind services has been put forth. Phase Two will focus on the social and environment aspects of the proposed dam sites. At the end of Phase Two, in mid-1990, the study will be at a decision point. A determination of feasibility will be available and the local sponsor and the Corps of Engineers will meet to determine if either proposed dam site should proceed to Phase Three. This phase will entail dam design and assessment of impacts of the selected site.

Preliminary estimates have indicated the cost of the Mahoney Creek alternative at $6.3 million and the Still Lake site at $6.7 million. Each of these sites if determined feasible and constructed would have an annual operational and maintenance costs near $600,000. The estimated annual benefit from this project is projected at $793,000.

The 1989 State Legislature appropriated $50,000 to be used in the initial phases of this feasibility study currently being conducted by the Corps of Engineers.

Black Hills Hydrology Study

The 1982 State Legislature authorized the Black Hills Hydrology Study as part of the State Water Resources Management System. The study includes all or parts of Butte, Custer, Fall River, Lawrence, Meade and Pennington counties. The objective of the study is to provide the necessary hydrologic information to encourage development of municipal, domestic, rural water, and private irrigation systems while at the same time providing protection to existing water users and to spring and stream flows.

The study has experienced a resurgence in the past years. The West Dakota Water Development District, Lawrence County, the United States Geological Survey and Department of Water and Natural Resources have been in the forefront of the efforts to revitalized the study. Presently, a monitoring network has been established in the northern Black Hills with the intention of expanding the network to the central and southern hills area. The current activities taking place are a streamflow, precipitation and water quality monitoring; inventory of groundwater aquifers; which is designed to assist in determining existing water quality

and quantity conditions of both groundwaters and surface waters.

The 1988 State Legislature appropriated $50,000 to the current efforts of establishing a monitoring network. These funds were matched at the local level and then used to leverage $100,000 in federal funds through the USGS's cooperative program. In 1989, the State Legislature appropriated $125,000 to continue and expand the study efforts. Fifty thousand of these dollars are to be used for the monitoring network and inventorying of the aquifers. The additional $75,000 was used to drill monitoring wells in critical areas to assist in the hydrologic evaluation of the Black Hills.

CENDAK Irrigation Project

The CENDAK Irrigation Project was authorized by the State Legislature as part of the SWRMS in 1982. The total project would use Missouri River water to irrigate up to 474,000 acres in Hughes, Hyde, Hand, Spink, Beadle, and Faulk counties. In addition, water would be available for municipal and rural domestic use, recreation, fish and wildlife enhancement and stream flow augmentation purposes. Partially constructed features of the Oahe pumping plant and the Pierre canal, are expected to be used in construction of the CENDAK project. The total cost was expected to be $750 million for a non-federal project or $1.12 billion for a traditionally federally funded project.

In 1987, the Bureau of Reclamation reassessed their role and priorities in regard to water project development. The key conclusion of the assessment was that the Bureau's mission must change from one based on federally supported construction to one based on effective environmentally sensitive resource management. According to the assessment, capital intensive construction projects such as CENDAK will receive little emphasis. As a result of the assessment, the Missouri Basin Regional Director of the Bureau Bill Martin announced at a Board of Water and Natural Resources meeting in Pierre on October 29, 1987, that the Bureau is proposing to finalize the CENDAK Planning Report/Draft Environmental statement as a concluding report for use at a later date, and that the Bureau will not take further action on the CENDAK project in the near future.

Recognizing the Bureau of Reclamation's assessment, the Board of Water and Natural Resources placed the CENDAK project on a list of long term goals for a Pick Sloan settlement. In 1988 CENDAK provided the department with a scaled down, three phased version of the system which would meet the conditions of section 4 of SB 343 and that the scaled down version would be used as the concluding report. This project would be 300,000 acres in size at a cost of approximately $475 million. The rescoped proposal would provide over $400 million in economic benefits to the State annually. It would also provide $17 million in annual State tax revenues to South Dakota and create 7,500 new jobs. There was little activity on the CENDAK project in 1989.

Dakota Lakes Research Farm Project

The Dakota Lakes Research Farm Project obtained a 463-acre research site adjacent to the Missouri River near Pierre, and is equipping it sufficiently to allow both irrigated and dryland research projects to be conducted on site and at satellite locations on both the east and west sides of the river; and attracting additional federal, private industry, and commodity organization support necessary to allow it to carry out its mission.

Governor George Mickelson made a $250,000 grant from the Future Fund to fund the project; this amount will be matched with $250,000 in additional private contributions. Private contributors, who now are shareholders in a nonprofit research farm corporation, earlier raised about $100,000 in cash and firm pledges. Meanwhile, the South Dakota Department of Agriculture loaned $250,000 to the Corporation to enable the project to proceed while the additional matching funds are being collected.

The primary mission of the Dakota Lakes Research Farm is to research, identify, and demonstrate the best methods of stabilizing the agricultural economy through promot-

ing agricultural diversity, increasing production efficiency, minimizing negative environmental effects maintaining soil productivity, and developing techniques to mitigate biological stress effects. This research center will be operated by the SDSU Ag. Experiment Station in cooperation with the Dakota Lakes Research Farm corporation.

The 1989 season was used to conduct the necessary soil sampling and determine the farm layout. In late summer, work shifted to constructing the water delivery system and removing existing equipment which is unsuited for use on the research station. In the fall of 1989 the irrigation distribution systems (lateral moves) to be used at the research station were installed. Permanent field borders have been seeded to grass.

During the 1990 season a limited number of research trials will be initiated on site, however, the primary emphasis will be on cropping the research station in a manner which will establish the desired uniformity and crop sequences for increased research operation to begin in the fall of 1990 and spring of 1991. In addition, the headquarters building will be constructed during the 1990 season.

Farmer/rancher shareholders in the Dakota Lakes Research Farm corporation will own the land and lease it to SDSU which will conduct the research and disseminate the results.

Garrison Extension Study

The 1981 State Legislature authorized the Garrison Extension Study as part of the State Water Resources Management System. A conceptual plan for the Garrison Extension Project was developed with the goal of designing a project that would turn the potential negative aspects of North Dakota's Garrison Diversion Unit into a project that could provide flood control, deliver additional high quality water for irrigation, industrial and municipal uses in South Dakota and improve recreational opportunities in the James River basin.

In March, 1981, Governor Janklow appointed a five-member Garrison Study Management Board to assess the Garrison Extension concept. The early meetings of the study board were held to discuss the idea of using additional flows in the James River provided from North Dakota's Garrison Diversion Unit together with storage features constructed in South Dakota to provide water for agricultural, municipal, industrial and recreational use. With assistance from the U.S. Bureau of Reclamation, the study board initiated an appraisal level investigation in October, 1981 and completed it in January, 1982.

Throughout the course of the study, local input has been provided by the former Oahe and Lower James Conservancy Subdistricts and is now being provided by the James River Water Development District. Wildlife review has been provided by the Department of Game, Fish and Parks and the U.S. Fish and Wildlife Service. The balance of the study effort was completed by the Department of Water and Natural Resources and the Bureau of Reclamation. The final report on the appraisal level study was completed in March, 1983. Public meetings were held, and in August, 1983, the S.D. Garrison Study Management Board made its final recommendations. Those recommendations were refined and project costs were incorporated into a preliminary findings report in December, 1983.

During 1984 the Bureau of Reclamation, under sponsorship of the former Oahe Conservancy Subdistrict, advanced the feasibility study on the Garrison Extension project. Soil classification and environmental analysis were completed during the summer of 1984. Preliminary investigations on potential storage sites as well as economic analysis of the project were also completed.

To resolve the controversy of North Dakota's Garrison Diversion Unit Project, Congress established a twelve member commission to study the North Dakota project and to recommend possible modifications. The Commission presented its recommendations in late December of 1984. Legislation to authorize the Commission's recommendations was drafted and introduced; however,

the State of North Dakota and the Audubon Society, the principal critic of the project, were unable to reach an agreement on the intent of the Commission's recommendations and the legislation was tabled in committee. The North Dakota congressional delegation redrafted the legislation and reintroduced it in 1985.

This legislation (H.R. 1116) was successfully amended and passed into law in April 1986. The bill authorizes a 130,940 acre project, prohibits construction of the Lonetree Dam and Reservoir, authorizes construction of the Syketon canal, authorizes $200 million for a North Dakota State municipal and industrial water supply system, requires acre-for-acre mitigation, establishes a new national wildlife refuge, authorizes use of federal hydropower for the State water supply system, requires farmers who grow surplus crops to pay 10% of project costs and prohibits construction of irrigation features in the James River basin before FY 1991 and completion of a comprehensive EIS on irrigation in the basin.

Further progress of the South Dakota study depends on completion of the comprehensive EIS for the basic North Dakota Garrison Project by Bureau of Reclamation. The Bureau of Reclamation established the James River Technical Team in 1983 to:

1. Develop recommendations to resolve issues related to the GDU about North Dakota and South Dakota water rights.
2. Develop recommendations to resolve the issue of operation of the Sand Lake National Wildlife Refuge impoundments.
3. Review alternative operation strategies for Jamestown and Pipestem Reservoirs with the GDU and recommend a preferred operation strategy.
4. Construct a predictive model to assist in the resolution of the issues addressed above.

Satisfactory resolution of these items is necessary before the project can proceed. The Technical Team, of which South Dakota is a member, has constructed mathematical models to predict flows and water quality at numerous points along the James River for alternative Garrison project configurations and operational plans. These models were used to study project alternatives which meet South Dakota water supply needs and enhance the Sand Lake National Wildlife Refuge.

The "James River Comprehensive Report, Garrison Diversion Unit" was released to the public in draft on May 22, 1989. This report summarizes all of the Garrison Unit James River studies, discusses project alternatives, and makes predictions of the impacts of each alternative. The fifty-two supporting reports were also made available. All of these reports are available at the South Dakota State Library in Pierre. The final Comprehensive Report was transmitted to Congress in October, 1989.

The Comprehensive Report evaluates but does not select alternatives. The Environmental Impact Statement will be the decision document for the Garrison Project. The earliest projected release date for the draft Environmental Impact Statement is mid 1991.

Gregory County Pumped Storage Project

The Gregory County Hydroelectric Pumped Storage Facility was authorized by the 1981 State Legislature as part of the State Water Resources Management System. This project will use off-peak electricity to pump water from Lake Francis Case to an 80,000 acre-foot reservoir on the river bluff over 700 feet above the lake. Water from the reservoir will be released back to the lake through turbines to generate 2,360 megawatts of peak-power electricity. Project features will consist of a 1,870 acre upper reservoir with an active storage of 80,000 acre-feet, an underground conduit 9,360 feet long and 30 feet in diameter, and a powerhouse with six 393 megawatt reversible pump turbine units. Maximum discharge into Lake Francis Case during generation periods will be 46,800 cubic feet per second with an average gross head of 724 feet. The unit also has the potential to provide water for rural, municipal, and agricultural use in the immediate vicinity.

The U.S. Army Corps of Engineers, in June 1982, completed an interim report and final environmental impact statement for the Gregory County project. The Corps' report recommended that the Gregory County Hydroelectric Pumped Storage Facility be constructed in two stages of 1,180 megawatts per stage at an estimated cost of $791 million each.

Federal legislation was introduced during the 1985 session of Congress to construct the Gregory County project. As passed in 1986, the legislation (P.L. 99-662) authorized $1.39 billion in federal funding for the project. Of this $1.39 billion authorization, $100 million is for construction of water supply and irrigation features.

Hydroelectric Component

As authorized by Congress, the hydroelectric features of Gregory County Pumped Storage cannot be constructed until feasibility studies have been completed on the water supply features.

In August of 1988, however, the South Dakota Conservancy District received a preliminary Federal Energy Regulatory Commission (FERC) permit on the hydroelectric features of Gregory County Pumped Storage. The permit reserves priority for development by the S.D. Conservancy District while the necessary environmental, engineering, and feasibility studies are completed. The permit is valid for three years with required reports every six months.

The federal authorization and the issuance of the FERC preliminary permit has provided South Dakota with two different means of pursuing project development.

The Board of Water and Natural Resources (BWNR) received a $50,000 Legislative appropriation in 1989 for feasibility studies on the hydroelectric portion of the project. The $50,000 required matching funds were obtained from manufacturing and utility interests. The matching funds are being managed by the local project sponsors. The BWNR retained EBASCO Services Inc. to conduct the feasibility studies on the hydroelectric features of the project. The report is scheduled for completion in late 1990.

Water Supply Component

The authorizing legislation provided that the Secretary of Interior must certify the feasibility of the water supply features before construction of the hydropower unit can begin. The Act further required that 50% of the costs of the feasibility study were to be paid with nonfederal funds. A maximum of one-half of the non-federal cost share may be provided with in-kind services. The U.S. Bureau of Reclamation estimated the cost of the feasibility study at $800,000.

The 1987 State Legislature passed legislation providing a $150,000 study loan to the Gregory County Pumped Storage Site Water Corporation (GCPSSWC). The study loan is being used to initiate the feasibility studies for irrigation and water supply development. The water supply component includes the potential for developing rural, municipal, and industrial water supplies, enhancing wildlife areas, and promoting rural economic development. Even though federal funding was not included in the 1988 federal appropriations bill for the feasibility study, the GCPSSWC entered into a $50,000 contract with the U.S. Bureau of Reclamation to begin soils and drainage studies on the lands identified for irrigation. In the fall of 1988 Congress approved a $500,000 FY 1989 appropriation to the Bureau of Reclamation for studies on the water supply features.

The year 1989 was a continuation of study efforts initiated in 1988. The local project sponsors entered into contracts with the U.S. Bureau of

Reclamation and EBASCO Services Inc. to continue studies on the irrigation and drinking water supply features of the project. The studies and final report are scheduled for completion in 1990.

James River Improvement Program

The 1984 State Legislature authorized the James River Improvement Program as part of the State Water Resources Management System. The program is a combination of projects along the James River which are intended to provide flood control as well as municipal, industrial, agricultural, recreational and wildlife benefits. Total cost for all projects in the program is $75 million. As part of this effort, federal legislation (P.L. 99-662) was approved in 1986 authorizing $20 million for flood control and stream flow improvement on the James River. Under this Act, a reconnaissance report was completed in September on 1989. This report showed a federal interest in pursuing feasibility study for flood protection in the lower Elm River-Moccasin Creek basins near Aberdeen and in the Dry Run Creek Basin near Mitchell. The report also contains provisions for potential federal funding of the James River Restoration project.

Individual components of the program have been actively pursued by local and state governmental entities for many years. A draft Environmental Impact Statement (EIS) was prepared in response to local interests' request to develop a plan for the James River. This EIS was the result of a cooperative effort between the James River Water Development District and the Department of Water and Natural Resources as well as numerous local interests within the basin. The EIS presented four alternatives for consideration: No Action; Limited Channel Cleanout; Channel Restoration and Flood Bypass.

The James River Water Development District adopted a three stage approach to river restoration as a result of public input to a draft Environmental Impact Statement (EIS). The three stages are: Limited Channel Cleanout, Tributary Drainage Control and Bank Stabilization. The Limited Channel Cleanout includes: a comprehensive tree and debris removal, sandbar removal at selected locations in the southern portion of the river, modification of select dams, selective dredging behind the Third Street Dam at Huron, protection and establishment of wildlife habitat areas, and improving recreational opportunities. The Tributary Drainage Control and Bank Stabilization plans are being addressed in cooperation with the recently completed reconnaissance study.

The 1988 State Legislature appropriated $200,000 to the James River Water Development District to begin implementation of the Limited Channel Cleanout activities. The District subcontracted with the James River Watershed District, City of Huron, Sanborn County, James River Valley Watershed District, Lower James Water Project District and the Elm Maple Valley Watershed District to carry out channel cleanout activities. Again, in 1989, the State Legislature appropriated an additional $200,000 to continue the restoration effort. The above mentioned entities along with the City of Mitchell are participating in the clean-out activities. Landowners in Davison and Hanson County are formulating a legal entity to sponsor restoration activities in their area. In addition, several sportsman's organizations have indicated interest in protecting and establishing recreational and wildlife habitat areas.

The James River Water Development District and project sponsors have been actively promoting and lobbying for the James River Restoration Project. These efforts have been directed at state and federal levels. The concept of federal funding for James River Restoration is currently being investigated by the District.

In May 1989, meetings with federal agencies, congressional, and environmental group representatives in Washington, D.C., the James River Water Development District presented its plan for restoring and improving the James River in South Dakota. The purpose of these meetings was to seek federal assistance. The James River Water Development District was advised that its plan is an

environmental project and that the Administration is considering an environmental initiative that the Corps may become involved in. The James River Water Development District also received indications that OMB officials favored the cost-sharing of environmental projects.

Because of (1) the potential environmental initiative, (2) the existing Corps construction authorization, and (3) Corps expertise in managing the implementation of water resources projects, the James River Water Development District decided to pursue its project through the Corps of Engineers. At a July issue resolution conference with the James River Water Development District; the South Dakota Department of Water and Natural Resources; the Omaha District; the Missouri River Division; and the Headquarters of the Corps of Engineers in attendance, it was decided that the Omaha District would prepare a description of the James River Restoration Plan and a scope of study for consideration and a decision by the Assistant Secretary of the Army. The description and the scope of study have been completed.

The decision to be made is whether or not the Corps, as part of an environmental initiative, should be involved in further development and implementation of the James River Restoration Plan. The meeting and subsequent decision are anticipated for early 1990.

Assistance is also being provided to the Aberdeen and Mitchell areas by helping them to encourage the Corps of Engineers to conduct two separate flood control feasibility studies in the upcoming year. These studies would require cost-sharing similar to that being provided to the Big Sioux Flood Control Feasibility Study near Watertown and the Sioux Falls Flood Control Study.

Lake Andes-Wagner/Marty II Irrigation Unit

In 1975, the State Legislature authorized the Lake Andes-Wagner Irrigation Project as part of the State Water Resources Management System. Located in Charles Mix County, the project will use Missouri River water pumped from Lake Francis Case to irrigate approximately 45,000 acres.

During the 1970's, the Lake Andes-Wagner Irrigation District approved an $850,000 bond issue to complete a project master plan and feasibility study assessing the potential for nonfederal irrigation development. The 1977 study identified 78,759 irrigable acres in the District with an estimated development cost of $48.3 million. With the additional costs covering interest during design and construction, possible cost overruns and bond reserve funds, the total bond issue required for project construction was estimated to be $84.7 million. After holding informational meetings, District landowners, on July 27, 1978, rejected the proposed $84.7 million revenue bond issue for construction of the project.

In 1981, the Lake Andes Irrigation District, the Department of Water and Natural Resources and the Bureau of Reclamation began a re-analysis of the privately sponsored feasibility study at the request of a number of landowners. Initially, the study identified 13,500 acres of irrigable land but this was later expanded to 26,700 acres identified as irrigable. The study was expanded again to an area east of Choteau Creek where an additional 15,000 acres was added to the project.

Study funds for the new 45,000 acre project were provided in part, by the local sponsor through a $600,000 loan from the South Dakota Water Facilities Construction Fund. The preconstruction surveying and geological and archeological activities have been performed by contracts between the Irrigation District and private consultants. Likewise, the land classification east of Choteau Creek was accomplished by contract between the District and the Bureau of Reclamation. The State of South Dakota has taken an active role in the study process, contributing services in the area of public involvement and study coordination as well as grant and loan monies.

The Regional Director's Report/Draft Environmental Statement was completed in

May, 1985. This report was submitted to the Commissioner of the Bureau of Reclamation, issued for further public review and released as the Commissioner's Final Planning Report/Final Environmental Statement in September, 1985. Congressional authorization legislation has been introduced and field hearings were held in October and November of 1985 by both the House and Senate. A House hearing was held in Washington, D.C. in July, 1987 and a Senate hearing was held on September 14, 1989.

In 1986, the South Dakota Legislature authorized the Marty II project as a part of the State Water Resources Management System. Marty II is generally located within the same area as the proposed Lake Andes-Wagner project. While these two projects will seek authorization jointly, they will be independent projects. Since they are to be introduced jointly the 1989 State Legislature amended the State Water Resources Management System to identify the Lake Andes-Wagner/Marty II project as one authorization effort.

In 1987, the State of South Dakota and the Lake Andes-Wagner Irrigation District submitted a nonfederal cost sharing proposal to the Bureau of Reclamation and the House and Senate authorization committees. The cost sharing proposal totals $45,950,000 for State and local share, which is approximately 29% of the total project cost of $157,650,000.

Under the cost sharing proposal, the State of South Dakota and the project sponsors would establish a sinking fund to cover the cost of the ring dike to be used to maintain water quality in Choteau Creek ($3.5 million) and the closed subsurface drainage system ($36 million). The irrigation district has agreed to administer the design and construction of the unit distribution system and this will result in a federal savings of $6.4 million.

The 1988 South Dakota State Legislature appropriated $200,000 to the Lake Andes-Wagner Water Systems Incorporated subject to the terms and conditions of the Board of Water and Natural Resources. Of the $200,000 appropriation, $90,000 was provided to Lake Andes-Wagner Water Systems Inc. as a grant to be used for detailed planning and environmental studies on the Marty II Yankton Sioux irrigation project. The Bureau of Indian Affairs at the request of the Yankton-Sioux tribe also provided $90,000 for the Marty II studies. These studies are underway and will be completed in late 1989 or early 1990.

The remaining $110,000 of the $200,000 appropriation is to be provided in the form of a loan for congressional authorization activities on the Lake Andes-Wagner irrigation project.

Future activities will include additional studies for the feasibility report to satisfy U.S. Bureau of Reclamation requirements and authorization activities to obtain Congressional approval.

A number of activities have taken place on these projects in 1989. The South Dakota State Legislature appropriated $50,000 to be used for authorization activities. Studies on the Marty II project have progressed well with a draft report anticipated in late 1989 or early 1990. Trace element testing has been conducted on both the lands and groundwaters of the Marty II and Lake Andes-Wagner projects. The results of the trace element testing have indicated the presence of selenium. A plan to manage the selenium under irrigated agriculture is being developed by the Bureau of Reclamation at this time.

Lake Herman Restoration Project

The Lake Herman restoration project was authorized by the State Legislature for inclusion on the State Water Resources Management System in 1984.

Lake Herman is a natural lake located two miles west of the City of Madison in Lake County. This 1,350 acre lake has a mean depth of 5.5 feet and a maximum depth of 7 feet. Several unnamed tributaries drain the lake's 42,000 acre watershed with Silver Creek providing the outflow.

The original purpose of the Lake Herman Restoration Project was to alleviate the degradation of water quality in Lake Herman

from non-point sources through the application of best management practices in the watershed and the construction of sediment control structures on the main tributaries of the lake. Three sediment control structures have been completed and 87% of the watershed has been treated with conservation practices. Riprapping of a major portion of the shoreline was completed in the early summer of 1982. In 1983, the U.S. Soil Conservation Service in conjunction with the Conservation District implemented stream bank erosion control in the north tributary adjacent to the lake.

In-lake restoration in the form of dredging was begun by the City of Madison in July, 1985. This constitutes the beginning of the final phase of the Lake Herman restoration effort. Dredging was started in the northeast bay of the lake with the intention of clearing silt in spawning areas. The spoil ponds are located approximately one-half mile east of the lake in an abandoned gravel pit. So far, almost 35 acres in the bay have been dredged to the original bottom. The operation has proceeded from north to south toward Lake Herman State Park and the main boat launch. On the average, 1,200 cubic yards of sediment were being removed daily. The operation was discontinued for the 1986 season in November.

Spring start-up began April 1987 in the swimming beach area of the Lake Herman State Park. Dredging operations proceeded from the immediate beach area out to the middle of the bay. Approximately 20 acres of lake was dredged until shut down in November. Dredging commenced in April, 1988 in the swimming beach area. Another 20 acres of the lake were dredged until pull out in November. Approximately 120,000 cubic yards were removed during the 1988 season.

The Lake Herman Restoration Project received (319 non-point source) funds to operate for two additional years. Local match was provided by the City of Madison, the East Dakota Water Development District, Lake County, the S.D. Department of Game, Fish and Parks and the S.D. Department of Water and Natural Resources.

In the winter of 1988-89, the dredge and tender boat were transported to the Herman Slough where spring start-up would occur. The Herman Slough is a twenty-five acre shallow lake located in the Lake Herman State Park. It is physically connected to Lake Herman by above and under ground water sources.

There is approximately 150,000 cu.yds. of sediment to depths of ten feet that will be removed. When the dredging season ends in November 1989, approximately 100,000 cu.yds. will be dredged. It is anticipated that the Herman Slough will be completely dredged by the middle of 1990 and that the dredge will be placed back in Lake Herman.

In addition to the funding listed above, the 1986 federal Omnibus Water Resources Act (P.L. 99-662) authorized an additional $5 million for the restoration of Lake Herman. Since 1986 the State has unsuccessfully negotiated with the Corps of Engineers to secure their support for an appropriation.

Mni Wiconi Rural Water System

The Mni Wiconi Rural Water System is a proposed rural domestic water system that will provide adequate quantities of high quality water to approximately 20,000 western South Dakota citizens in an eight county area extending from Ft. Pierre through the Pine Ridge Indian Reservation. Much of the area is plagued with inadequate water supplies and extremely poor quality water. This system will enable water users to have a supply of water which meets State Drinking Water Standards.

Mni Wiconi has been nearly 20 years in development. Three proposed water supply systems make up the Mni Wiconi project. The systems are the West River RWS, Lyman-Jones RWS, and the Oglala Sioux Water Supply System. The Lyman-Jones Water Development Association, Inc., was organized as a non-profit corporation in 1971. The purpose of the organization was to develop the Lyman-Jones RWS with a Lake

Sharpe water source. The 1981 Legislature authorized Lyman-Jones RWS as part of the State Water Resources Management System (SWRMS). An engineering design report was completed in 1982 with a $100,000 Water Facilities Construction Fund loan.

West River Rural Water System was organized as a non-profit corporation in 1981. Initial development of the West River system was sponsored by the West River Conservancy Subdistrict. The 1981 Legislature authorized West River RWS as part of the State Water Resources Management System (SWRMS). The proposed West River Aqueduct would have been particularly beneficial to the West River RWS as a water source. The cancellation of the ETSI project eliminated the West River Aqueduct as a water source. An engineering design report was completed in 1982 with a $100,000 Water Facilities Construction Fund loan.

Under the leadership of the West River Water Development District, the two projects began to jointly pursue combined water source and treatment facilities. In 1984, negotiations began with the U.S. Army Corps of Engineers to establish a water source within the powerhouse at the Oahe Dam. Use of the powerhouse source, as compared to construction of a new intake, provides significant cost and operational advantages. The Corps has agreed to the concept of tapping into the dam by the water systems. From the Oahe powerhouse, a raw water pipeline would run across the dam face to a treatment facility near Ft. Pierre.

In 1987, the Lyman-Jones/West River Rural Water System was awarded a $50,000 loan to look into incorporating the Oglala Sioux water supply system into the joint system. The preliminary appraisal report was completed and the Oglala Sioux system was included as part of the total project seeking Congressional authorization. The total estimated cost of the project is $100 million. The 1988 South Dakota Legislature approved the addition of the Oglala Sioux rural water system to the SWRMS project list and appropriated $50,000 in loan funds for the West River, Lyman-Jones, and Oglala Sioux rural water systems.

In the fall of 1988, the project was Federally authorized as the Mni Wiconi Rural Water Supply Project with the passage of H.R. 2772 (P.L. 100-516). The authorization granted approval for a $100 million water system of which thirty five percent (35%) of the costs of the non-Indian portions of the project are to be paid by the local and state project sponsors. The non-federal cost share requirement is estimated at $12.5 million at 1988 costs. The authorization contained a provision unique to South Dakota rural water systems in that it provides low-cost hydropower, identified for the Pollock-Herreid Irrigation Project, for use in pumping during the summer season. This provision may provide substantial savings in the operating costs of the system.

The 1989 State Legislature provided a $1.5 million grant to the Mni Wiconi project to be used for the engineering design, preconstruction activities, and construction. Additionally, the Legislature converted to grants all loans for the West River, Lyman-Jones and Oglala Sioux rural water systems to be used to the extent permitted by federal law as part of the non-federal match requirement. The SWRMS project list was revised to include Mni Wiconi and to delete references to West River, Lyman-Jones, and Oglala Sioux rural water systems. The FFY 1990 Energy and Water Appropriation legislation included an initial federal appropriation of $500,000 for Mni Wiconi.

Mid Dakota Rural Water System

The Mid-Dakota Rural Water System is a proposed rural domestic water system which will provide high quality water to the counties of Beadle, Buffalo, Hand, Hughes, Hyde, Jerauld, Potter, Sanborn, Sully and small portions of Spink, Kingsbury, and Aurora. The water system will provide water to 29,000 people including 23 communities in central South Dakota. The project cost is estimated to be $100 million.

A detailed feasibility study and report was completed on the project in early 1989.

The authorizing legislation for the project was introduced in the summer of 1989 and project sponsors are hopeful that a subcommittee hearing will be scheduled in spring 1990.

The project was placed on the State Water Resources Management System in 1988 and a $100,000 study loan was appropriated to proceed with project studies and authorization activities. The 1989 State Legislature appropriated a $50,000 grant for further studies and authorization activities on the project.

Missouri River National Recreational River Project

The Missouri River National Recreational River Project was authorized as part of the State Water Resources Management System by the 1981 State Legislature. The Segment of the Missouri River between Gavins Point Dam and Ponca State Park, Nebraska, was designated a national recreational river in the 1978 amendment (P.L. 95-625) to the Wild and Scenic Rivers Act (P.L. 90-524). The project involves preservation of visual, cultural and fish and wildlife resources; recreation development; and bank protection. Union, Clay, and Yankton counties in South Dakota are affected, as are Cedar and Dixon counties in Nebraska.

By virtue of designation as a national recreational river, a need has been recognized to protect for present and future generations the outstanding scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values of this river segment. Construction of bank stabilization and other control structures will be necessary to achieve this protection. Fiscal year 1980 and 1981 appropriations allowed the U.S. Army Corps of Engineers to begin inventory studies, but lack of continued funding has prevented completion of the work. The 1985 supplemental appropriation to the Corps of Engineers included funds for work at Myron Grove but contained cost sharing requirements. Since that time, the Corps of Engineers policy for bank stabilization in the Recreational River has been that it is a 100% local cost for private land. The Water Resources Development Act of 1988 passed the Congress. Section 216 of the Act makes all bank stabilization in a Recreational River a 100% federal cost. A $3 million annual ceiling was placed on any appropriation for bank stabilization under the Act. No progress was made on this project in 1989 because of lack of federal activity.

Pick-Sloan Riverside Irrigators

The Pick-Sloan Riverside Integration was authorized by the State Legislature to be placed on the State Water Resources Management System in 1987.

This proposal attempts to integrate existing irrigators into the Pick-Sloan Missouri Basin Program. The concept has been limited to irrigators using water from the Pick-Sloan system, generally located in counties along the Missouri River corridor. Integration into the Pick-Sloan program provides irrigators an opportunity to utilize Pick-Sloan power and the potential to obtain power revenue assistance. Additionally, irrigators would be eligible for technical assistance and other benefits associated with an authorized federal water project. Approximately 70,000 acres of existing irrigation exist in the Missouri River corridor, of which a portion would be eligible for integration.

Integration of existing irrigators into the Pick-Sloan program requires Congressional authorization. In 1986 Congress authorized two existing irrigation projects in South Dakota into the Pick-Sloan program. They are the Hilltop project located north of Chamberlain and the Gray Goose project located north of Pierre.

Several irrigation projects such as Northwest Central Charles Mix, West Brule, and New Evarts Irrigation Districts and West Potter Water Project District that utilize water from the Pick-Sloan system, and are organized as legal entities which can contract with the Federal government and will comply with Reclamation law have been actively pursuing Congressional authorization. No legislation has been introduced for these projects.

Sioux Falls Flood Control Project

The City of Sioux Falls has successfully negotiated an agreement with the Corps of Engineers to conduct a feasibility study for upgrading the existing flood construction project which was completed in 1965. The study is scheduled for completion in 1991.

The project would involve increasing Sioux Fall's flood protection from Skunk Creek and the Big Sioux River. Current flood protection levels are at the 22 year and 34 year flood frequency along Skunk and the Big Sioux River, respectively. The plan developed would provide 100-year protection at Sioux Falls through modification to the levees above and along the diversion channel, and to drainage structures, the spillway chute, the diversion dam, the stilling basin and possibly some bridges. The benefit / cost ratio for this project is 1.4.

The City of Sioux Falls received a $50,000 grant from the 1989 State Legislature for initiating the feasibility study. The feasibility phase is estimated to cost $469,500 with half the funds federal and half non-federal. The construction phase is estimated at $6,502,000 with a federal share of 75% and a non-federal share of 25%.

Slip-Up Creek Project

The Slip-Up Creek Project was authorized by the 1981 State Legislature as part of the State Water Resources Management System. The proposed plan of development for the Slip-Up Creek 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 to the city's water treatment plant.

Surface water from the Big Sioux River would be pumped by the low-lift pumps of the Big Sioux pumping plant through the Sioux diversion pipeline to the reservoir for storage. The pumping plant would be located immediately upstream from an existing Corps of Engineers' diversion headworks weir on the Big Sioux River diversion channel about two miles north of the municipal water treatment plant. When needed, water stored in Slip-Up Creek reservoir would be pumped by the Slip-Up Creek pumping plant back through the Sioux diversion pipeline and then through the Sioux Falls pipeline to the municipal water treatment plant. The Big Sioux pumping plant would also divert Big Sioux water directly to the treatment plant when available.

Slip-Up Creek reservoir and adjacent land would also be developed for recreation and fish and wildlife activities, providing a water recreation area near Sioux Falls.

The Sioux Falls Unit's feasibility report has been completed by the U.S. Bureau of Reclamation, and is now ready for federal project construction authorization and funding. The cost of constructing Slip-Up Creek is estimated at approximately $45 million. In 1985, Sioux Falls hired a private engineering firm to evaluate and develop recommendations regarding the city's water supply alternatives. The engineering firm has completed its report and recommended development of the Slip-Up Creek reservoir alternative. After a public meeting in March 1986, the city passed a resolution providing the following: 1) continue developing the Sioux Falls aquifer; 2) continue planning for a reservoir in the Slip-Up Creek Valley; and 3) initiate a water education and conservation program. In 1987 Sioux Falls began construction of a well field expansion project as a water supply alternative included in the Slip-Up Creek project. No significant action was taken in 1989.

Southeastern South Dakota Water Supply System

This project consists of supplying the southeastern portion of the State with a dependable source of good quality water for domestic/industrial purposes. Various alternatives being studied include: a) pipeline from Chamberlain to Mitchell and Sioux Falls; b) pipeline from Missouri River near Vermillion to Sioux Falls/Mitchell and points in-between; and c) pipeline from Choteau Creek to Mitchell and Sioux Falls. The capi-

tal cost of these pipeline alternatives range from $50 million to $100 million.

A coordinating committee has been formed which consists of representatives from the S.D. Association of Rural Water Systems, S.D. Municipal League, area-wide planning and development districts, City of Sioux Falls, and affected water development districts.

The coordinating committee has engaged the services of the U.S. Army Corps of Engineers (COE) to provide cost estimates for the above mentioned alternatives. The COE final cost estimates are due in December, 1989. However, preliminary cost estimates indicate that the project is feasible.

The Department's Omnibus Water Bill will include $50,000 for cost sharing a feasibility study of the project. The coordinating committee is holding a series of meetings in the study area to generate financial support for the non-state share of the cost of the feasibility. The interested local entities will be expected to sign a Memorandum of Understanding prior to the January 1, 1990. By signing the Memorandum of Understanding, the local entities are agreeing to form a legal entity and to provide their share of the cost of the feasibility study when needed next spring.

Turkey-Clay Watershed

The Turkey-Clay Watershed is located in parts of Clay, Turner, Yankton and Hutchinson counties with a project area of 252 square miles. The project will consist of construction of 10.2 miles of main channel, 55.3 miles of laterals, nine flood water retarding structures, two stabilization structures, and 14 sediment basins. Upon completion of the project, it is estimated that flood damages will be reduced by 72% and that sediment leaving the watershed will be reduced by nearly 50%.

The environmental impact statement and design studies have been completed by the U.S. Soil Conservation Service. Estimated project costs are $10.4 million of which approximately $8.5 million could be funded through Public Law 83-566, the Small Watershed Program. Further federal funding will be delayed until the watershed approves a financial plan.

In March, 1984 a referendum on the proposed financial plan for the Turkey-Clay Watershed project was held and defeated when the proposal failed to receive the required 60% favorable vote. The watershed directors revised the proposed financial plan and took steps to hold another referendum. However, a group of landowners in the watershed sought an injunction to prevent the second referendum on the grounds that specific project plans had not been approved by the S.D. Board of Water and Natural Resources. The circuit court ruled that the watershed had not violated state law but did require the watershed to have project plans approved before the referendum. On September 7, 1984, the Board of Water and Natural Resources approved the project plans.

The watershed board spent most of 1985 reviewing and reformulating the proposed financial plan. After holding the required hearings, the plan was referred to the voters once again on September 24, 1985. The revised plan failed to receive a 60% favorable vote.

In 1984 the Legislature appropriated $100,000 from the Water Facilities Construction Fund for a loan to the Turkey-Clay Watershed District. Because of the need for further planning, the 1986 Legislature provided the Board of Water and Natural Resources with the authority to grant up to $30,000 of the 1984 appropriation for engineering and planning. In 1987, the Turkey-Clay Watershed District requested and received $30,000 of this appropriation to pay for engineering costs on the project. Since this time the Watershed has engaged in an engineering study. No significant activity occurred on this project in 1989.

Vermillion River Basin Flood Control

The Vermillion Basin flood control study was authorized by the State Legislature to be placed on the State Water Resources Management System in 1987.

Flooding in the Vermillion River Basin has become much more severe in the last 30-40 years than in past years. Area residents feel that much of this problem is due to the widespread drainage of wetlands in the river uplands. Instead of reducing flood flows and storing runoff from snowmelt and precipitation events, these drained wetlands discharged water into the river, resulting in an increase in the severity, frequency and duration of floods.

The Vermillion Water Project District has been active in lobbying Congress to appropriate funds for a reconnaissance and feasibility study of the Vermillion River Basin. An appropriation has not been obtained at the federal level. The 1988 State Legislature appropriated $50,000 grant to the District to facilitate its efforts for obtaining a federal appropriation and to begin the feasibility study of flood control alternatives in the Vermillion River Basin.

During 1989 the District was active in moving forward the formation efforts of the Vermillion River Water Development District. To date the new water development district has not been formed.

Water for Energy Transport (WET) System

The Water for Energy Transport System was authorized by the 1981 State Legislature as part of the State Water Resources Management System. The WET system proposes to transport treated wastewater from nine Black Hills municipalities and industries to Wyoming, via pipeline, to be used in a coal slurry pipeline that would carry low sulfur coal to power plants in the mid-south region. The WET system is considered a viable concept for the following reasons: (1) municipal wastewater is being treated and discharged into surface water courses without any means of a tangible cost recovery; (3) water supplies are limited relative to future demands, especially in energy developing areas of Wyoming. In the past three slurry pipeline companies expressed an interest in the WET system.

During 1981, the WET system was advanced as an alternative source to the Madison Aquifer as a water supply for the ETSI coal slurry pipeline. Project costs for WET were updated and several meetings were held with the interests involved to resolve possible problems over the rights of downstream water users to the effluent. The major thrust of activities concerning the WET system in 1983 was directed at identifying additional storage locations. A primary site, located on Rapid Creek, would potentially be known as Brennan Reservoir. The U.S. Army Corps of Engineers conducted additional studies to locate potential sites on other Black Hills streams. The ultimate goal is storage of an additional 100,000 acre-feet of water.

In 1984, a final report was completed on the project. The report estimated construction costs for the WET system of $149 million with operation and maintenance cost of $47 million annually. The Water for Energy Transport (WET) System has been developed to the point that an industrial user needs to express a strong interest with a Letter of Intent to enter negotiations before any additional specific work is completed. The project sponsor (Black Hills Council of Local Governments) completed a Concept Report Update in 1987.

An important spin off of the WET System effort is the identification of potential on-stream and off-stream reservoir sites. One site in particular has been targeted by the West Dakota Water Development District for further evaluation. A tentative scope of work for the study was proposed for the reservoir and an interstate water delivery system. An analysis of potential water quality of the proposed reservoir was undertaken. The analysis was completed and the only identifiable concern was the current phosphorus loading in Rapid Creek. The analysis recommended that the cost of phosphorus removal become part of the cost of the entire system. Now that the water quality question has been analyzed, it is anticipated that the proposed scope of work will be finalized and a feasibility study initiated.

The future of the project will continue to be linked with the development of the coal industry of Wyoming and its water needs.

WEB Pipeline Project

The WEB Pipeline Project was authorized by the 1981 State Legislature for inclusion in the State Water Resources Management System. The project is a domestic water pipeline that will supply treated Missouri River water for rural domestic, livestock and municipal users in portions of nine counties in north central South Dakota. The project area includes all or parts of Walworth, Edmunds, Brown, Spink, Day, Campbell, McPherson, Faulk, Potter and Hand counties. Domestic drinking water via a system of buried pipelines will be provided to 3,000 farm livestock hookups and 44 small towns with a total population of 30,000 people. The public water supplies in most of WEB cities, towns and rural systems that currently have public water supply systems violate two or more of the federal Safe Drinking Water Act maximum contaminant levels.

The WEB system includes a raw water intake and a pumping station along the east shore of Lake Oahe on the Missouri River, a 3.8 mile raw water transmission pipeline, a water treatment plant, a water pumping station, a main storage reservoir, 115 miles of main transmission pipeline, 3,400 miles of distribution pipeline and 17 reservoirs and storage tanks. The system is being integrated as a single system with service lines tapping both main transmission lines and distribution lines. The total estimated cost of the WEB project is approximately $117 million.

The WEB project was federally authorized in the Rural Development Policy Act of 1980. Since its authorization the federal government has appropriated approximately $112 million for construction. These appropriations and all future federal appropriations for WEB are provided on at least a 75% grant basis, with the remaining percentage on a loan basis with a 5% interest rate. The State has provided $1.6 million for project construction.

Construction is expected to be completed in 1990 with over 4,435 farms and households and 46 towns being served by WEB.

West River Aqueduct

A study report was presented to the 1977 State Legislature proposing to include the West River Aqueduct Project on the State Water Resource Management System. As proposed, the project would have delivered 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 to rural communities and rural water systems in western South Dakota.

An agreement in principle was reached between the State and ETSI whereby ETSI would construct a delivery system and make Missouri River water available to users along the aqueduct. Legislation was passed in 1981 by the state approving construction of the aqueduct. By year end, a contract was executed between the Board of Water and Natural Resources and ETSI detailing the delivery system and payment arrangements as previously agreed to in principle.

In August 1982, two suits were filed in U.S.Circuit Court against ETSI, Interior Secretary James Watt and several other federal officials. One suit was brought by the states of Iowa, Missouri, and Nebraska while the other was filed by the Kansas City Southern Railway Company, the Sierra Club, the Colorado Farmers Union, Nebraska and Iowa. The ultimate objective of each suit was to halt the sale of Missouri River water to ETSI. The issue on appeal to the Eighth Circuit was whether the Department of the Interior or the Department of the Army had the authority to enter into a water service contract with ETSI to use the stored waters of the Oahe Reservoir. The Eighth Circuit Court of Appeals ruled in favor of the lower court that in fact the Department of the Interior did not have authority to contract and held that the contract between ETSI and the United States was void. A petition for certiorari was filed with the U.S. Supreme Court and the Supreme Court determined that the Corps of Engineers was the proper authority to contract with ETSI supporting the Eighth Circuit's decision but made no attempt in that decision to determine what State's rights were.

In May 1985, the U.S. District Court in Lincoln, Nebraska granted a permanent injunction blocking South Dakota's proposed sale of Missouri River water to ETSI. On August 1985, ETSI cancelled its proposed $3 billion coal slurry pipeline and its plans to buy Missouri River water from South Dakota. As a result, South Dakota only received $5.2 million of the projected $1.4 billion in payments from ETSI.

In 1983 the State of South Dakota filed suit against the Kansas City Southern Railroad and its associated companies charging conspiracy to monopolize Powder River coal traffic and tortious interference with the South Dakota Conservancy District's ETSI contract. This case was heard in 1988 and the U.S. District Court ruled in favor of South Dakota which awarded $600 million to South Dakota in damages. The case was subsequently appealed to the U.S. Eighth Circuit Court of Appeals which overturned the judgement against Kansas City Southern Railroad. The State has appealed the decision to the United States Supreme Court.

State Water Facilities Plan—Progress Report

In November, 1989, the Board of Water and Natural Resources reviewed and approved 74 water projects for inclusion in the 1990 State Water Facilities Plan. The State Water Facilities Plan represents those priority projects which can be implemented using the discretionary authority of the Board of Water and Natural Resources.

In 1989, twenty-three rural and municipal projects received $1,324,980 in State funding with the balance being implemented using other State and federal awards. Of the projects in the State Water Facilities Plan, 26% received direct state funding. In addition to the State funding, federal and local funds were used to complete the projects' financial packages. These other financing sources include the Farmers Home Administration, the Environmental Protection Agency, water development districts and local bond issues. The tables on the following pages display the funding progress of each of the projects which received State funds in the 1989 State Water Facilities Plan.

State Revolving Fund (SRF)

This program was established in 1988 to establish a revolving fund to provide low interest loan funds to municipalities, sanitary districts, and watershed districts. The low interest loans are to be used to upgrade wastewater treatment facilities or establish nonpoint source pollution control projects.

The Department of Water and Natural Resources received the State's first SRF capitalization grant from the Environmental Protection Agency (EPA) for $4,577,200, on March 6, 1989. This capitalization grant required a State match of $915,440 which was secured by bond proceeds. The Board of Water and Natural Resources, acting as the South Dakota Conservancy District issued $5,785,000 of revenue bonds on August 1, 1989, which will be used not only as the State's share of the grant, but also for the next two years of SRF grants from EPA.

The Board of Water and Natural Resources held the federal fiscal year 1990 Intended Use Plan hearing on August 9, 1989. A project must be on the Intended Use Plan priority list to be eligible for a SRF loan. The Intended Use Plan was finalized with the following list of communities/nonpoint source pollution control projects:

WASTEWATER FACILITIES

Municipality	Project Description
Ethan	I/I Correction
Whitewood	Addition to Facility/Collection
Huron	Addition to Facility
Lead-Deadwood S.D.	New Facilities/Interceptors/Collection
Custer	Addition to Facilities/Collection
Hughes County	New Facilities/Interceptors/Collection
Wall	Addition to Facilities
Custer County	New Facilities/Interceptors/Collection
Box Elder	Interceptors/Collection/Refinancing
Rapid Valley S.D.	Interceptors/Collection
Mobridge	Addition to Facility
Mina Lake S.D.	New Facilities/Interceptors/Collection
Prairie Meadows S.D.	I/I Correction
Sioux Falls	Interceptor(s)/Rehabilitation
Rapid City	Interceptor(s)/Rehabilitation
Lemmon	Refinancing
Clark	Refinancing

Dakota Dunes	Interceptor/Collection
Wentworth	Refinancing
Lake Madison S.D.	Refinancing
Hill City	Interceptors
Lead	Storm Sewer Separation/Rehabilitation
Belle Fourche	Interceptors/Collection
Lake Cochrane (Amend)	Collection/Treatment
Deadwood	Interceptors/Collection
Waubay	Interceptors/Collection
Oacoma	Addition to Facility
Brookings (Amend)	Interceptors
Union County (Amend)	Interceptors

NONPOINT SOURCE PROGRAMS

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.

The first SRF loan was approved by the Board in November, 1989, in the amount of $1,656,000, for the City of Huron. The second loan approval was made at the December, 1989 meeting and is for $1,038,600 for the City of Mobridge.

TABLE 4

1989

Rural Water Systems Which Received Community Development Block Grants or Consolidated Water Facilities Construction Program Assistance

Project Title	CDBG	Federal	Local	CWFCP	Other	Total Cost
South Lincoln	$	$	$ 388,000	$ 30,000	$	$ 418,000
Tripp County	100,000		168,000	30,000		298,000
Igloo-Provo	200,000			58,000	393,571	651,571
Butte-Meade	500,000		386,320	79,480		965,800
Kingbrook	500,000	1,350,000	1,966,000	100,000		3,916,000
Total	$1,300,000	$1,350,000	$2,908,320	$297,480	$393,571	$6,249,371

TABLE 5

1989

Municipal Water Projects Which Received Community Development Block Grants or Consolidated Water Facilities Construction Program Assistance

Project Title	CDBG	Federal	Local	CWFCP	Other	Total Cost
Dakota Dunes	$		$ 253,500	$250,000	$	$ 503,500
Camelot			192,200	20,000	5,000	217,200
Aberdeen	100,000		1,100,000			1,200,000
Custer	85,750		85,750			171,500
Elkton	126,000		84,000			210,000
Castlewood (Sioux RWS)	250,000				975,000	1,225,000
Total	$561,750		$1,715,450	$270,000	$980,000	$3,527,200

EPA Construction Grants

The program was established 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 grants under the provisions of the Federal Water Pollution Control Act.

TABLE 6

1989 WASTEWATER SYSTEMS

(October 1, 1988 - September 30, 1989)

Name	Activity	EPA Grant Amount	CWFCP	Local	CDBG	Total Cost
Arlington-Inc	Add to Fac	$ 34,870	$	$ 28,530	$	$ 63,400
Ashton	Add to Fac	144,650	35,000	71,397		251,047
Belle Fourche	Add to Fac	521,290	95,000	494,180	95,275	1,205,745
Brandt-Inc	Add to Fac	18,750		6,250		25,000
Canistota	Add to Fac		20,000	274,145		294,145
Chamberlain	Inc-Add to Fac	60,640		33,360		94,000
Chancellor	Add to Fac	119,272	40,000	55,768		215,040
Custer	Collection	318,725	85,000	16,075		419,800
Doland - Inc	New Fac	9,932		8,128		18,060
Eden	New Fac	72,600	26,500	34,944		134,044
Eureka	New Fac	507,320	60,000	405,251		972,571
Frederick	Add to Fac	112,365	30,000	59,438		201,803
Hughes County	New Fac	208,615		170,685		379,300
Huron	Add to Fac	2,000,000		2,149,000		4,149,000
LaBolt	New Fac	162,855	70,000	71,880		304,735
Lake Andes	Add to Fac	114,470		93,658		208,128
Lake Cochrane	Inc-New Facility	97,135		40,765		137,900
Lake Madison	Inc-New Fac	194,400		64,800		259,200
Lake Poinsett-Inc	Inc-New Fac	22,165		18,135		40,300
Mellette-Inc	Add to Fac	27,769		11,651		39,420
Miller	Add to Fac	74,800		61,200		136,000
Mobridge	New Fac	648,900		0		648,900
Pierre-Inc	Add to Fac	481,515		0		481,515
Platte	Add to Fac	142,340		116,460		258,800
Roslyn	Add to Fac	105,985	28,000	46,037		180,022
Sioux Falls	Interceptor	124,960		102,240		227,200
Sioux Falls	Interceptor	206,690		169,110		375,800
Sioux Falls	Interceptor	169,675		138,825		308,500
Sisseton-Inc	Add to Fac	22,906		0		22,906
Stickney-Inc	Add to Fac	14,757		12,073		26,830
Tabor-Inc	Add to Fac	11,107		9,085		20,192
Volga	Add to Fac	830,335		679,365		1,509,700
Wall	Collection	45,650	30,935	50,755		127,340
Wall Lake	New Fac	396,120	50,000	333,035		779,155
Wall-Inc	Collection	19,085		15,615		34,700
Wessington	Inc-Add to Fac	10,000		0		10,000
White River	Add to Fac	470,000		0		470,000
Section 319	Transfer	458,000				458,000
Total		$8,980,648	$570,435	$5,841,840	$95,275	$15,488,198

TABLE 7

1989

LAKE RESTORATION PROJECTS

PROJECT TITLE	CONSOLIDATED WATER FACILITIES GRANT	LAKE AND RIVER DREDGING GRANT	FEDERAL	LOCAL	OTHER	TOTAL PROJECT COST
Brant Lake Shoreline Rehabilitation	$ 33,000	$	$	$ 33,000	$33,000	$ 99,000
Lake Campbell-Dredge Project		70,000		70,000		140,000
Wall Lake Dredge Project	50,000		151,361	50,907		252,268
Lake Herman Dredge Project		32,572	206,927	105,379		344,878
Stockade Lake-Dredge Project	95,000	213,500			9,000	317,500
TOTAL	$178,000	$316,072	$358,288	$259,286	$42,000	$1,153,646

Water Development Financing Programs — Progress Report

The Board of Water and Natural Resources administers the Water Facilities Construction Fund into which all legislative appropriations 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, the Interim Financing Program, the Lake and River Dredging Program, and all monies appropriated to SWRMS projects. During 1989, the Board and Department awarded $1,324,980 in grants and loans to water development projects in South Dakota. The Board also awarded $200,000 in CWFCP funds to the Drought Disaster Water Supply Assistance Program.

The BWNR also has authority to issue tax-exempt bonds in connection with its water resources management duties. Under SDCL 46A-1-29 to 30, the Board may issue long-term bonds, upon Legislative approval, for the construction of projects within the State Water Resources Management System. As well, the Board has discretionary bonding authority for small bond issues under $8 million. These means for long-term permanent financing have not yet been used. Under 46A-1-17 to 27, the Board 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 DWNR 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 1989 in each program.

Water Facilities Construction Fund

Legislative appropriations, interest on investments, principal and interest on loans, and funds accruing to the conservancy district pursuant SDCL 46A-1-60 are deposited in this special capital project fund to be used for the projects in the State Water Resources Management System or for ongoing programs. Table 8 describes the breakdown of funds appropriated in the 1989 Legislature. Appendix A displays the condition statement of the Water Facilities Construction fund.

TABLE 8

WATER FACILITIES CONSTRUCTION FUND

1989

	Amount Authorized by Legislature	Contracted	Reserved
Consolidated Water Facilities Construction Program	$1,525,000	$1,524,980	$ 20
Mni Wiconi	1,500,000	250,000	1,250,000
Gregory County Pumped Storage	50,000	50,000	0
James River	200,000	200,000	0
Mid-Dakota RWS	50,000	50,000	0
Lake Andes-Wagner/Marty II (loan)	50,000	50,000	0
Ft. Randall Hydropower Upgrade	50,000	0	50,000
Black Hills Hydrology	50,000	50,000	0
Black Hills Groundwater Monitor	75,000	75,000	0
Big Sioux Flood Control	50,000	50,000	0
Sioux Falls Flood Control	50,000	50,000	0
	$3,650,000	$2,349,980	$1,300,020

Table 9

STUDY LOAN PROGRAM

	AMOUNT AUTHORIZED BY BWNR	CONTRACTED
BHC	$ 150,000	$ 150,000
CENDAK	1,300,000	1,300,000
LAKE ANDES/WAGNER	710,000	710,000
GREGORY CO. PUMPED STORAGE	150,000	150,000
TOTAL	$2,310,000	$2,310,000

Table 10

CONSTRUCTION LOAN PROGRAM

	AMOUNT AUTHORIZED BY BWNR	CONTRACTED	RESERVED	CURRENT LOAN BALANCE	INTEREST PAID
BDM RWS	$ 500,000	$ 500,000	$ 0	$ 475,462	$142,973
B-Y RWS	200,000	200,000	0	194,518	43,114
CLARK RWS	380,000	380,000	0	361,351	128,159
DAVISON RWS	200,000	200,000	0	190,883	46,276
DEADWOOD	400,000	400,000	0	291,411	70,421
DOUGLAS RWS	100,000	0	100,000	0	0
EAST GREGORY	30,000	30,000	0	24,306	4,826
KEYSTONE	120,000	120,000	0	114,914	29,100
MCINTOSH	100,000	100,000	0	95,475	21,811
MINNEHAHA RWS	120,000	120,000	0	114,914	23,903
SOUTH LINCOLN RWS	100,000	100,000	0	92,486	32,837
TM RWS	400,000	400,000	0	381,767	102,607
TOTAL	$2,650,000	$2,550,000	$100,000	$2,337,487	$646,027

Consolidated Water Facilities Construction Program

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 and study loan programs, the rural water system grant program, and several smaller programs not funded 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. A factor system was adopted in the rules to help the Board in its decision making process.

During the summer of 1989 South Dakota farmers and ranchers had trouble keeping up with watering demands. In response to the problem the Governor through the Department of Water and Natural Resources (DWNR) reestablished the Drought Disaster Water Supply Assistance Program (DDWSAP). This program provided $200,000 in State drought relief funds for existing rural domestic and livestock water supply problems caused by this year's drought. Over 300 applications were received. Approved were 127 applications at an average cost of $1,570, with the DDWSAP staff holding approximately 80 applications pending additional funding. The program enabled 36 wells to be drilled, 28 rural water system hook-ups to be established, 29 dugouts to be restored, and 34 pipeline projects to be built.

Funding was obtained from DWNR through the Consolidated Water Facilities Construction Fund. Not every project received funding under the restrictions of the program, and the program is slated to end on December 31, 1989.

Table 11

CONSOLIDATED WATER FACILITIES CONSTRUCTION PROGRAM GRANTS PRIOR TO 1989 (Open Accounts)

	AMOUNT AUTHORIZED BY BWNR	BALANCE REMAINING
LAKE POINSETT	$ 54,480	$ 14,120
VALLEY SPRINGS	43,500	4,592
KINGBROOK	100,000	100,000
LAKE POINSETT	40,000	14,120
CLARK RWS	100,000	17,730
WINNER	25,000	25,000
LAKE COCHRANE	60,000	33,732
RAVINIA	30,000	3,838
AVON	34,000	34,000
MC INTOSH	20,000	1,124
DOLAND	30,000	30,000
RELIANCE	25,000	23,221
BOX ELDER	50,523	50,523
WALL	30,935	30,935
STICKNEY	40,460	40,460
WHITEWOOD	40,945	35,160
WESSINGTON	38,432	15,925
KIMBALL	10,000	2,801
TOTAL	$773,275	$477,281

TABLE 12

1989 CONSOLIDATED GRANT AWARDS

Name	Activity	Award Amount	Total Proj. Cost
S. Lincoln RWS	System Expansion	$ 30,000	$ 418,000
Eureka	Wastewater Treatment	60,000	972,571
Eden	Wastewater Treatment	26,500	134,044
Wall Lake	Wastewater Treatment	50,000	779,155
Chancellor	Wastewater Treatment	40,000	229,050
Canistota	Wastewater Treatment	20,000	294,145
Kimball	Wastewater	20,000	593,158
Tripp Co. WUD	System Expansion	30,000	298,000
Igloo-Provo	System Acquisition	58,000	799,020
Minnehaha Co.	Dredge	50,000	252,268
Labolt	Wastewater Treatment	70,000	304,735
Belle Fourche	Wastewater Treatment	90,000	1,205,745
Custer	Wastewater Collection	85,000	684,206
Sturgis	Wastewater Treatment	55,000	994,000
Ashton	Wastewater Treatment	35,000	251,047
Roslyn	Wastewater Treatment	28,000	180,022
Camelot	Water Supply	20,000	217,200
Custer Co. CD	Stockade Dredge	95,000	317,500
Brant Lake	Shoreline Restoration	33,000	99,000
Dakota Dunes	Water Supply	250,000	503,500
Butte-Meade RWS	System Expansion	79,480	965,800
Lake Preston	Wastewater Treatment	70,000	1,250,000
Frederick	Wastewater Treatment	30,000	201,830
TOTAL		$1,324,980	$11,943,996
Drought Disaster Water Supply Assistance Program		$ 200,000	$740,000
	GRAND TOTAL	$1,524,980	$12,683,996

APPENDIX A

WATER FACILITIES CONSTRUCTION FUND CONDITION STATEMENT

	FY88	FY89
REVENUE:		
General Fund Transfer In	$ 1,267,000 e	$3,500,000 g
Loan Repayments (P&I)	215,871	221,612
Investment Council Interest	473,062 a	355,304 a
Interim Note Bond Defeasance	1,433,489 b	0
Transfers To WERF	(16,786) c	(61,627) d
Wear Element Replacement Fund	33,839 c	74,713 d
Grant Overpayment	0	1,000
Transfer from Lake Mitchell Acct.	0	9,743
WERF Non Operating Revenue	230 h	0
TOTAL	$ 3,406,705	$4,100,745
EXPENDITURES:		
Construction & Study Loans	$ 74,532	$ 842
Legislative Line Items	3,271,710	1,259,134
WPC Revolving Fund Transfer Out	0	1,200,000 f
Transfer from WFCF to WERF	0	(61,627)
Transfer 88 WFCF to WERF	0	(16,941)
WERF	39,806	38,334
Game Fish & Parks (Stockade)	0	400,000
Consolidated Constr. Prog.	11,250	333,536
TOTAL	$ 3,397,298	$3,153,278
REVENUE OVER(UNDER) EXPENDITURES	$ 9,407	$ 947,467
BEGINNING CASH BALANCE	5,361,012	5,370,419
ENDING CASH BALANCE	$ 5,370,419	$6,317,886
CURRENT YEAR APPROPRIATIONS		
Construction & Study Loans	$ 1,850,000 i	$ 0
Legislative Line Items	2,650,000 i	2,075,000 j
WPC Rev. Fund General	1,000,000 i	0
WPC Rev. Fund Federal	5,900,000 i	0
WPC Rev. Fund Other	200,000 i	0
Consolidated Constr. Prog.	1,000,000 i	1,525,000 j
Wear Element Replacement Fund	43,023	0
TOTAL APPROPRIATIONS	$12,643,023	$3,600,000

FOOTNOTES FOR WATER FACILITIES CONSTRUCTION FUND CONDITION STATEMENT FOR FY90.

a. Investment income: FY1987 received in February 1988, FY1988 received in December 1988.

b. FY88 income is the actual payment to WEB from the 1987 Legislature appropriation.

c. 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).

d. $48,966 of the total transferred to WERF was to capitalize the WERF account from Legislative line items in the WFCF.

e. $267,000 was appropriated by the 1987 legislature to the Department of Water and Natural Resources' operating budget in the Division of the Secretariat to be transferred to the Water Facilities Construction Fund to replace interest lost as noted in the WFCF audit report of January, 1987.

The $1,000,000 balance was appropriated to the Water Pollution Control Revolving fund by 1988 Senate Bill 343 which contained an emergency clause.

f. Transfer of the SRF General and Other Appropriation to the First National Bank in Sioux Falls, as trustee.

g. Amount appropriated from 1989 SB186 from funds collected through Union Pacific settlement.

h. Funds received from freight damage.

i. The 1987 legislature adopted SB283 which provides for $475,000 in construction and study loans ($50,000 each to Lake Andes-Wagner Irrigation District and West River/Lyman Jones Rural Water System; $150,000 to Gregory County Pumped Storage Project; and, $225,000 to Game, Fish, and Parks for repair of Stockade Lake). Also appropriated in this bill is up to $1,700,000 for WEB Rural Water System to be funded from the defeasance of the $17,230,000 South Dakota Conservancy District loan anticipation notes. (WEB Water Development Assoc., Incorp. Project), 1983 series. This series came due December 15, 1988. The 1987 Legislature also adopted HB1069 which provides $400,000 to Game, Fish, and Parks for the repair of Center and Stockade Lakes.

The 1988 Legislature adopted SB343 which provides for $1,375,000 in construction and study loans ($75,000 to CENDAK Water Supply System; $100,000 to Mid-Dakota Rural Water System; $1,000,000 to Lake Andes-Wagner Irrigation District; $200,000 to lake Andes-Wagner for Yankton Sioux Marty II Rural Water System). Also appropriated in this bill are the following: $100,000 for Missouri River Cost Recovery Authority, $50,000 for Pick-Sloan settlement, $200,000 for stage one of the James River clean-out, $50,000 each for Vermillion Basin and Black Hills Hydrology Studies, $1,000,000 for the S.D. Conservancy District for grant awards to projects from the Consolidated Water Facilities Construction Program and $100,000 for dredge pipe acquisition or lease. This bill repeals a 1984 appropriation to lake Andes-Wagner for $1,200,000. The Water Pollution Control Revolving Fund, which is operated as a subfund of the Water Facilities Construction Fund, was also appropriated with $1,000,000 in general, $5,900,000 in federal and $200,000 other authority. The federal funds come form a matching grant and the other funds will be transferred from the unobligated cash of the Water Facilities Construction Fund.

j. The 1989 Legislature adopted SB186 which appropriated $1,525,000 for the Consolidated Water Facilities Construction Program. Also provided was $1,500,000 for the Mini Wiconi Rural Water System, $50,000 for the Gregory County Pump Storage Project, $50,000 for the Mid Dakota Rural Water System, $50,000 for Hydropower Facilities at the Fort Randall Dam, $50,000 for the Black Hills Hydrology study, $75,000 for monitoring wells in the Black Hills, $50,000 for the Big Sioux Flood Control Project, $50,000 for the Sioux Falls Big Sioux Flood Control Project, and $20,000 for James River Restoration.