2018 ANNUAL REPORT
~~and~~
2019 STATE WATER PLAN

South Dakota
Board of
Water and Natural Resources

DEPARTMENT OF ENVIRONMENT and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov

Governor Kristi Noem
and Members of the Ninety-Fourth
Legislative Session

As required by state law, transmitted herewith is the 2018 Annual Report/2019 State Water Plan of the Board of Water and Natural Resources (the Board). The Annual Report describes water development and waste management activities during the past year. The State Water Plan outlines the projects on the State Water Facilities Plan and State Water Resources Management System (SWRMS).

Throughout this document, you will see the on-going needs for water, wastewater, and solid waste projects statewide and how critical state assistance is to construct these projects. During the past year, the Board awarded nearly $100.4 million in grant and loan funds for the planning, design, and construction of municipal drinking water, wastewater, watershed restoration, rural water, solid waste disposal, and recycling projects. The 2019 State Water Facilities Plan currently includes 64 projects with projected state funding needs of more than $211.7 million.

The Department of Environment and Natural Resources (DENR) sincerely appreciates the interest and help of all who have contributed to the success of the State Water Plan. The DENR will continue to work together with the Governor, the Legislature, the Board of Water and Natural Resources and local project sponsors to make the State Water Plan the road map leading to a better environmental future for South Dakota.

Sincerely,

Steven M. Pirner, P.E.
Secretary

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To
Governor Kristi Noem
and the
Ninety-Fourth Session, Legislative Assembly
2019

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~~and~~
2019 STATE WATER PLAN

Board of Water and Natural Resources

January 2019

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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 Governor and Legislature 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*

This report consists of two principal sections – the 2018 Annual Report and the 2019 State Water Plan. The annual report provides progress reports on each funding program and other board activities during calendar year 2018.

The water plan section sets forth the projects included on the State Water Facilities Plan and the State Water Resources Management System. A Water and Environment Fund Special Condition Statement that projects the status of the Water and Environment Fund at the end of fiscal year 2019 is included in Appendix A. A copy of the resolutions approved by the Board of Water and Natural Resources that provide recommendations to the Governor and the Legislature for the designation of projects on the State Water Resources Management System and the recommended Water and Environment Fund fiscal year 2020 appropriation levels are included in Appendix B.

2018 Annual Report

Board of Water and Natural Resources

Overview

South Dakota Codified Law 46A-1-14 requires an annual report of the Board of Water and Natural Resources (the board). The report summarizes the board's 2018 activities, including a detailed account of Water and Environment Fund grant and loan awards.

In November 2017, the board placed 27 projects on the 2018 State Water Facilities Plan. This made the projects eligible for financial assistance from a variety of federal and state sources. During the year, the board amended an additional 23 projects onto the plan.

The board awarded nearly $100.4 million in grant and loan funds to finance municipal drinking water systems, rural water systems, wastewater facilities, watershed restoration, solid waste disposal, and recycling activities. The grant and loan funds helped to provide South Dakotans with safe and dependable environmental infrastructure.

Clean Water State Revolving Fund Loan Program

In 1989, the Clean Water State Revolving Fund (SRF) loan program began providing low-interest loans to governmental entities including municipalities, sanitary districts, and other special purpose districts. The loans are used for construction of wastewater facilities, storm sewers, and nonpoint source pollution control projects. During 2018, the board approved 15 loans totaling more than $58.4 million (Table 1).

The base interest rates for the Clean Water SRF program were 2.0 percent for loans up to 10 years, 2.25 percent for up to 20 years, 2.5 percent for up to 30 years, and an interim financing rate of 2.0 percent for up to five years. The program's nonpoint source incentive rates were 1.0 percent for loans with a term of 10 years or less, 1.25 percent for loans with a term up to 20 years, and 1.5 percent for loans with a term up to 30 years. Projects for traditional wastewater or stormwater projects that include a nonpoint source component may receive the nonpoint source rate. The annual principal and interest payments were calculated for a loan at the higher base interest rate. Using the lower nonpoint source interest rate, a loan is sized using the annual payment previously calculated. The difference in the two loan amounts is the amount of funding available for the nonpoint source component of the project.

The federal fiscal year 2018 appropriations bill for the Clean Water SRF program included the requirements set forth in the Water Resources Reform and Development Act of 2014 along with some specific requirements for the current year. These requirements involve 1) applying Davis-Bacon wage rates to all projects awarded in fiscal year 2018; 2) requiring that not less than 10 percent of the 2018 capitalization grant be utilized for "green" projects; 3) requiring

that a portion of the capitalization grant be made available as additional subsidy; 4) requirements for American Iron and Steel products to be used for all projects awarded on or after January 17, 2014; 5) adoption of affordability criteria by the state for principal forgiveness eligibility; and 6) requirements for procurement of architectural and engineering services.

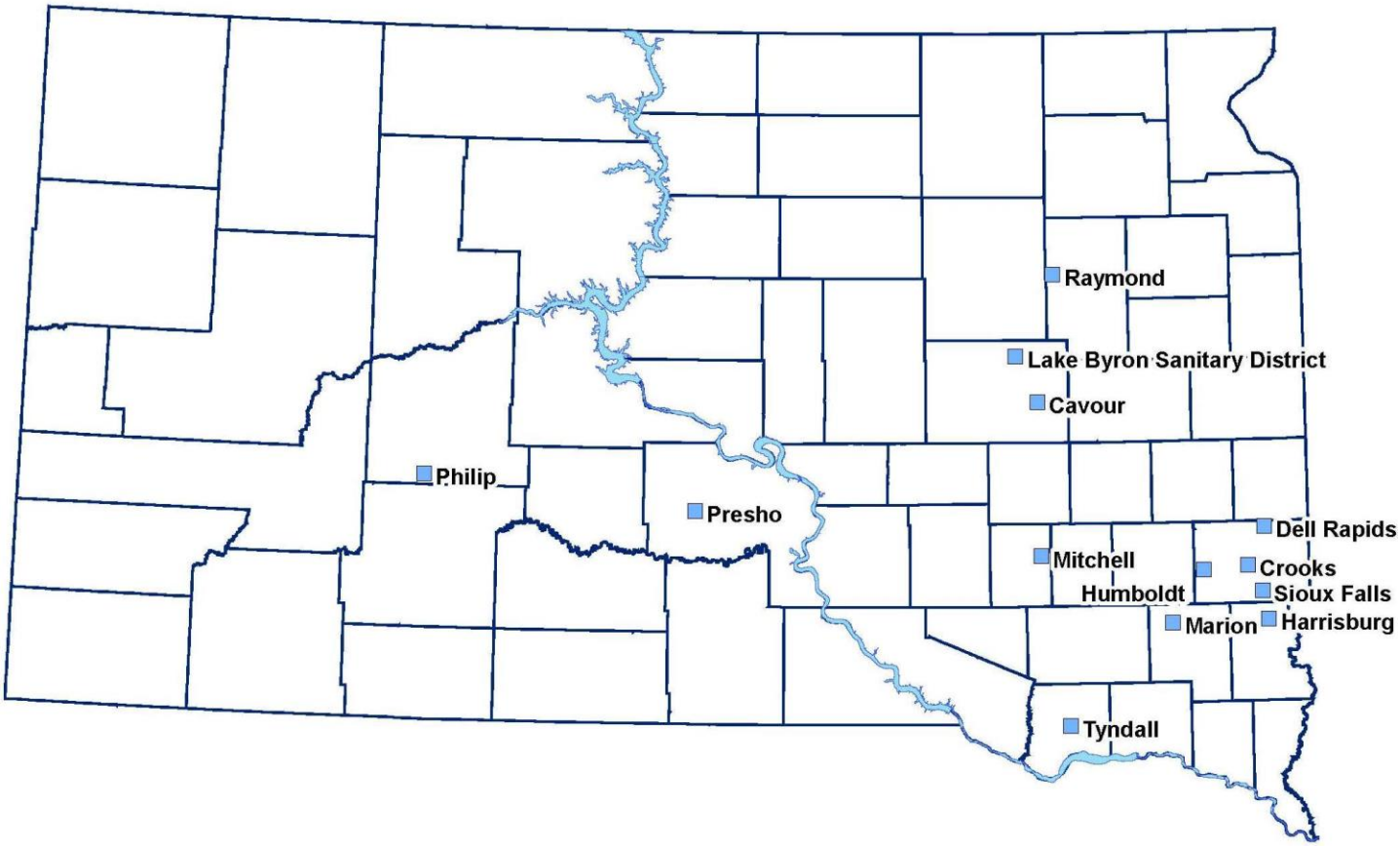
The board uses principal forgiveness as the method to provide the additional subsidy. Municipalities and sanitary districts with monthly residential wastewater rates of $30 per month (based on 5,000 gallons usage or a flat rate) are eligible to receive principal forgiveness. Other applicants are required to have residential wastewater rates of $40 per month (based on 5,000 gallons usage or a flat rate) to be eligible to receive principal forgiveness. Applicants must also meet the state's affordability criteria to be eligible to receive principal forgiveness.

Table 1 – 2018 Clean Water State Revolving Fund Loan Awards

Sponsor	Description	Total Award	Principal Forgiveness	Interest Rate	Term
Cavour (CW-02)	Collection System Improvements	$192,000		2.5%	30
Crooks (CW-03)	Palmira Wastewater Collection Improvements	$2,052,000		2.5%	30
Dell Rapids (CW-09)	Southeast and Railroad Utility Improvements	$2,324,000		1.5%	30
Dell Rapids (CW-09NPS)	Big Sioux Watershed Restoration	$337,700		1.5%	30
Harrisburg (CW-07)	Wastewater Treatment Facility Construction	$24,487,000		2.5%	30
Humboldt (CW-03)	Wastewater Collection Improvements	$1,876,000		2.5%	30
Humboldt (CW-04)	Water Meter Replacement	$290,000		2.0%	10
Lake Byron Sanitary District (CW-01)	Wastewater Collection and Treatment System Construction	$3,475,000		2.5%	30
Marion (CW-02)	Water Meter Replacement	$522,000	$99,000	2.0%	10
Mitchell (CW-05)	Sanborn Boulevard Wastewater and Storm Sewer Improvements	$6,842,000		1.25%	20

Sponsor	Description	Total Award	Principal Forgiveness	Interest Rate	Term
Mitchell (CW-05NPS)	South Central Watershed Restoration	$682,000		1.25%	20
Philip (CW-06)	Southwest Storm Sewer Improvements	$536,000		2.5%	30
Philip (CW-07)	Southwest Wastewater Improvements	$605,000		2.5%	30
Presho (CW-01)	Collection System Improvements	$4,048,000	$1,400,000	2.5%	30
Raymond (CW-02)	Lift Station and Wastewater Treatment Facility Improvements	$951,225	$951,225	0.0%	0
Sioux Falls (CW-39)	Terry Avenue and 43rd Street Improvements	$8,400,000		1.0%	10
Sioux Falls (CW-39NPS)	Big Sioux Watershed Restoration	$429,000		1.0%	10
Tyndall (CW-02)	Maple Street Sewer Replacement	$374,000		2.25%	20
	Total	**$58,422,925**	**$2,450,225**		

Map 1 – 2018 Clean Water State Revolving Fund Recipients



Drinking Water State Revolving Fund Loan Program

In 1998, the Drinking Water State Revolving Fund (SRF) loan program began providing low-interest loans to nonprofit corporations and governmental entities including municipalities, sanitary districts, and other special districts for the construction of drinking water facilities. In 2018, twelve loans and one loan amendment were approved totaling more than $23.5 million (Table 2).

The base interest rates for the Drinking Water SRF program were 2.0 percent for terms up to 10 years, 2.25 percent for up to 20 years, 2.5 percent for up to 30 years, and an interim financing rate of 2.0 percent for up to five years.

Disadvantaged communities were eligible to receive an interest rate below the base rate. To qualify as disadvantaged, the water system's monthly residential water bill must be at least $30 per 5,000 gallons usage for municipalities and sanitary districts or $55 per 7,000 gallons usage for all other community water systems.

Additionally, the median household income of a disadvantaged community must be below the statewide median household income (MHI). Communities with a household income less than the MHI but greater than 80 percent of the MHI were eligible for a 30-year term loan at 2.25 percent interest. Communities with a household income between 60 percent and 80 percent of the MHI were eligible for a 30-year term loan at 2.0 percent interest and a 10-year loan at 1.0 percent interest. An average household income less than 60 percent of the MHI is necessary to be eligible for a 30-year term loan at zero percent interest.

The federal fiscal year 2018 appropriations bill for the Drinking Water SRF program extended several of the requirements set forth in the American Recovery and Reinvestment Act and subsequent SRF appropriation bills. These requirements involve 1) applying Davis-Bacon wage rates to all projects awarded in fiscal year 2018; 2) requiring that a portion of the 2018 capitalization grant be made available as additional subsidy; and 3) requirements for American Iron and Steel products to be used for all projects awarded on or after January 17, 2014.

The board uses principal forgiveness as the method to provide the additional subsidy. Municipalities and sanitary districts with monthly residential water rates of $30 per month (based on 5,000 gallons usage) were eligible to receive principal forgiveness. Other applicants were required to have residential water rates of $55 per month (based on 7,000 gallons usage) to be eligible to receive principal forgiveness.

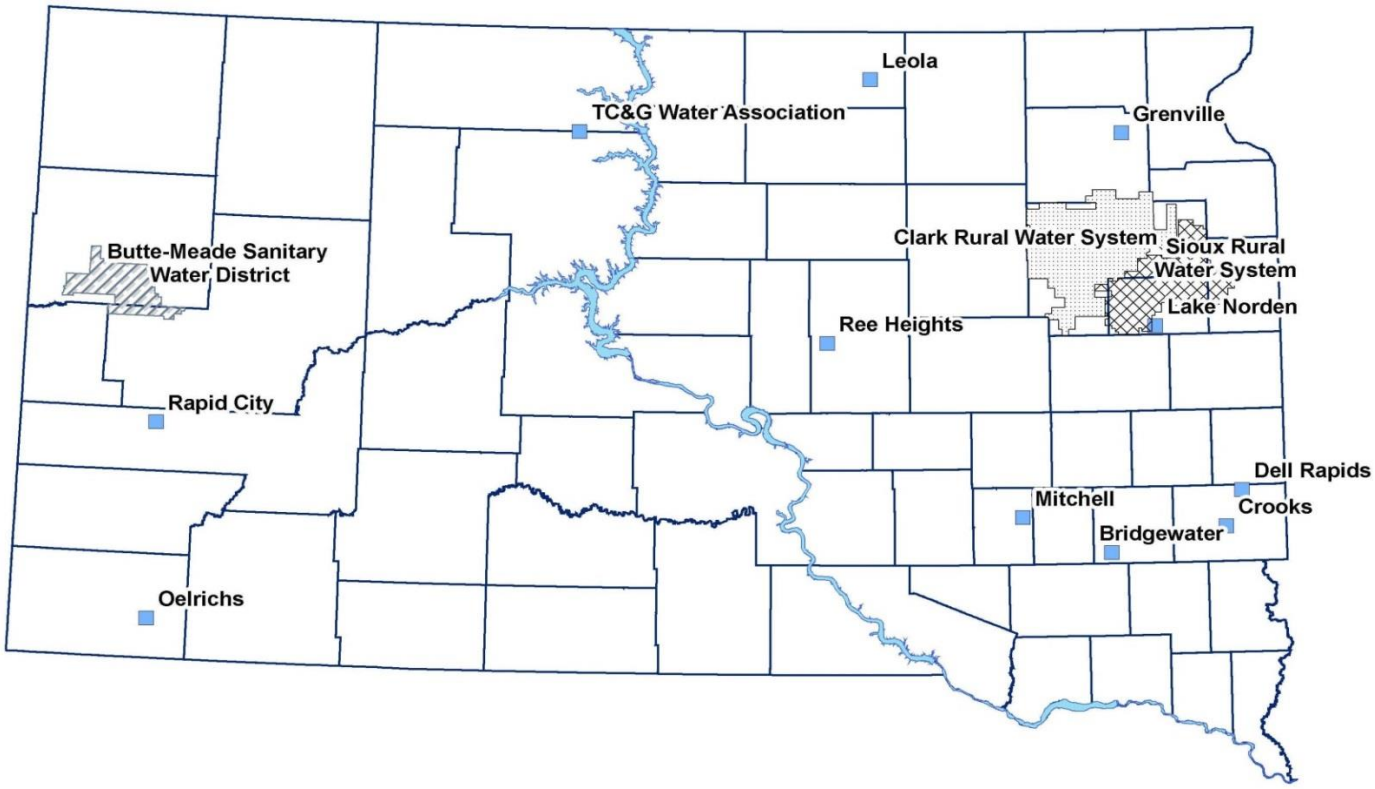
Table 2 – 2018 Drinking Water State Revolving Fund Loan Awards

Sponsor	Description	Total Award	Principal Forgiveness	Interest Rate	Term
Bridgewater (DW-02)	Water Meter Replacement	$243,000		1.0%	10
Butte-Meade Sanitary Water District (DW-02)	Water Line Replacement	$413,000		2.25%	20
Clark Rural Water System (DW-01)	Connections to Willow Lake and Bradley and System Improvements	$2,950,000	$1,270,000	2.0%	30
Crooks (DW-02)	Palmira Collection and Distribution	$1,214,000		2.5%	30
Dell Rapids (DW-07)	Southeast and Railroad Water Improvements	$2,486,000		2.5%	30
Grenville (DW-01)	Water Meters and Valve Replacement	$352,000	$282,000	2.0%	30
Lake Norden (DW-01)	Water Supply and Treatment Improvements	$1,477,000		2.0%	20
Leola (DW-01)	Water System Improvements	$1,891,000	$1,615,000	2.0%	30

Sponsor	Description	Total Award	Principal Forgiveness	Interest Rate	Term
Mitchell (DW-03)	Sanborn Boulevard Water Improvements	$821,000		2.25%	20
Oelrichs (DW-01)	Water System and Meter Improvements	$447,000	$357,600	2.25%	30
Rapid City (DW-04)	East Rapid City Water Expansion	$500,000	$375,000	2.0%	20
Ree Heights (DW-01)	Distribution System Replacement	$430,000	$430,000	0%	0
Sioux Rural Water System (DW-02)	Water System Improvements	$9,821,000		2.25%	20
TC&G Water Association (DW-01)*	Water System Improvements	$500,000		2.25%	30
	Total	**$23,545,000**	**$4,329,600**		

*Amendment to prior year Drinking Water SRF Award

Map 2 – 2018 Drinking Water State Revolving Fund Recipients



Consolidated Water Facilities Construction Program

The 2018 State Legislature appropriated $7.5 million for the Consolidated Water Facilities Construction Program to provide grants and loans for water development projects on the State Water Facilities Plan. Additionally, prior year funding and reversions were available for award in 2018.

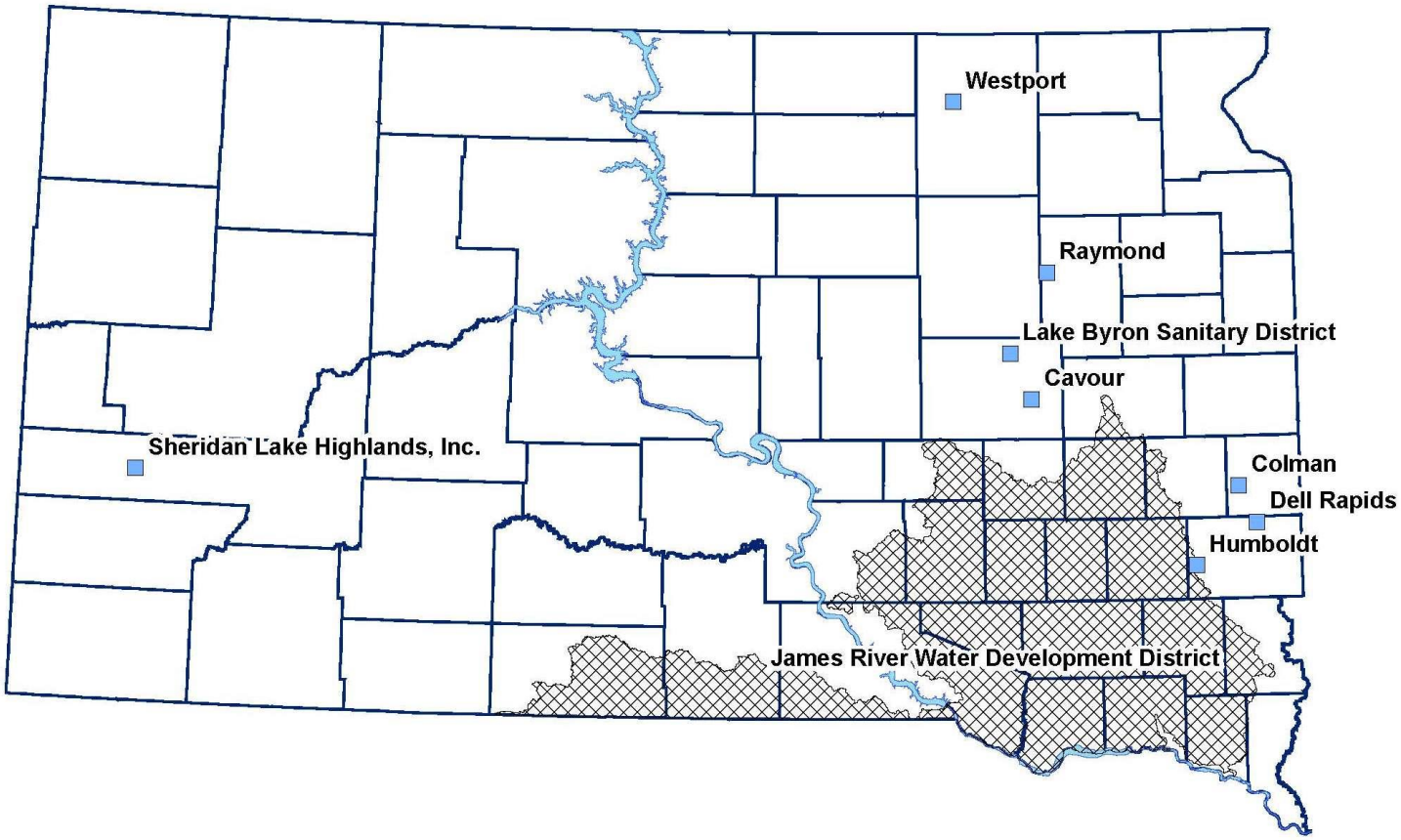
The board awarded seven grants, three loans, and one grant amendment totaling more than $7.7 million (Table 3). The 2018 awards leveraged more than $19.3 million in total project activities.

Table 3 – 2018 Consolidated Awards

Sponsor	Description	Grant Amount	Loan Amount	Total Project
Cavour	Wastewater Collection System Improvements	$764,000		$956,000
Colman*	Water Main and Tower Replacement	$23,000		$1,223,000
Dell Rapids	Southeast and Railroad Wastewater Improvements	$2,000,000		$4,324,000
Humboldt	Wastewater Collection Improvements	$2,000,000		$3,876,000
James River WDD	South Central Watershed Implementation	$275,000		$1,833,333
Lake Byron Sanitary District	Wastewater Collection and Treatment System Construction	$2,000,000		$5,475,000
Raymond	Lift Station and Wastewater Treatment Facility Improvements		$60,000	$1,011,225
Sheridan Lake Highlands, Inc.	Water System Improvements	$90,000	$211,700	$301,700
Westport	Lift Station Replacement	$30,000	$270,000	$300,000
	Total	**$7,182,000**	**$541,700**	**$19,300,258**

*Amendment to prior year Consolidated Grant Award

Map 3 – 2018 Consolidated Program Grant/Loan Recipients



State Revolving Fund Programs – Grant Assistance

In 2018, the board allocated additional funds under both the Clean Water and Drinking Water State Revolving Fund programs for planning, technical assistance, construction activities, and management of the regulatory Public Water System Supervision program. The board's 2018 intended use plans approved the use of $3,772,140 in Clean Water and Drinking Water funds for grants (Table 4).

Table 4 – 2018 State Revolving Fund Grant Allocations

Activity	Source	Amount
Water Quality Grants	Clean Water SRF Admin Surcharge (CWSRF WQ)	$900,000
Drinking Water Construction Grants	Drinking Water SRF Admin Surcharge (DWSRF CG)	$1,500,000
Public Water System Supervision Program	Drinking Water SRF Set-Aside and Drinking Water SRF Admin Surcharge	$600,000

Activity	Source	Amount
Small System Technical Assistance Grants	Drinking Water SRF Set-Aside, Drinking Water Admin Surcharge, and Clean Water Admin Surcharge	$397,140
SRF Application Preparation and Administration	Clean Water SRF and Drinking Water SRF Admin Surcharge	$300,000
Drinking Water Operator Certification Training	Drinking Water SRF Admin Surcharge	$75,000
	Total	**$3,772,140**

During 2018, the board approved 24 Water Quality or Technical Assistance awards totaling nearly $2.1 million (Table 5). The narrative sections below describe the general categories of the State Revolving Fund programs assistance and provide updates for on-going activities supported by this funding.

Water Quality Watershed/Construction Grants: The board provided additional grant assistance from Clean Water Administrative Surcharge fees to supplement the Consolidated and Section 319 grant awards. The construction of wastewater treatment, collection, or conveyance projects and watershed restoration projects are eligible uses for these fees, and its use allows additional projects to be completed.

Water Quality Planning Grants: The Small Community Planning Grant Program was established to encourage proactive planning by small communities and systems. Grants are available for the preparation of a wastewater or stormwater engineering study for systems serving populations of 2,500 or less. For engineering studies, participating systems are reimbursed 80 percent of the cost, up to $10,000.

Drinking Water Construction Grants: The board provided additional grant assistance from Drinking Water Administrative Surcharge fees to supplement the Consolidated grant awards. The construction of water treatment, source, distribution, storage, or meter projects are eligible uses for these fees, and its use allows additional projects to be completed.

Public Water System Supervision Program: Insufficient federal funds have been allocated from the Performance Partnership Grant for South Dakota's Public Water System Supervision (PWSS) program to complete all tasks and activities identified in DENR's workplan with EPA. The PWSS program is managed by DENR's Drinking Water program and ensures all public water systems in the state are maintaining compliance with the requirements of the Safe Drinking Water Act. A total of $600,000 was allocated from the State Program Management set-aside in federal fiscal year 2018.

Technical Assistance Grants: Small Community Planning Grants are also available for the preparation of a drinking water engineering study for systems serving populations of 2,500 or less. Participating systems are reimbursed at 80 percent of the cost, up to $8,000, for engineering studies.

The board continued its technical assistance contract with the South Dakota Association of Rural Water Systems (SDARWS) in 2018. SDARWS provides assistance to small drinking water systems serving populations of 10,000 or less with compliance, permitting, and operational issues. In 2018, the Midwest Assistance Program conducted capacity assessments and follow-up reviews to assist the department in ensuring that all borrowers demonstrate the required technical, financial, or managerial capacity to access Drinking Water SRF loan assistance. Midwest Assistance Program was awarded an additional contract to provide technical assistance to wastewater funding applicants with capacity issues.

In 2018, the board provided $75,000 for operator certification training. These funds are provided to SDARWS and used for operator certification training of drinking water system operators. During state fiscal year 2018, 340 operators received training.

The board continued to offer grants to assist very small systems in violation of the Safe Drinking Water Act to come into compliance. These funds are limited to community systems with 50 or less connections and not-for-profit, non-transient, non-community water systems. Funds will be provided for infrastructure projects as 100 percent grants up to a maximum of $50,000 and total project costs less than $100,000. In calendar year 2018, the first Very Small System Compliance grant was awarded to Cedar Gulch Sanitary and Water District. The grant was awarded for $50,000 on a total project cost of $66,093 to install water treatment units at each residence to remove radionuclides and install a new well pump and variable frequency drive controls.

The board continued to provide assistance to the state's six planning districts for preparation of applications and ongoing loan administration activities to include Davis-Bacon wage rate compliance. The planning districts are all under existing five-year joint powers agreements to receive up to $9,000 per loan for application and loan administration duties and up to $1,100 per loan for Davis-Bacon wage rate compliance. No additional funds were placed under agreement with the planning districts in 2018.

Table 5 – 2018 State Revolving Fund Programs Grant Awards

Watershed /Wastewater/Water Construction Grant Awards

Sponsor	Project	Grant Amount	Source of Funds
Cedar Gulch Sanitary and Water District	Drinking Water Compliance Improvements	$50,000	VSSC Grants
James River WDD	South Central Watershed Implementation	$500,000	CWSRF WQ
Sioux Rural Water System	Water System Improvements	$1,100,000	DWSRF CG
	Total	**$1,650,000**	

Map 4 –2018 Watershed/Construction Grant Recipients

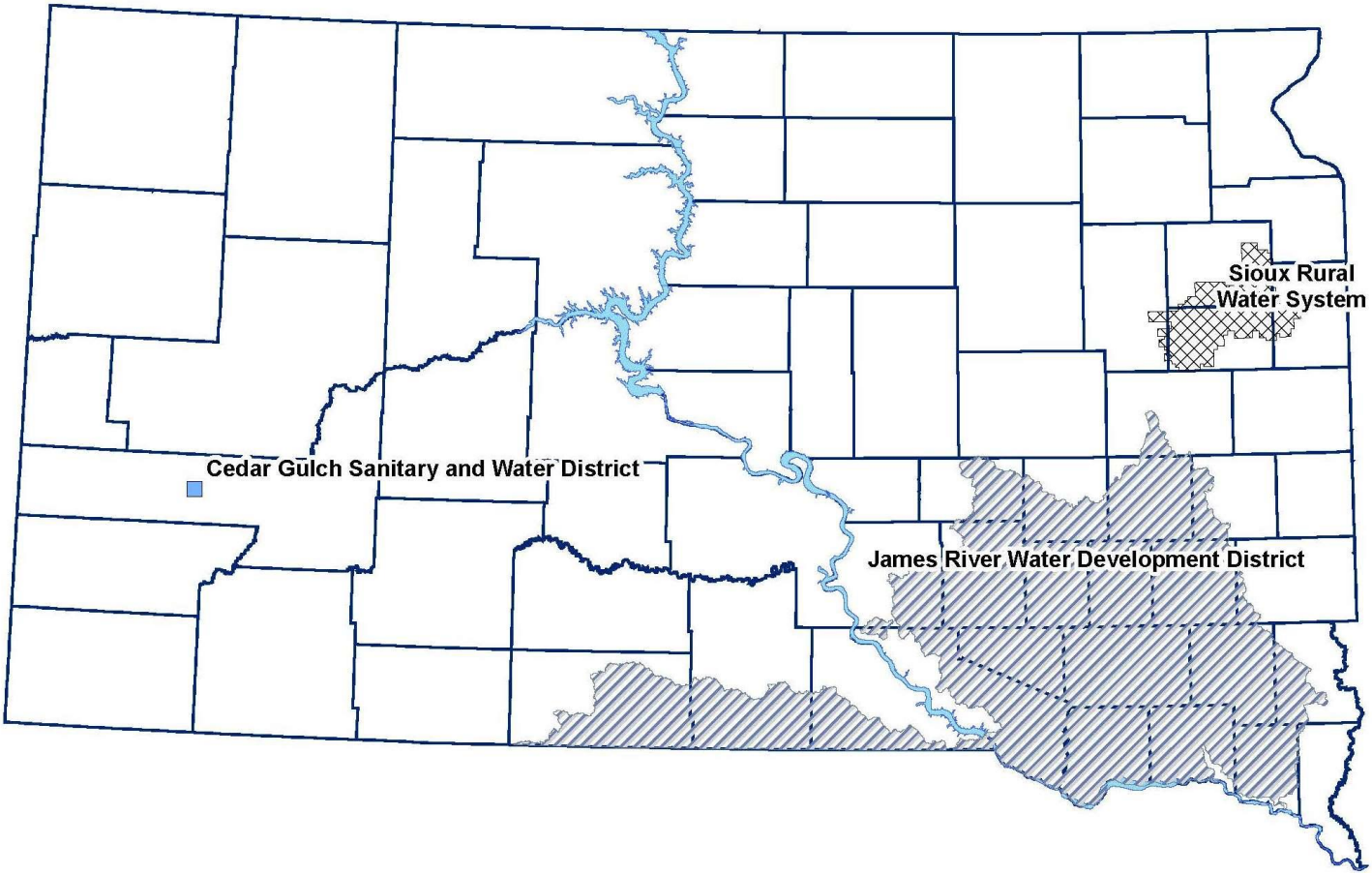


Table 5 (continued)

Small Community Planning Grant Awards

Sponsor	Project	Grant Amount
Alexandria	Drinking Water Engineering Study	$8,000
Avon	Wastewater Engineering Study	$10,000
Baltic	Wastewater Engineering Study	$10,000
Britton	Storm Sewer Engineering Study	$10,000
Bryant	Drinking Water Engineering Study	$8,000
Crooks	Storm Sewer Engineering Study	$10,000
Ethan	Storm Sewer Engineering Study	$10,000
Green Valley Sanitary District	Wastewater Engineering Study	$9,976
Oldham	Drinking Water Engineering Study	$8,000
Owanka Rural Water System	Drinking Water Engineering Study	$8,000
Pierpont	Wastewater Engineering Study	$10,000
Roscoe	Wastewater Engineering Study	$10,000
Roscoe	Drinking Water Engineering Study	$8,000
Sheridan Lake Highlands Homeowners Association, Inc.	Drinking Water Engineering Study	$8,000
Volin	Wastewater Engineering Study	$10,000
Webster	Drinking Water Engineering Study	$8,000
Willow Lake	Drinking Water Engineering Study	$7,222
	Total	**$153,198**

Map 5 –2018 Small Community Planning Grant Awards

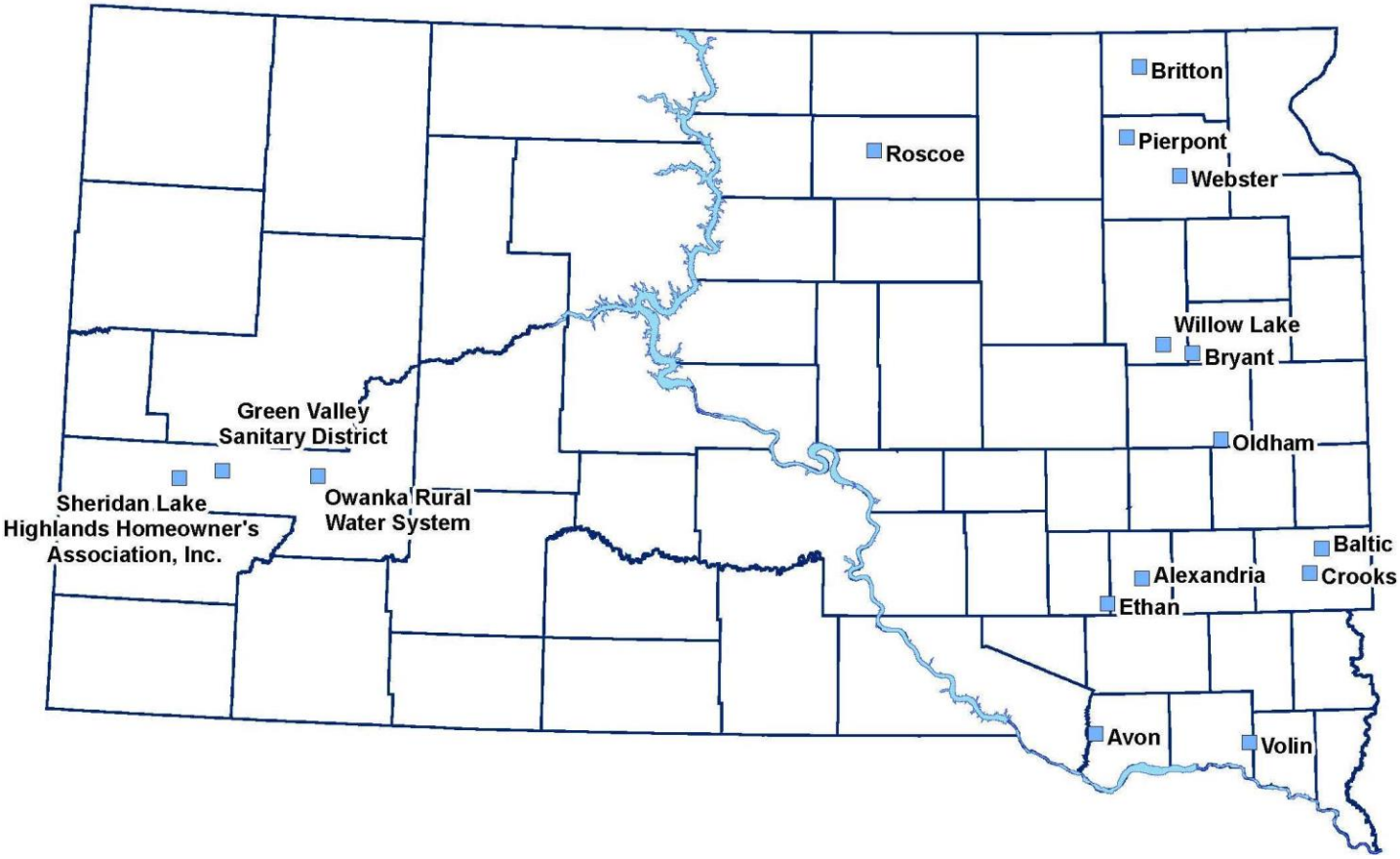


Table 5 (continued)

Technical Assistance Awards

Sponsor	Project	Award
Department of Environment and Natural Resources	Drinking Water Operator Certification Training	$75,000
Midwest Assistance Program	Drinking Water Small Systems Capacity Assessments	$75,000
Midwest Assistance Program	Small Systems Wastewater Capacity	$25,000
SD Association of Rural Water Systems*	Small System Technical Assistance	$120,000
	Total	**$295,000**

* Amendment to prior year Technical Assistance award.

State Water Resources Management System

No new funds were appropriated in the 2018 Omnibus Bill (House Bill 1098) for the State Water Resources Management System (SWRMS) list. There remained $103,080 from prior year appropriations available for award in 2018. Information on individual SWRMS project accomplishments and activities is provided in the State Water Plan section (pages 35-53). During the year, the board placed the following amount under agreement (Table 6).

Table 6 – 2018 State Water Resources Management System Awards

Sponsor	Project	Amount	Type
Department of Environment and Natural Resources	High Resolution Hydrographic Study in the Lower Big Sioux River Basin	$10,000	Grant

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Watershed Protection Program – EPA Section 319 Grants

The South Dakota Watershed Protection Program is designed to assess nonpoint water pollution sources and reduce or eliminate their impact on water quality throughout the state. Nonpoint source refers to the polluted run-off from urban, agriculture, and forest lands. The program provides technical and financial assistance to local watershed project sponsors in the planning and management of assessment and implementation projects. Additionally, the program administers state and federal grants, monitors the effectiveness of implementation projects, and funds information and education activities. Applications for Section 319 grants must be approved by the board prior to submission to EPA. In 2018, the board recommended that EPA award $1.864 million in federal fiscal year 2018 Section 319 grant funds to watershed projects (Table 7).

Table 7 - 2018 EPA Section 319 Grants

Sponsor	Project	Amount	Total Project
Belle Fourche Watershed Partnership	Belle Fourche River Watershed Implementation	$650,000	$1,088,500
Day Conservation District	Northeast Glacial Lakes Watershed Protection	$250,000	$483,710
South Dakota Discovery Center	South Dakota Nonpoint Source Information and Education	$200,000	$418,950
James River Water Development District*	South Central Watershed Implementation	$464,000	$7,634,618

Sponsor	Project	Amount	Total Project
South Dakota Grasslands Coalition	Grassland Management and Planning	$200,000	$405,400
South Dakota Soil Health Coalition	Soil Health Improvement and Planning	$100,000	$275,400
	Total	**$1,864,000**	**$10,306,578**

* Amendment to prior year 319 award

Throughout the year, the department works with EPA to reallocate deobligated prior year funds. Table 8 contains a list of grants that were awarded to existing project sponsors during the calendar year 2018.

Table 8 - 2018 EPA Section 319 Grant Amendments

Sponsor	Project	Amount	Total Project
Belle Fourche Watershed Partnership	Belle Fourche River Watershed Implementation	$18,500	$2,516,900
James River Water Development District	South Central Watershed Implementation	$45,452	$7,634,618
South Dakota Grasslands Coalition	Grassland Management and Planning	$26,365	$778,715
	Total	**$90,317**	**$10,930,233**

Solid Waste Management Program

The 2018 State Legislature appropriated $2,500,000 for the Solid Waste Management Program (SWMP). These appropriations, combined with reverted and unobligated prior year funding, resulted in more than $3.99 million being available for grants and loans for recycling, waste tire, and solid waste disposal projects.

These programs are supported by three funding sources – a $0.75 per ton landfill surcharge on municipal solid waste, a $0.25 per tire vehicle registration fee, and principal and interest payments from past solid waste loan awards.

The board awarded five grants and two loans in 2018, totaling nearly $1.8 million (Table 9). Of these awards, three were for recycling and four were for solid waste disposal. SWMP awards helped leverage more than $7.6 million in total project activities.

Table 9 - 2018 Solid Waste Management Awards

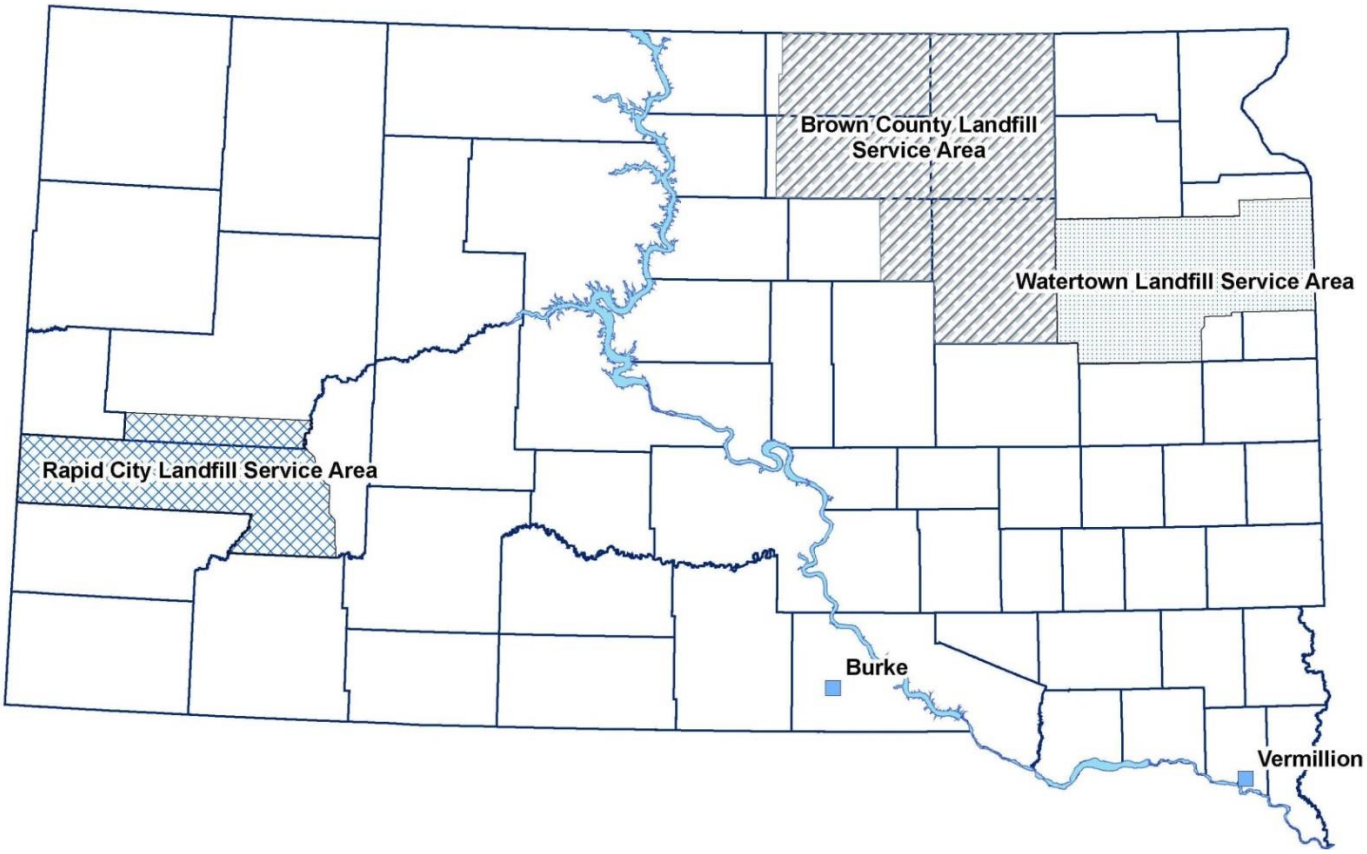
Disposal

Sponsor	Description	Loan Amount	Grant Amount	Total Project
Brown County	Landfill Cell #3 Construction		$490,000	$2,474,350
Rapid City	Cell 18 Construction		$1,000,000	$4,556,944
Watertown	Landfill Stormwater Improvements	$108,000	$162,000	$540,000
	Total	**$108,000**	**$1,652,000**	**$7,571,294**

Recycling

Sponsor	Description	Loan Amount	Grant Amount	Total Project
Burke	Recycling Drop off Trailer Purchase		$7,000	$14,125
Vermillion	Recycling Collection Trailer Purchase	$10,000	$10,000	$22,800
	Total	**$10,000**	**$17,000**	**$36,925**

Map 6 – 2018 Solid Waste Management Program Grant/Loan Recipients



Brownfields Revitalization and Economic Development Program

The 2004 South Dakota Legislature followed the federal Brownfields Act and established a state Brownfields Revitalization and Economic Development Program within the Department of Environment and Natural Resources (the department). The purpose of Brownfields program is to complete environmental assessments and cleanups so that local governments can put contaminated lands back into productive, beneficial use and complete projects that are necessary to revitalize local economies. The 2004 bill created two subfunds: a Brownfields revolving loan subfund and a Brownfields assessment and cleanup subfund. The board approves annual work plans for both subfunds. The department agreed to use existing staff to administer this program.

While the department has made application for federal funding, the U.S. Environmental Protection Agency has not awarded South Dakota any federal funds for the Brownfields revolving loan subfund. Therefore, there has been no activity in this subfund. EPA has advised the department that until potential applicants are identified, the department will not be eligible for federal revolving loan funds.

The department has used both federal Brownfields grants and federal Leaking Underground Storage Tank Trust Funds to complete environmental assessments and cleanups of Brownfields projects statewide. Projects are limited by federal Brownfields law to $200,000 for Assessment and $200,000 for Clean Up unless a waver is granted by EPA. Brownfields projects are nominated by local project sponsors and approved by the board. Table 10 contains a list of all the Brownfields projects approved by the board in calendar year 2018. The Brownfields process is an extremely useful tool to help assess and clean up contaminated lands statewide and move economic development projects forward that are a high local priority.

Table 10 - 2018 Brownfields Assessment and Cleanup Projects

Applicant	Site Name and Location	Activity	Land After Cleanup	Amount*
City of Pierre	Beck Property, Pierre	Assessment and Cleanup	Residential	$1,498
City of Crooks	CHS	Assessment	Public	$36,421
City of Wall	Glenn Street Property	Assessment	Commercial	$6,556
Viborg Development	Proposed Industrial Park	Assessment	Commercial	$3,868

Applicant	Site Name and Location	Activity	Land After Cleanup	Amount*
City of Rapid City	Future Ascent Innovation (Ulland Outlot)	Assessment	Commercial/ Public	$16,668
Sturgis Economic Development	Langin Autos	Assessment	Commercial	$3,195
Southern Hills Economic Development Corporation	Abandoned water fill station, Hot Springs	Assessment	Residential	$12,508
City of Spearfish	Former McLaughlin Sawmill	Assessment	Commercial, Residential and Public	$32,060
Dakota State University	Convent Building	Assessment	Public	$0
City of Salem	Salem Armory	Assessment	Public	$0
			Total	**$112,774**

* Accumulative costs as of September 30, 2018

2018 State Water Development Legislation

On February 8, 2018, Governor Daugaard signed House Bill 1098, the Omnibus Water Funding Bill. The 2018 Omnibus Bill contained the following appropriations:

Appropriations from the Water and Environment Fund

- Consolidated Water Facilities Construction Program – $7,500,000 to provide grants and loans for community drinking water, wastewater, and watershed improvement projects;
- Solid Waste Management Program – $2,500,000 to provide grants and loans for recycling, solid waste disposal, and waste tire projects.

Appropriations from WEF Subfunds and Other Sources

- Section 3 of the bill appropriated $1,000,000 from the Clean Water State Revolving Fund program subfund for the purpose of providing water quality grants;
- Section 4 of the bill appropriated $150,000 from the Clean Water State Revolving Fund program subfund for the preparation of loan applications and administration of loans;
- Section 5 of the bill appropriated $200,000 from the Drinking Water State Revolving Fund program subfund for the preparation of loan applications and administration of loans and to provide supplemental funds for planning grants;
- Section 6 of the bill appropriated $1,500,000 from the Drinking Water State Revolving Fund program subfund for the purpose of providing drinking water construction grants;
- Section 7 of the bill appropriated $150,000 from the Drinking Water State Revolving Fund program subfund for small system technical assistance grants;

2019 State Water Plan

2019 State Water Plan

Overview

The 1972 State Legislature established the State Water Plan to ensure the optimum overall 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 for this plan with the Board of Water and Natural Resources (the board).

The State Water Plan, as established in SDCL 46A-1-2, consists of two components – the State Water Facilities Plan and the State Water Resources Management System. To be considered for the State Water Facilities Plan, projects must meet criteria established by the board. These eligibility criteria are used as guidelines by the board and the Department of Environment and Natural Resources (the department) when considering a project for inclusion on the State Water Facilities Plan. Additions to or deletions from the State Water Resources Management System can only be made by the State Legislature.

State Water Facilities Plan

The State Water Facilities Plan (Facilities Plan) is a list of potential water projects. The Facilities Plan includes projects such as rural, municipal, and industrial water supply, wastewater collection and treatment facilities, storm sewers, groundwater protection, and watershed restoration. The board is responsible for approving the placement of projects on the Facilities Plan. The board can provide direct assistance to projects on the plan and placement on the plan may influence federal and other state agency funding decisions.

In November 2018, the board considered 31 applications requesting placement on the State Water Plan. The board placed all 31 projects on the Facilities Plan, bringing the total number of projects on the 2019 State Water Facilities Plan to 177 (Table 11 and Table 12).

The projects in Table 11 have received either partial or full funding. Projects that have received funding from the board remain on the Facilities Plan until project completion and remain eligible to request additional funding.

The projects in Table 12 had not received funding as of December 31, 2018. Projects placed on the plan in November 2017 or that were amended onto the plan during calendar year 2018 remain on the Facilities Plan through December 2019. The 31 projects placed on the plan in November 2018 remain on the Facilities Plan through December 2020.

Additional projects may be placed on the Facilities Plan during the year. Projects placed on the Facilities Plan through the amendment process remain on the plan for the balance of the calendar year and the following year. Once a project is removed from the Facilities Plan, the project sponsor must submit a new State Water Plan application to be eligible to seek assistance.

Table 11 - 2019 State Water Facilities Plan Funded Projects

Sponsor	Project Description	Amount Funded	Total Project
Big Sioux Community Water System	Connection to Minnehaha Community Water Corporation and City of Madison	$3,014,000	$3,014,700
Big Sioux Community Water System	Water Meter System	$900,000	$900,000
Bison	Wastewater Treatment and Sanitary Sewer Collection	$419,000	$419,000
Blunt	Wastewater Treatment and Lift Station Improvements	$710,000	$710,000
Box Elder	Ghere Reservoir and Well	$3,562,950	$3,562,950
Brandon	Drinking Water System Improvements	$12,425,000	$12,425,000
Bridgewater	Water Meter Replacement	$243,000	$243,000
Britton	Water Distribution System Improvements	$1,444,000	$4,656,000
Butte-Meade Sanitary Water District	Water Line Replacement	$413,000	$413,000
B-Y Water District	Water Storage Reservoir	$4,700,000	$4,700,000
Canistota	Main Street Utility Improvements	$96,000	$96,000
Canova	Water Meter Replacement	$52,000	$52,590
Canton	Dakota Street Sewer Improvements	$1,648,000	$1,648,000
Canton	Dakota Street Water Improvements	$760,000	$760,000
Canton	Well Replacement	$1,550,000	$1,550,000
Cavour	Lift Station and Force Main Improvements	$795,000	$845,000

Sponsor	Project Description	Amount Funded	Total Project
Cavour	Collection System Improvements	$956,000	$956,000
Centerville	Storm Sewer Improvements	$240,000	$240,000
Chancellor	Sanitary Sewer Improvements	$574,000	$574,000
Clark	Wastewater Treatment Facility Construction	$6,485,000	$7,000,000
Clark Rural Water System	Willow Lake and Bradley Regionalization and System Improvements	$2,950,000	$2,950,000
Colman	Phase 3 Water Mains and Tower Replacement	$1,223,000	$1,223,000
Colton	Water Distribution Improvements	$2,158,000	$2,158,000
Colton	Sanitary Sewer Improvements	$2,774,000	$2,774,000
Conde	Water Distribution and Storage Improvements	$2,333,000	$2,333,000
Crooks	Palmira Wastewater Collection Improvements	$2,052,000	$2,052,000
Crooks	Palmira Water Distribution Improvements	$1,214,000	$1,214,000
Dell Rapids	Sequencing Batch Reactor Construction	$5,758,000	$5,758,000
Dell Rapids	2016 Wastewater Improvements	$1,037,000	$1,037,000
Dell Rapids	2016 Water Improvements	$705,000	$705,000
Dell Rapids	Southeast Phase 1 and Railroad Wastewater Improvements	$4,661,700	$4,661,700
Dell Rapids	Southeast Phase 1 and Railroad Water Improvements	$2,486,000	$2,486,000
Dimock	Wastewater Improvements	$528,000	$568,000
Doland	Water Meter Replacement	$150,000	$150,000
Eagle Butte	Sanitary and Storm Sewer Improvements	$3,080,000	$3,080,000

Sponsor	Project Description	Amount Funded	Total Project
Eagle Butte	Water Distribution System Improvements	$1,245,000	$1,245,000
Edgemont	Water System Upgrades	$4,337,000	$4,337,000
Elk Point	Rose Street Wastewater Improvements	$235,000	$235,000
Elk Point	Rose Street Water Improvements	$564,000	$564,000
Emery	Citywide Watermain Replacement	$2,355,000	$2,355,000
Emery	Citywide Wastewater Collection Replacement	$3,084,000	$3,084,000
Faulkton	Wastewater System Improvements	$500,000	$5,151,000
Garretson	Water Replacement	$1,279,000	$1,279,000
Garretson	Sewer Replacement	$1,160,000	$1,160,000
Grant-Roberts Rural Water System	Milbank Service Area Improvements	$4,500,000	$4,500,000
Gregory	Felton Street Sanitary Sewer Replacement	$260,000	$260,000
Grenville	Water Meters and Valve Replacement	$352,000	$352,000
Hartford	Mickelson Road Sanitary and Storm Sewer	$1,482,000	$1,482,000
Hermosa	Water Source and Distribution Improvements	$199,000	$199,000
Humboldt	Wastewater Collection Improvements	$3,876,000	$3,876,000
Humboldt	Water Meter Replacement	$290,000	$290,000
James River Water Development District	South Central Watershed Implementation	$500,000	$15,797,092
Keystone	Well Retrofit	$98,000	$98,000
Keystone	Wastewater System Improvements	$431,000	$431,000

Sponsor	Project Description	Amount Funded	Total Project
Lake Byron Sanitary District	Wastewater Collection and Treatment System Construction	$5,475,000	$5,475,000
Lake Norden	Wastewater Collection System Improvements	$1,606,000	$1,606,800
Lake Norden	Water Supply and Treatment Improvements	$1,477,000	$1,477,000
Lake Poinsett Sanitary District	Wastewater System Expansion	$1,917,000	$1,917,000
Langford	Water Line and Storage Improvements	$1,371,000	$1,921,000
Lead	Water Meter Replacement	$427,000	$427,000
Lennox	Storm and Sanitary Sewer Improvements	$2,433,000	$2,733,000
Lennox	Central Basin Sewer Improvements	$3,766,000	$3,766,000
Lennox	Central Basin Watermain Improvements	$912,000	$912,000
Leola	Water System Improvements	$1,891,000	$1,891,000
Marion	Water Meter Replacement	$522,000	$522,000
Martin	4th & 5th Avenue Water Main Improvements	$633,000	$633,000
Miller	Water Infrastructure Improvements	$4,511,000	$5,611,000
Miller	Wastewater Infrastructure Improvements	$4,875,000	$10,292,866
Mina Lake Sanitary District	Wastewater Improvements	$559,000	$559,000
Oelrichs	Water System and Meter Improvements	$447,000	$447,000
Onida	Water System Improvements	$1,850,000	$2,305,000
Onida	Wastewater Collection Improvements	$2,400,000	$2,400,000
Parker	Wastewater Improvements	$731,000	$731,000

Sponsor	Project Description	Amount Funded	Total Project
Parker	Water Improvements	$697,000	$697,000
Philip	Storm Sewer System Improvements	$536,000	$536,000
Philip	Wastewater System Improvements	$605,000	$605,000
Pierre	Wastewater Treatment Facility Improvements	$3,821,000	$3,821,000
Pierre	Hilger's Gulch Sanitary Sewer	$1,450,000	$1,450,000
Pine Cliff Park Water & Maintenance Inc.	Water System Improvements	$463,000	$463,000
Plankinton	Water Meter Replacement	$240,000	$240,000
Platte	Wastewater System Improvements	$2,300,000	$2,300,000
Powder House Pass Community Improvement District	Wastewater Treatment and Collection Construction	$2,060,000	$2,060,000
Prairie Meadows Sanitary District	Wastewater Collection System Rehabilitation	$1,388,000	$1,388,000
Presho	Collection System Improvements	$4,048,000	$4,048,000
Rapid City	East Rapid City Water Expansion	$6,126,000	$7,626,000
Raymond	Wastewater Improvements	$900,000	$900,000
Ree Heights	Distribution System Replacement	$430,000	$430,000
Salem	Watermain Improvements	$802,000	$802,000
Salem	Sanitary Sewer Improvements	$2,556,000	$2,556,000
South Dakota Game Fish and Parks	Canyon Lake Sediment Removal	$155,000	$415,000
Sheridan Lake Highlands, Inc.	Water System Improvements	$301,700	$301,700
Sioux Falls	Outfall Sewer Replacement	$26,060,000	$26,060,000

Sponsor	Project Description	Amount Funded	Total Project
Sioux Falls	Basin 14D Sanitary Sewer Extension	$9,287,000	$9,287,000
Sioux Falls	Primary Digester Mixing Improvements	$11,559,125	$11,559,125
Sioux Falls	Terry Avenue and 43rd Street Improvements	$8,829,000	$8,829,000
Sioux Falls	Brandon Road Lift Station Parallel Force Main	$11,400,000	$11,400,000
Sioux Rural Water System	Water System Improvements and System Expansion	$4,515,000	$4,564,600
Sioux Rural Water System	Water System Improvements-2018	$10,921,000	$11,321,000
Sturgis	Wastewater Treatment System Improvements	$16,647,000	$16,647,000
Summerset	Wastewater Treatment Facility Improvements	$2,769,000	$2,769,000
TC&G Water Association	Water System Improvements	$2,875,000	$2,875,000
Terry Trojan Water Project District	Water System Rehabilitation	$812,000	$812,000
Tyndall	Maple Street Sewer	$374,000	$374,000
Tyndall	Water Distribution and Storage Upgrades	$1,570,000	$1,570,000
Vermillion	Prentis Street Lift Station	$812,000	$812,000
Viborg	Sewer Improvements	$105,000	$105,000
Viborg	Water Improvements	$606,000	$606,000
Viewfield Rural Water Association Inc.	Water Treatment Improvements	$250,000	$250,000
Volga	Wastewater Treatment Facility Improvements	$2,819,000	$2,819,000
Wakonda	Distribution System Upgrades and Water Tower Rehabilitation	$1,930,000	$1,930,000
Waubay	Wastewater Treatment Facility Improvements	$2,170,000	$3,344,400

Sponsor	Project Description	Amount Funded	Total Project
Westport	Lift Station Replacement	$300,000	$300,000
Yankton	Water Treatment Plant Construction	$37,000,000	$37,000,000
Yankton	East Highway 50 Lift Station	$3,330,000	$3,330,000
	Total	**$324,465,475**	**$359,439,523**

Table 12 - 2019 State Water Facilities Plan Unfunded Projects

Sponsor	Project Description	On Plan Through	Projected State Funding	Total Project
Alexandria	Water System Improvements	2020	$1,450,000	$1,453,970
Aurora	Wastewater Treatment Improvements	2020	$4,200,000	$4,200,000
Aurora-Brule Rural Water System	System Capacity Improvements	2019	$4,500,000	$4,500,000
Avon	Main Street Infrastructure Improvements	2020	$310,000	$1,425,226
Belle Fourche	Day Street Lift Station Replacement	2020	$1,836,000	$1,836,000
Blunt	Storm Water Drainage Improvements	2020	$920,000	$920,000
Blunt	Water System Improvements	2019	$645,000	$645,000
Bowdle	Main Street Sewer Improvements	2019	$355,000	$355,000
Bowdle	Main Street Water Improvements	2019	$395,000	$395,000
Box Elder	Well #10 Construction	2020	$1,841,681	$2,911,681
Bryant	Wastewater and Storm Sewer Replacement	2019	$4,812,000	$5,582,000
Bryant	Water Main Replacement	2019	$1,151,000	$1,921,000
Claremont	Wastewater System Improvements	2020	$1,831,446	$1,831,446
Colome	Water System Improvements	2019	$1,220,360	$1,220,360

Sponsor	Project Description	On Plan Through	Projected State Funding	Total Project
Eagle Butte	Water Tower Rehabilitation	2020	$350,000	$350,000
Elk Point	Douglas Street Utility Improvements	2019	$788,000	$788,000
Elkton	Water System Improvements	2020	$4,600,000	$4,600,000
Elkton	Wastewater System Improvements	2020	$8,412,000	$8,412,000
Faith	Wastewater System Improvements	2020	$1,315,821	$1,830,821
Fort Pierre	Wastewater Treatment Facility Improvements	2020	$3,930,000	$3,930,000
Frederick	Wastewater Improvements	2019	$2,988,000	$2,988,000
Gayville	Water Meter Replacement	2019	$46,205	$46,205
Geddes	Water Storage and Meter Improvements	2019	$1,927,488	$1,927,488
Groton	Water System Improvements	2020	$2,077,700	$2,077,700
Harrisburg	Highway 115 Watermain Loop	2020	$1,340,088	$1,340,088
Hot Springs	North 24th Street Sewer	2020	$638,525	$638,525
Hot Springs	North River Street Utility Replacement	2020	$1,091,950	$1,091,950
Hot Springs	Houston Ave Sewer Main Replacement	2019	$197,000	$197,000
Hot Springs	Water System Supply and Storage	2019	$3,850,000	$3,850,000
Huron	Wastewater Treatment Facility Improvements Phase 1	2019	$5,709,000	$5,709,000
Irene	Phase II Utility Improvements	2020	$4,043,000	$5,323,801
Lake Norden	Wastewater Lagoon Improvements	2020	$1,723,700	$1,723,700
Lake Poinsett Sanitary District	Wastewater System Expansion	2019	$10,000,000	$10,000,000
Lake Preston	Wastewater Collection System Improvements	2019	$4,200,000	$4,200,000
Lake Preston	Water Distribution System Improvements	2020	$8,405,000	$8,405,000

Sponsor	Project Description	On Plan Through	Projected State Funding	Total Project
Lead	Houston Street Utility Improvements	2020	$208,091	$208,091
Marion	Broadway Avenue Utility Improvements Phase I	2020	$3,843,218	$3,843,218
McIntosh	Wastewater System Improvements	2019	$2,005,000	$2,005,000
Mitchell	Water Improvements	2019	$14,300,232	$14,300,232
Mitchell	East Central Drainage Improvements	2019	$2,698,000	$2,998,470
Montrose	Water Storage Improvements	2020	$187,000	$338,500.00
Newell	Water Main Replacement	2020	$314,924	$629,847
Oldham	Water Distribution System Improvements	2020	$1,245,000	$1,289,000
Philip	Water Meter Replacement	2020	$340,000	$340,000
Piedmont	Central Wastewater System	2019	$4,500,000	$4,500,000
Piedmont	Water Tower and Well	2019	$2,200,000	$2,200,000
Pierpont	Wastewater System Improvements	2020	$1,333,000	$1,933,000
Pierre	Wastewater Treatment Facility Improvements	2020	$11,300,000	$11,300,000
Pierre	Water Treatment System Construction	2019	$36,800,000	$36,800,000
Pukwana	Sewer System Improvements	2019	$1,742,555	$1,742,555
Randall Community Water District	System Improvements and Geddes Consolidation	2020	$460,000	$4,628,749
Roscoe	Sanitary Sewer Improvements	2020	$4,334,469	$4,334,469
Roscoe	Water system Improvements	2020	$2,261,790	$2,261,790
Salem	Water Treatment Plant Improvements	2019	$1,144,000	$1,144,000
Springfield	Water & Waste System Improvements	2019	$10,506,948	$11,162,000
Tea	1st Street Water and Sewer Extension	2019	$1,653,000	$1,653,000

Sponsor	Project Description	On Plan Through	Projected State Funding	Total Project
Tea	85th Street Water Meter Station	2019	$1,500,000	$1,500,000
Tea	93rd Street Sanitary Sewer Extension	2019	$2,285,000	$2,285,000
Tea	Brian Street Water and Sewer Extension	2019	$3,042,000	$3,042,000
Tulare	Drinking Water Improvements	2019	$1,374,800	$2,124,800
Watertown	Wastewater Facility Administration and Operations Building Construction	2019	$5,665,000	$5,665,000
Watertown	Kittelson Addition Sanitary Sewer Extension	2020	$832,896	$832,896
		Total	**$211,745,887**	**$224,255,578**

State Water Resources Management System

The State Water Resources Management System (SWRMS) identifies large, costly water projects that require specific state or federal authorization and financing. These projects are placed on the list when recommended by the board and approved by the Governor and the Legislature. The SWRMS list (Table 13) serves as the preferred priority list to optimize water resources management in the state. Once a project is placed on the SWRMS list, it remains on the list until removed by legislative action.

Table 13 – State Water Resources Management System Projects

Project	Description
Belle Fourche Irrigation Upgrade Project	Irrigation Project – Belle Fourche Region
Big Sioux Flood Control Study	Watertown Flood Control
CENDAK Irrigation Project	Irrigation Project - Central SD
Gregory County Pumped Storage Site	Multi-Purpose Water Utilization
Hydrology and Water Management Studies	Statewide Water Resources
Lake Andes-Wagner/Marty II Irrigation Unit	Irrigation - Charles Mix County
Lewis & Clark Rural Water System	Bulk Water System - Southeastern SD

Project	Description
Sioux Falls Flood Control Project	Increased Flood Protection
Southern Black Hills Water System	Rural Water System - Southern Hills
Vermillion Basin Flood Control Project	Flood Control on Vermillion River

SWRMS Project Status

A brief summary of each project and its status is presented on the following pages. The year in the title indicates when the project was placed on the State Water Resources Management System (SWRMS).

Belle Fourche Irrigation Upgrade Project - 2012

- The 2012 Omnibus Bill added the Belle Fourche Irrigation District upgrade project to the SWRMS list. The project was for the construction of a $5,000,000 Belle Fourche irrigation upgrade project to include replacement of the Indian Creek siphon, the Horse Creek siphon, the north canal control house, the south canal control house, repair of the Belle Fourche River siphon, and removal of sediment from the south canal intake for the purpose of stabilizing crop and forage production in central western South Dakota to offset the effects of drought conditions which naturally devastate South Dakota's economic viability.
- South Dakota Codified Law 46A-1-13.12 authorized a state cost share commitment of up to $2,500,000 in grant and $2,500,000 in loan assistance to provide funding for the Belle Fourche Irrigation District upgrade project.
- The appropriations for 2012 included a $1,250,000 grant and a $1,250,000 loan for engineering design, preconstruction, and construction of the facilities associated with the Belle Fourche irrigation upgrade project.
- During calendar years 2012 and 2013, engineering design of siphons and the canal gatehouse was ongoing.
- The appropriations for 2013 included a $750,000 grant and a $750,000 loan for engineering design, preconstruction, and construction of the facilities associated with the Belle Fourche irrigation upgrade project.
- The appropriations for 2014 included a $500,000 grant and a $500,000 loan for engineering design, preconstruction, and construction of the facilities associated with the Belle Fourche irrigation upgrade project. This completed the state cost share commitment to the upgrade project.
- Bids were opened and awarded for the Indian Creek and Horse Creek siphons in 2013, and construction started in October of 2013. The Indian Creek siphon was completed in 2014 and was operational for the 2014 irrigation season. The Horse Creek siphon was completed in 2015 and was operational for the 2015 irrigation season.

- Bids were opened and awarded for the canal gatehouse upgrade in 2015, and construction started in the fall of 2015. The canal gatehouse upgrade was completed in the spring of 2016 and was operational for the 2016 irrigation season.
- In May 2014, bids were opened for dredging of the reservoir intake structure. Dredging operations were approximately 10 percent complete prior to 2016 when the contractor experienced difficulties with their methods to hydraulically dredge the reservoir. The dredging contractor returned to the site in late summer of 2016 with larger equipment to resume dredging operations. Dredging of the intake was completed in the spring of 2017.
- The final portion of the Belle Fourche irrigation upgrade project was an assessment of the Belle Fourche River siphon. The work was bid during the 2017 construction season, and the work was completed in the spring of 2018.
- With all proposed work completed, the Board of Water and Natural Resources took action to certify the project complete as of November 1, 2018. As a result of this action the Belle Fourche Irrigation District will begin making loan payments on November 1, 2019.

Big Sioux Flood Control Study (Watertown & Vicinity) – 1989

- The Corps of Engineers completed a reconnaissance report titled "Flood Control for Watertown and Vicinity." The study concluded the best alternative for flood protection for Watertown, Lake Kampeska, and Pelican Lake was a $16 million dry dam on the Big Sioux River at the Mahoney Creek site.
- The Corps of Engineers, in cooperation with Watertown, East Dakota Water Development District, Codington County, Lake Kampeska Water Project District, and the Department of Environment and Natural Resources, initiated a feasibility study in 1988. State appropriations of $150,000 were provided to help meet the nonfederal cost share.
- The final draft feasibility report was distributed in June 1994 for public review and comment. A public hearing in July 1994 in Watertown presented findings of the report and gathered comments. City and county elections were held, and residents voted against further local participation in the project.
- The project regained momentum after severe spring flooding in 1997 forced 5,000 residents from their homes. The Watertown City Council scheduled an election in February 1998, calling for a citywide vote on the proposed Mahoney Creek Dam. The record turnout of voters again rejected the proposed dam.
- In June 2001, the residents of Watertown called for a citywide vote on the proposed Mahoney Creek Dam project. The voters approved the project. City officials proceeded with updating the original Corps of Engineers feasibility study and obtaining support and financing for the project.
- After the affirmative vote, Watertown began negotiations with the Corps of Engineers to complete a General Re-evaluation Report of the city's flood control alternatives. Negotiations continued in 2003, and the scope of work to be reviewed by the report

continued to be evaluated. The cost of the re-evaluation report was estimated at $2.8 million.

- In 2003, Watertown returned $450,000 of state funds appropriated in 2003 for local participation during the General Re-evaluation process. Because of cost share and scope of work issues, Watertown decided to step back from participation in the re-evaluation and turned over all work to the Corps of Engineers.
- The Corps of Engineers received $246,000 in 2003, $473,000 in 2004, $176,000 in 2005, and $344,000 in 2008 to continue with the General Re-evaluation Report. Alternatives to be considered included the Mahoney Creek Dry Dam, three to five medium sized dams, 800 small dams, and a diversion between Lake Kampeska and Lake Pelican.
- A stakeholder's group consisting of representatives from the Lake Pelican and Kampeska water project districts, the Corps of Engineers, the city of Watertown, Codington County Commissioners, and landowners was created in 2010. The group held several public meetings to discuss and develop a flood control plan.
- The U.S. Army Corps of Engineers has indicated that the most cost-effective solution is the Mahoney Creek Dry Dam. The city of Watertown voted to support the Mahoney Creek Dry Dam for flood protection. The cost-benefit study of the dam is anticipated to take two years once started, and the total project cost is estimated at $40 million dollars.
- In 2015, the city of Watertown indicated its intent to partner with the Corps of Engineers to conduct a feasibility level study update to investigate flood risk management solutions for Watertown.
- In 2016, the $225,125 in grant funds appropriated by the 2016 legislature was placed under agreement with the city of Watertown. This grant will fund half of the nonfederal cost share for the flood control feasibility study to be completed by the Corps of Engineers.
- In 2018, no work was completed on the study. The Corps of Engineers needs to receive funding for the study and prioritize it in their list of projects before any work will begin. The city of Watertown met with the Corps in 2018 to discuss how to best move the study forward, but funding is still needed prior to beginning work.

CENDAK Irrigation Project – 1982

- This proposed irrigation project would supply Missouri River water to 474,000 acres in Hughes, Hyde, Hand, Spink, Beadle, and Faulk counties in central South Dakota. South Dakota will pursue development of the project when federal policies are more supportive of large-scale irrigation projects. No activity occurred on the project in 2018.

Gregory County Pumped Storage Project - 1981

- The Gregory County Pumped Storage Project is a proposed peak generation hydroelectric facility in northern Gregory County. The Water Resources Development Act of 1986 (Public Law 99-662) authorized the construction of a $1.3 billion hydroelectric pumped storage facility by the Corps of Engineers. The Act also authorized up to $100 million for construction of the associated Gregory Unit of the Pick-Sloan Missouri Basin Program.

- After extensive geotechnical and environmental studies of the site, the Corps was forced to abandon the investigation when its mission was altered and hydroelectric development projects were no longer federally funded.
- Hydroelectric Component – The South Dakota Conservancy District authorized a feasibility study to determine if the state of South Dakota should sponsor a continuation of the project with nonfederal funding. To protect the site during these studies, the District applied for and received a 3-year Preliminary Permit from the Federal Energy Regulatory Commission (FERC) effective August 1, 1988. The state's preliminary permit expired August 1, 1991.
- Water Supply Component – The project has the potential to provide water for irrigation and municipal, rural, and industrial purposes using the hydroelectric project's upper bay as a water supply source. The Bureau of Reclamation completed a *Special Report on the Gregory Unit of the Pick-Sloan Missouri Basin Program, South Dakota* in 1992.
- On June 20, 2001, Dakota Pumped Storage, LLC, a Minnesota corporation, filed a FERC Preliminary Permit application for a pumped storage hydroelectric facility in Gregory County. On September 25, 2001, South Dakota filed a Motion to Intervene and a Notice of Intent to File Competing Application for Preliminary Permit by the State of South Dakota. An Application for Preliminary Permit for the Gregory County Pumped Storage Hydroelectric Facility was filed with FERC by the South Dakota Conservancy District on October 12, 2001.
- The FERC issued a 3-year Preliminary Permit to the South Dakota Conservancy District on August 12, 2002. FERC denied the application by Dakota Pumped Storage, LLC.
- The 2002 Omnibus Bill appropriated $100,000 to the South Dakota Department of Environment and Natural Resources to complete preliminary permit and full permit applications to FERC. The department solicited Requests for Proposals from firms interested in providing the research to support the FERC permit. Four proposals were received. Black & Veatch was selected.
- The Black & Veatch study was completed in 2004 and determined that it was not cost-effective to pursue the pumped storage project at that time. These findings were presented to the Board of Water and Natural Resources in June 2004. The state's preliminary permit expired in 2005.
- In 2010, South Dakota Energy, LLC submitted a preliminary permit application prepared by Symbiotics, LLC to FERC to study the feasibility of the South Dakota Energy Hydroelectric Project located on the Missouri River in Gregory County, South Dakota. On July 21, 2010, the Commission issued a preliminary permit to South Dakota Energy. The preliminary permit issued to South Dakota Energy expired on July 1, 2013.
- On July 3, 2013, Gregory County, with Schulte Associates, LLC as its designated agent filed a preliminary permit application to study the feasibility of the proposed Gregory County Energy Project.
- On July 30, 2013, Western Minnesota Municipal Power Agency, a municipal corporation and political subdivision of the state of Minnesota, filed a preliminary permit application to study the feasibility of the proposed Gregory County Pumped Storage Project. Western

Minnesota Municipal Power Agency finances the construction and acquisition of the generation and transmission facilities for members of Missouri River Energy Services.

- On December 19, 2013, FERC released an order issuing a Preliminary Permit and Granting Priority to File License Application for the project to Western Minnesota Municipal Power Agency. The preliminary permit expired in December 2016.
- On December 1, 2016, the Missouri Basin Municipal Power Agency, doing business as Missouri River Energy Services, applied to FERC for a preliminary permit to study the feasibility of the 1,200-MW Gregory County Pump Storage Project.
- On February 14, 2017, FERC issued a deficiency letter for the Missouri River Energy Services application requesting that revisions be filed within 45 days and informing the applicant that failure to provide this information may result in the application being rejected.
- In a letter dated April 18, 2017, FERC informed Missouri River Energy Services that due to its failure to file a response to FERC's February 14, 2017, letter, the preliminary permit application for the Gregory County Pump Storage Project was rejected pursuant to section 4.32(g) of the Commission's regulations. No activity occurred on the project in 2018.

Black Hills Hydrology and Water Management Study – 1982 to 2015

- The hydrology study compiled water resource data to assess the quantity, quality, and distribution of surface and groundwater resources in the Black Hills area. These resources have been stressed by increasing population, periodic drought, and developments related to expansion of mineral, timber, agricultural, recreational, municipal and urban needs. The U.S. Geological Survey provided $3.4 million from federal fiscal years 1988 through 2001 to establish the hydrologic monitoring system, collect the data, and complete data analysis.
- The hydrology study entered Phase II in federal fiscal year 1997 and was completed in 2002. The study emphasis during Phase I was data collection. The emphasis shifted to analytical activities and publication of maps and reports during Phase II.
- The hydrology study produced 31 technical reports including a lay reader summary, a comprehensive report on the hydrology of the Black Hills area, and a comprehensive lay reader atlas of water resources in the Black Hills area.
- The water management study provided interested parties with the tools needed to assist in making informed management decisions about development of water resources. Data gathered during the hydrology study was used in the water management study. Congress appropriated funds in federal fiscal year 1991 to initiate the Federal Black Hills Water Management Study by the Bureau of Reclamation.
- The Black Hills Water Management Study was completed in federal fiscal year 2003. The study focused on needs assessment, management alternatives, and a final report.
- The 2004 Omnibus Bill appropriated $100,000 for the development, evaluation, and review of studies related to development of regional water supply systems in or near the Black Hills. The Fall River Water User District sponsored a regional water supply study for an area that included all of Custer and portions of Fall River and southern Pennington counties.

- The 2005 Omnibus Bill appropriated $100,000 for the development, evaluation, and review of studies related to development of regional water supply systems in or near the Black Hills. The Southern Black Hills Water System, Inc., a nonprofit corporation, was formed to continue the feasibility study of a regional water system in Custer, Fall River, and southern Pennington counties. The Southern Black Hills Water System requested additional funds to continue activities begun by the Fall River Water User District. In June 2005, the board awarded $50,000 for these activities.
- The 2006 Omnibus Bill amended the State Water Resources Management System to add the Southern Black Hills Water System to its list of preferred, priority objectives for South Dakota. The bill also provided an initial appropriation of $125,000 to allow the Southern Black Hills Water System to continue activities begun by the Fall River Water User District.
- In December 2006, the Lead-Deadwood Sanitary District submitted a request for the remaining $50,000 of SFY 2006 Black Hills Water Management Study funding placed under agreement with the District to conduct a regional water study in the Lead, Deadwood, and Central City area. The funding was awarded in January 2007, and the sanitary district selected an engineer in June 2007. The Lead-Deadwood Area Water Study Final Report was issued on July 18, 2008. The study provided an analysis of the Lead-Deadwood Sanitary District intake and water treatment plant, a review of the Lead and Deadwood distribution systems, an analysis of the development in the surrounding area, and analyzed the ability of the Lead-Deadwood Sanitary District to serve them.
- The 2009 Omnibus Bill appropriated $65,000 for hydrology studies. These funds were awarded to West Dakota Water Development District to cost share the United States Geological Survey groundwater aquifer study in the Black Hills.
- Several microgravity surveys were completed during 2010 and 2011 at three study sites in the Black Hills. Collected data was analyzed spatially to help characterize the heterogeneity of the Madison and Minnelusa aquifers and possibly the transition zone between the two aquifers. Time-series data was analyzed at each of the three study sites and correlated with water levels in Madison aquifer wells. This analysis helps characterize vertical heterogeneity and effective porosity at selected sites.
- A report entitled "Microgravity Methods for Characterization of Groundwater-Storage Changes and Aquifer Properties in the Karstic Madison Aquifer in the Black Hills of South Dakota" was completed in 2012.

Hydrology and Water Management Studies – 2015 to Present

- The 2015 Omnibus Bill appropriated $250,000 for statewide hydrology and water management studies. In June 2015, the Department of Environment and Natural Resources was awarded a $47,000 grant to conduct aquifer isotope analysis in eastern South Dakota. The department's Geological Survey program conducted this work and the final report was issued in September 2017.
- The 2016 Omnibus Bill appropriated $750,000 for the development of a Big Sioux River Basin Hydrologic model. In March 2016, the appropriation was placed under agreement

with the Department of Environment and Natural Resources to hire a consulting firm to develop the hydrologic model for the Lower Big Sioux River Basin.

- In May 2016, DENR issued a Request for Proposals to consulting firms to develop the hydrologic and hydraulic model. Nine firms submitted proposals for review. In August 2016, after review by all involved state agencies and interviews of several firms, RESPEC was selected as the consulting firm to complete the hydrologic and hydraulic models.
- The 2017 Omnibus Bill appropriated an additional $450,000 for the development of a Big Sioux River Basin Hydrologic model. In March 2017, the appropriation was placed under agreement with the Department of Environment and Natural Resources to increase the contract with RESPEC to $1,300,000 to complete development of the models for the Lower Big Sioux River Basin.
- Using the new models, the Big Sioux River Flood Information System is currently being developed. A majority of the effort in 2017 has focused on developing a basin wide hydrologic model as well as hydraulic models for the cities of Watertown, Brookings, Dell Rapids, Sioux Falls, and North Sioux City. Concurrently, a web user interface is being created that will allow access to model predictions, stream gauge data, and precipitation data. The project team has met several times with the local authorities to gain feedback on model results and user interface.
- In 2017 and 2018, new stream gauges were installed to improve the stream gauge network available for the Flood Information System.
- The beta version of the Flood Information System was operational in the spring of 2018. The beta version was used to help predict river elevations and flood inundation during flooding in June 2018. The model predictions matched very closely to the actual flood levels observed. Entities that were along the river where flooding occurred were able to accurately predict if any infrastructure would be impacted due to the flood waters and prepare accordingly.
- The Flood Information System is on schedule and will be complete by December 2018. With the completion of the model, federal, state, county, and local community authorities will be able to use the Flood Information System to evaluate flood scenarios and prepare appropriately for flood response.
- In June 2018, an additional $10,000 from the remaining funds of the 2017 Omnibus Bill appropriation was placed under agreement with the Department of Environment and Natural Resources. These funds will be used to cost share on a United States Geological Survey high resolution hydrographic mapping study in the Lower Big Sioux River Basin. Other entities contributing to the project include US Geological Survey ($20,000), SD Department of Transportation ($20,000), city of North Sioux City ($3,333), Dakota Dunes Community Improvement District ($3,333), and Union County ($3,333). The primary goal of the project is to determine more accurate flow routes for flood waters and runoff from

heavy precipitation events. The area under study has a complex drainage pattern through a heavily developed area. The project will give state and local authorities a better understanding of potential impacts from severe drainage events in the area.

Lake Andes-Wagner/Marty II Irrigation Unit – 1975

- The 45,000-acre Lake Andes-Wagner Irrigation project and 3,000-acre Marty II Irrigation project are federally authorized Pick-Sloan Missouri Basin Units in Charles Mix County (Public Law 102-575). Estimated construction costs are $175 million and $24 million, respectively.
- In 1990, a plan of study was developed for a 5,000-acre research demonstration program to determine best management practices for irrigating glacial till soils containing selenium.
- The 1992 State Legislature authorized the construction of the Lake Andes-Wagner/Marty II project and provided a state loan cost share commitment of $7 million. Both the state and federal project authorizations are contingent upon the successful completion of the 5,000-acre research demonstration program.
- In 1995, Congress approved $250,000 for the research program. State and federal agencies revised the 1990 plan of study to re-scope the demonstration program and identify the specific issues and research components that are of national significance. A nine-year, $11.3 million effort was projected.
- In 1999, the Bureau of Reclamation (BoR) received $150,000 to prepare an environmental assessment for the demonstration program.
- The BoR completed the environmental assessment and issued a Finding of No Significant Impact for the demonstration program in 2000. Significant federal funding must be secured before the demonstration program can proceed.
- The Board of Water and Natural Resources placed $15,000 in 2002 and $50,000 in 2003 under agreement. The Lake Andes-Wagner Irrigation district continued to seek federal funding for the demonstration program.
- The 2009 Omnibus Bill appropriated $35,000 for the Lake Andes-Wagner/Marty II research demonstration program. These funds were awarded to the project sponsor to continue its efforts to get this project moving forward.
- During 2010, the sponsor worked to assemble information and research data from multiple resources. Discussions with BoR continued regarding the possibility of funding and placing the project into the BoR's program proposal.
- The 2011 Omnibus Bill appropriated $55,500 for the Lake Andes-Wagner/Marty II research demonstration program. However, these funds will not be awarded unless the federal government makes the decision to begin funding the project at levels that will ensure project completion in a reasonable timeframe.
- In June 2012, a portion of South Central Water Development District's future use permit reserving water from the Missouri River was transferred to the Lake Andes-Wagner

Irrigation District. The District's transfer was for the reservation of 96,000 acre-feet of water annually from the Missouri River for future development including irrigation, municipal, stock watering, fire protection, industrial, and public recreation use. The seven-year review of this permit, as required by statute, was conducted in October 2013 before the Water Management Board, and the permit was allowed to remain in effect for 96,000 acre-feet annually, subject to the required fee being submitted. No activity occurred on the project in 2018.

Lewis & Clark Regional Water System – 1989

- The Lewis & Clark Regional Water System is a bulk delivery system providing treated Missouri River water to communities and existing rural water systems in southeastern South Dakota, northwestern Iowa, and southwestern Minnesota. South Dakota membership includes eight communities and three rural water systems. Approximately 155,000 South Dakotans will receive water from Lewis & Clark.
- President Clinton signed Public Law 106-246 on July 13, 2000, authorizing the federal construction of the Lewis & Clark Regional Water System. The federal legislation also approved a federal appropriation of $600,000 to continue project engineering and begin construction. The Board of Water and Natural Resources placed $200,000 of state funding under agreement in 2000 to assist with these same project activities.
- Iowa and Minnesota sponsors provided funding support for project development in proportion to their service capacity needs. The Iowa and Minnesota State Legislatures authorized the project for construction and completed their cost share commitments.
- The South Dakota Legislature authorized Lewis & Clark's South Dakota project features ($200 million) in 1993. In 2002, the state cost share commitment of $18,585,540 in 1993 dollars was established for the Lewis & Clark Regional Water System.
- The 2002 Omnibus Bill appropriated $750,000 for the project. These funds, combined with federal and other local sources, completed the federal environmental review, the final engineering report, and initiated construction. Lewis & Clark Regional Water System's final engineering report completed its initial required 90-day congressional review on September 8, 2002. The federal Office of Management and Budget (OMB) determined that Lewis & Clark could not submit its final engineering report to Congress until OMB had approved it. Lewis & Clark worked with OMB to get its final engineering report approved and resubmitted to Congress. Lewis & Clark held its groundbreaking on August 21, 2003.
- In 2005, Lewis & Clark agreed to provide Sioux Falls an additional 17 million gallons of water per day, bringing the total delivered capacity to 45 million gallons per day. Sioux Falls financed the cost of the additional capacity.
- In May 2007, Lewis & Clark elected to change the project's name from "Rural" to "Regional". The project will be doing business as the Lewis & Clark Regional Water System.
- In May 2008, Lewis & Clark began operating its first segment of pipeline – a nine-mile emergency connection between Sioux Center and Hull, Iowa. Until Lewis & Clark water arrives, Lewis & Clark is purchasing water from Sioux Center and reselling it to Hull.

- Through June 30, 2008, the South Dakota Legislature had appropriated, and the Board of Water and Natural Resources had placed under agreement, $19,275,000 toward South Dakota's cost share commitment.
- In July 2008, a $20.8 million contract was awarded for the first phase of the water treatment plant, which included a three million-gallon underground reservoir, high capacity pumps, electrical building, and two standby generators. This infrastructure is separate from the main treatment plant building.
- In July 2008, work was completed on a $5.5 million contract that included one mile of river bank stabilization southwest of Vermillion to protect Lewis & Clark's main well field from erosion, as well as two well houses, four valve vaults, and various piping. Utilizing a permanent easement, Lewis & Clark's main well field is located on land owned by the SD Department of Game, Fish & Parks (Frost Game Production Area).
- In September 2008, Lewis & Clark began operating its second segment of pipeline, a 12-mile emergency connection for Tea and Harrisburg. Until Lewis & Clark water arrived, Lewis & Clark purchased water from Sioux Falls and re-sold it to Tea and Harrisburg.
- The 2009 Omnibus Bill appropriated $6.3 million for the engineering design, preconstruction activities, and construction.
- In April 2009, Lewis & Clark was approved to receive $56.5 million from the Bureau of Reclamation as part of the American Recovery and Reinvestment Act.
- In May 2009, a $64.1 million contract was awarded for Phase II of the water treatment plant. In July 2009, Phase II construction of the water treatment plant commenced.
- In July 2009, a $5.04 million contract was awarded for the construction of the 85th Street Tower, which has a three million-gallon storage capacity, located in Sioux Falls.
- In August 2009, a $9.5 million contract was awarded for the construction of two above-ground reservoirs to be built near Tea. These two reservoirs along with the 85th Street tower serve as Lewis & Clark's primary storage facilities.
- In September 2009, a $3.7 million contract was awarded for the first segment of the "Minnesota Transmission Line." This segment is a five-mile pipeline constructed in South Dakota and serves Minnehaha Community Water Corporation, all Minnesota users, and Rock Rapids, Iowa.
- In September 2009, a $2.8 million contract was awarded for construction of the Parker and Centerville service lines. These service lines included almost fourteen miles for the Parker service line and five miles for the Centerville service line.
- Lewis & Clark received $10 million in federal funding in 2009 under the 2010 Energy and Water Appropriation bill.
- In November 2009, the last section of the treated water pipeline, which is the main trunk between the water treatment plant and the city of Sioux Falls, was completed.

- A contract for five new wells was awarded in April 2010 for $6.8 million. The five new wells will provide Lewis & Clark with an estimated 10 million gallons a day of additional capacity. Including the six previously drilled wells, Lewis & Clark's total well capacity will be 28 million gallons per day.
- A $4.2 million bid was awarded in May 2010 for the treated water pipeline - segment 11. This five-mile segment connected Beresford to the main truck line. This is the first segment of the "Iowa Transmission Line." Eventually this line will connect to Sioux Center, Hull, and Sheldon.
- In June 2010, the $6.3 million approved by the 2010 Legislature was put under agreement. This completed the State's cost share commitment to the project.
- In October 2010, Lewis & Clark was awarded approximately $3.5 million in reprogrammed American Recovery and Reinvestment Act funding through the Bureau of Reclamation.
- In October 2010, a $7.55 million contract was awarded for the Minnesota – segment 1 pipeline, which runs along the South Dakota - Iowa border from just west of the Big Sioux River to a point six miles west of Rock Rapids.
- Lewis & Clark received $1,996,000 in federal funding through the Bureau of Reclamation in FFY 2011. Lewis & Clark was also allocated an additional $306,000 in funding for FFY 2011 in reprogrammed funds.
- In May 2011, Lewis & Clark awarded a $1.6 million dollar contract for the pipeline commissioning. This contract provided for testing, disinfecting, and cleaning 85 miles of pipes from the water treatment plant near Vermillion to Sioux Falls.
- Lewis & Clark received $5.5 million in federal funds for FY 2012. Lewis & Clark initiated operation of its water treatment plant and began to serve water to eleven of its twenty members in July 2012.
- The 20 members and three states have prepaid 100 percent of the nonfederal cost share. Because the prepayments made by the 20 members and three states, which total just under $154 million, have been fully utilized, the schedule to connect the remaining nine members is entirely dependent upon future federal funding.
- In 2014, Lewis & Clark was provided $22 million in advance federal funding from Minnesota. These funds will be used to construct transmission lines to Luverne and Magnolia.
- In 2014, Lewis & Clark received a $1 million reimbursable grant for advance federal funding from South Dakota. These funds were made available by the Joint Appropriations Committee in Senate Bill 53. These funds will be used to acquire easements and pay for engineering costs for two of the five segments of the Madison service line.
- In 2015, Lewis & Clark was provided $19 million in advance federal funding from Minnesota. These funds will be used to connect the Lincoln Pipestone Rural Water System, construct a 4 million-gallon storage reservoir southwest of Luverne, install a booster station southeast of Luverne, acquire easements, and complete design for the pipeline between Adrian and Worthington.

- In 2015, Lewis & Clark received a $7.7 million loan for advance federal funding from South Dakota. These funds were made available by Senate Bill 173. These funds were used to construct segments one and five of the Madison service line. Madison was the only South Dakota member system not yet connected; however, construction of segments 1 and 5 does not get a drop of water to Madison. In 2016, the agreement was amended to include engineering design and easement acquisition of segments 2 through 4 and is estimated to cost more than $22 million for final construction.
- DENR worked with three regional water systems and the city of Madison to develop a wheeling option as an alternative to providing federal fund advances to construct the balance of the Madison service line. The wheeling option builds on the construction of segments 1 and 5. Segment 1 provides Minnehaha Community Water Corporation (MCWC) with its second Lewis & Clark connection a mile west of Crooks. That connection increases the delivery of Lewis & Clark water to MCWC to 1.1 million gallons per day and with $1.8 million in wheeling upgrades, and frees up water from MCWC's water treatment plants to feed its Tower 3B near Colton. Tower 3B feeds water into a new 12-inch Big Sioux Community Water line going north and west to connect with Lewis & Clark's segment 5 to deliver 1 million gallons of water per day to Madison costing $3 million to construct. The wheeling option saves the state more than $17 million in federal fund advances.
- In 2015, Lewis & Clark delivered water to 12 of the 20 members.
- In January 2016, the first of several contracts for the wheeling option to provide water to Madison was awarded. The contract was awarded by MCWC, and construction of the additional lines to free capacity elsewhere within MCWC's distribution system was completed in the fall of 2016. This work was funded partially by a $900,000 Consolidated grant.
- In May and July of 2016, the Big Sioux Community Water System awarded bids for their portion of the Madison wheeling option. The work includes construction of new water distribution line to connect MCWC to a new Lewis & Clark line east of Madison and a new pump station to provide the pressure needed to move the water. Construction was completed early 2017. This work was funded by a $2,000,000 Consolidated grant and a $1,014,000 Drinking Water SRF loan.
- In April 2016, Lewis & Clark awarded the contract for construction of the Madison meter building and Crooks meter building/pump station. These buildings supply metering and pressure for water to get to Madison. Construction was completed in late 2016.
- In June 2016, the final bids for the Madison wheeling project were awarded by Lewis & Clark for construction of segments 1 and 5 of the Lewis & Clark lines and connections to Minnehaha CWC and Big Sioux CWS. Construction of this work was completed early 2017.
- In 2016, Lewis & Clark delivered water to 13 of the 20 members, with Luverne being connected in March 2016. Water demand has increased and the treatment plant is now staffed 24 hours per day 7 days a week.

- From 2015 through 2017, Lewis & Clark has been provided $44.5 million in advance federal funding from Minnesota. This federal funding advance allows all the Lewis & Clark members in Minnesota to be connected and begin receiving water.
- In May 2017, Lewis & Clark received $2.25 million in advance federal funding from Iowa. These funds will be used to pay for engineering services and easement acquisition for the pipeline and meter building to Sioux Center. The bill passed by Iowa's legislature also committed $4.75 million for use in the next fiscal year.
- In 2017, Lewis & Clark delivered water to 14 of the 20 members, with Lincoln Pipestone Rural Water system being connected in November 2017.
- In May 2017, the joint projects of Lewis & Clark, Big Sioux CWS, Minnehaha CWC, and the city of Madison were fully completed. With the completion of the projects, Madison now has access to 1 million gallons of water per day from a regional system supplier. All South Dakota members of Lewis and Clark are now directly or indirectly connected to the system.
- In May 2018, Lewis & Clark received $4.75 million in advance federal funding from Iowa. These funds, along with a $2.25 million advance last year from Iowa will be used to construct pipeline starting at Sioux Center and going approximately 6 miles west towards the Big Sioux River.
- In June 2018, Lewis & Clark awarded a contract for the purchase of an emergency generator for the Tea Pump Station. Without this generator 93 percent of the water produced by the system cannot be delivered to its customers if power is lost. A portion of the remaining funds from the $7.7 million federal fund advance from South Dakota in 2015 will be used for the procurement of this generator.
- After 2018, Lewis & Clark will be able to provide 16 of its 20 members with access to their full allocation of water with Worthington anticipated to be connected in early December 2018. The Lewis & Clark system construction is estimated to be 75 percent complete and anticipates being at 80 percent complete with the construction planned for 2019 and 2020.
- Through FY 2017, the federal government has appropriated $249.15 million for the project. Recent federal funding levels include $14.875 million in FY 2018; however, only $100,000 was included for FY 2019 in the proposed White House budget. It is hoped that the House and Senate budgets will include a substantial increase from that proposed number.

Sioux Falls Flood Control Project – 1989

- In 1961, the Corps of Engineers completed a channelization, levee, and diversion system to provide 100-year flood protection on the Big Sioux River and Skunk Creek.
- Because of subsequent flooding events on the Big Sioux River and Skunk Creek, the Corps of Engineers reanalyzed the flood criteria in the early 1980s and determined that the 1 percent chance of flood occurrence was greater than previously established. The Corps then recommended that the levee system be upgraded so that it would continue to provide Sioux Falls with 100-year flood protection on the Big Sioux River and Skunk Creek. Project upgrades included constructing a dam on the Big Sioux River just above the confluence of

Skunk Creek as well as raising the levees along the Big Sioux River from Skunk Creek to Interstate 229, raising the levees along Skunk Creek from Marion Road to the Big Sioux River, raising the levees above and along the diversion channel, modifying the spillway chute, replacing the stilling basin, and modifying some bridges.

- The 1992 State Legislature authorized project construction and a state cost share commitment of $4.55 million. Federal authorization was completed as part of the 1996 Water Resources Development Act on October 12, 1996 (Public Law 104-303). The Act authorizes a $34.6 million construction project under the Corps of Engineers.
- In 1999, a $2.2 million federal appropriation was provided to the Corps of Engineers. A Project Cooperation Agreement between the Department of the Army and the city of Sioux Falls for final design work was executed.
- Construction of Phase 1A of the Big Sioux River/Skunk Creek Flood Control Project was completed in 2001 and addressed the spillway and stilling basin area at the outfall of the diversion channel. Later that year bids were accepted on Phase 1B of the project addressing the levies adjacent to Morrell's downstream to Cliff Avenue.
- Sioux Falls continued to work with the Corps of Engineers on final design and construction of the project from 2001 to 2007. Sioux Falls continued to secure required easements and properties for the project.
- Construction of Phase 2A of the project continued in 2007. Phase 2A work included improvements to the levees on the Big Sioux River from 49th Street to Interstate 229.
- Phase 2B of the project was completed in 2008. This work included the levee and associated structures on the east side of the Big Sioux River from 41st Street to 49th Street. The city advanced sufficient funds to the US Army Corps of Engineers to complete Phase 2 work in the next two years. This was an ambitious schedule, but reduced the high cost of flood insurance for many properties now being placed in Flood Zone A of the National Flood Insurance Program.
- Phase 2C raised two miles of existing levees approximately two to five feet in order to provide 100-year flood protection along the Big Sioux River within the city of Sioux Falls. In October 2009, the Corps of Engineers accepted proposals for this phase of the project. Phase 2C of the Sioux Falls Flood Control project was awarded in February 2011 for approximately $12 million. The project was completed by the end of calendar year 2011.
- In December 2009, the city issued $27 million in taxable revenue bonds; $17 million of the total was advanced to the Corps of Engineers for levee and dam construction. The balance was to pay for the 41st Street Bridge project.
- As part of the 2010 Energy and Water Appropriation bill, $1.84 million was appropriated to the Corps of Engineers for the Sioux Falls Flood Control Project.
- In March 2010, the city of Sioux Falls reconstructed the existing 41st Street bridge in order to raise the levee system. The project was substantially completed in September 2010.
- The 2011 Omnibus Bill appropriated $3.31 million for project design and construction.

- Phase 3 was awarded at $8.8 million, and work began above the diversion dam and on the diversion channel where the levees were raised two to four feet. Phase 3 was completed by the end of calendar year 2012 and is the final phase of construction.
- The Corps of Engineers is in the process of preparing documents for certification of the remaining uncertified levees within the city. Once these documents are complete, FEMA will begin the process of revisiting the flood insurance rate maps within the city limits. Upon completion of the new rate maps, the Sioux Falls Flood Control Project will be complete.
- In 2013, the project reached substantial completion. The new levee system building was built, and all of the gates and posts for the closure structures were received. Testing of the controls for the dam was conducted, and the operation of the gates was successfully completed. The Corps of Engineers awarded and completed a project to replace a deficient drainage structure through the levee next to the Sioux Falls zoo.
- In 2015, the major work on the levee system was completed; the Corps of Engineers submitted the application to FEMA for a physical map revision. The FEMA review and eventual issuing of new flood insurance rate maps should result in 1,500 properties in Sioux Falls being taken out of the floodplain.
- In 2016, the $2,036,375 in grant funds appropriated by the 2016 legislature was placed under agreement with the city of Sioux Falls. This funding provides the final portion of the state's cost share commitment to provide half of the nonfederal cost share to the city, and all necessary work has been completed.
- In 2017 and 2018, Sioux Falls continued to work with the Corps of Engineers to complete property appraisals for city-owned land that was not previously appraised. Once this work is completed and accepted by the Corps, the city will be able to submit final reimbursement for the state's cost share commitment.

Southern Black Hills Water System – 2006

- The 2006 Omnibus Bill amended the State Water Resources Management System to add the Southern Black Hills Water System to the list of preferred, priority objectives for South Dakota. The bill also provided an initial appropriation of $125,000 to allow the Southern Black Hills Water System to continue activities begun under the Black Hills Hydrology and Water Management Study.
- The project objective is to construct a rural regional water system capable of delivering quality drinking water to rural residents and area communities in Custer, western Fall River, and southern Pennington counties. Communities involved include Custer, Edgemont, Hermosa, Hill City, Hot Springs, Keystone, and Pringle.
- Project sponsors worked with representatives from the Department of Agriculture Rural Development Program to secure funding for the construction of the North Hot Springs service area. In 2007, negotiations with the city of Hot Springs for a permanent water source failed to produce a contract.

- Local support continued to be strong for the project with area-wide rural signups near 500 individual homes. Additionally, strong interest continues to be expressed by the Custer State Park, the Mount Rushmore National Park, the Crazy Horse Foundation, and the various area communities for water service from the system.
- In 2009, Southern Black Hills Water System secured an initial water source and received a water permit for a future well site. Southern Black Hills Water Systems secured easements for construction of pipeline and a storage reservoir.
- In 2009, Southern Black Hills Water System secured funding through Department of Agriculture Rural Development Program for Phase I construction.
- The 2010 Omnibus Bill appropriated $350,000 for the engineering design, preconstruction activities, and construction. The Bill also established the state cost share commitment at $12 million.
- In 2010, Southern Black Hills opened bids and awarded three contracts for Phase I of the project. Phase I consisted of a water treatment plant, an underground reservoir, and approximately 30 miles of distribution pipeline. Southern Black Hills received more than $4.5 million in Rural Development loan and grant funding to assist with Phase I.
- The 2011 Omnibus Bill appropriated $2,000,000 for the engineering design, preconstruction activities, and construction. These funds were awarded to the project sponsor to continue Phase I construction, Phase II engineering design and preconstruction, and the Cascade Area engineering design and preconstruction.
- In September 2011, a portion of Phase I was completed and approximately 200 customers received water.
- The 2012 Omnibus Bill appropriated $4,000,000 for the engineering design, preconstruction activities, and construction. These funds were awarded to the project sponsor to continue Phase I construction, Phase II engineering design and preconstruction, and the Cascade Area engineering design and preconstruction.
- Final plans and specifications for Phase II of the project were completed in 2012. Phase II serves approximately 230 customers, consists of 72 miles of pipes, a booster station, and a water storage tank.
- Southern Black Hills was issued a Forest Service Special Use Permit in September 2012. This allows construction and installation of the water transmission pipeline associated with Phase II to cross 2.7 miles of National Forest System lands in the Black Hills National Forest.
- The 2013 Omnibus Bill appropriated $3,800,000 for the engineering design, preconstruction activities, and construction. These funds were awarded to the project sponsor to continue Phase II engineering design, preconstruction and construction, and the Cascade Area engineering design and preconstruction.
- In May 2013, bids were opened for the Phase II distribution project and the Junction storage tank with construction on both projects starting in September 2013.

- Construction continued in 2014 for both the Phase II distribution project and the Junction storage tank. The Phase II distribution project added the Red Canyon sub-development to the project. This portion of the project was completed in August of 2015.
- In 2016, Southern Black Hills continued efforts to acquire wells and provide regional water to the town of Hermosa and surrounding developments. In 2017, Hermosa decided not to connect to Southern Black Hills. Discussions of providing water in the Cascade Road area south of Hot Springs have also taken place with local residents to gauge interest levels in a potential project.
- In August 2016, Southern Black Hills Water System purchased Spring Creek Acres (aka Heartland Country Ranchettes) water system for $125,480. Spring Creek Acres is located approximately 4 miles north and 2 miles east of Hermosa, SD. The system is comprised of a 100 gpm Inyan Kara aquifer well with 62 current users and the potential for 26 additional users in the development. SCADA system upgrades have been made along with installation of a temporary generator at the well house.
- In September 2016, Southern Black Hills Water System purchased the Paramount Point Subdivision water system for $25,580. The Paramount Point Subdivision is located approximately 1 mile north and ½ mile west of Hermosa, SD. The system is comprised of a 50 gpm Inyan Kara aquifer well with 12 current users and the potential for 12 additional users in the development. The current distribution system will be replaced to increase system pressure and better serve the customers. Bids were opened in June 2017 with a low bid of $170,965, with the work to be completed during 2017. The system holds a water right for up to 150, gpm and Southern Black Hills Water System plans to drill an additional well to increase the capacity. There is the potential to connect the Spring Creek Acres and Paramount Point Systems to serve additional users and provide a redundant source of water.
- In January 2017, Southern Black Hills opened bids for the purchase of back-up generators at all well sites and the treatment plant. These generators will ensure water supply for the users of the system in the event of a power outage. The bid amount for the generators was $151,032, with the work planned to be completed during 2017.
- In July 2017, Southern Black Hills drilled a monitoring well near their existing treatment plant. This well will help to assess current drawdown levels of the groundwater from the existing water production well to provide factual evidence of actual aquifer drawdown if additional water supply is needed. The new monitoring well has the potential to be used as a water production well in the future if approved.
- In September 2017, Southern Black Hills Water System purchased the Rushmore Ranch water system for $80,567. Rushmore Ranch is located just north of SD Hwy 40 approximately halfway between Hermosa and Keystone, SD. The system is comprised of a 150 gpm Madison aquifer well with 52 current users with the distribution system in place for 36 additional homes in an adjacent development. The location of this system is near several other small developments near SD Hwy 40 and there is the potential for additional connections.

- In 2018, Southern Black Hills Water System continued to connect and solicit potential new users. Letters were sent to potential customers along SD Hwys 36 and 40 west of Hermosa in the area around Rushmore Ranch and on SD Hwy 79 north of Hermosa to Spring Creek Acres. The System also constructed a new well in the Paramount Point subdivision and the increased supply will allow them to interconnect systems and serve some of the potential new customers in the areas listed. An additional 10 new users were connected during the year in the areas of Phase 1 and 2 original system construction.
- In 2018, a four day pump test was conducted on the well near the treatment plant known as the Casey Well. Utilizing the monitoring well drilled in 2017 drawdown levels within the aquifer were able to be determined and provide factual evidence for a water right permit application. Southern Black Hills applied for a 300 gallon per minute water right at the Casey Well site and in July 2018 was approved.

Vermillion Basin Flood Control Project – 1987

- The project objective is to address the severe flooding problems in the Vermillion River Basin. The basin covers 2,697 square miles in parts of 14 counties and is about 150 miles long with an average width of about 20 miles.
- In 1993, the Corps of Engineers completed The *Vermillion Basin Flood Control Reconnaissance Report* but failed to identify a feasible federal project. The project sponsors re-evaluated project alternatives for nonfederal development. Local project sponsors submitted a pre-application notification for a Federal Emergency Management Agency (FEMA) Hazard Mitigation grant for a *Feasibility Study of Flood Control Alternatives* for the basin. In 1994, more than 70 technical experts met to develop a multi-objective plan to reduce flooding impacts in the Vermillion River Basin. The National Park Service compiled the group's issues and suggestions and formulated the multi-objective plan.
- The Vermillion River Watershed Authority was incorporated in December 1997 and is comprised of representatives from the Clay, Miner, Turner, McCook, and Lake county commissions. The Authority proposed to use FEMA Hazard Mitigation grant funds to widen the channel at the outlet of Lake Thompson and construct a control structure to retain the natural outlet elevation, channel maintenance along 19 miles of the Vermillion River and its tributaries, and wetland restoration and development throughout the basin. The cost benefit ratio for the outlet of Lake Thompson was found to be in error. The ratio was actually less than one; consequently, all FEMA Hazard Mitigation funds were withdrawn. The Authority withdrew its request to set the outlet elevation on Lake Thompson and moved to dissolve after financial records are completed. No activity occurred on the project in 2018.

Recommendations to the Governor and State Legislature

In November 2018, the board conducted a public meeting on the State Water Resources Management System (SWRMS) projects. The board adopted Resolution #2018-77 recommending that all current projects be retained on the SWRMS list. The board also adopted Resolution #2018-78 providing its recommendations to the Governor and the Legislature for the Water and Environment Fund (WEF) and WEF subfunds fiscal year 2020 appropriation levels. A summary of the board's recommendations are below. Full resolutions are in Appendix B.

Table 14 – Board of Water and Natural Resources Funding Recommendations

WATER AND ENVIRONMENT FUND (WEF)	
Consolidated Water Facilities Construction Program	$10,500,000
Solid Waste Management Program	$2,400,000
WEF SUBFUNDS	
Clean Water State Revolving Fund (SRF) Admin Surcharge Fees	
Water Quality Grants	$1,000,000
SRF Application and Administration Assistance	$200,000
Drinking Water SRF Set-Asides and Admin Surcharge Fees	
SRF Application and Administration and Assistance	$50,000
Very Small System Compliance and Public Health Grants	$200,000
Local and Small System Technical Assistance	$150,000
WEF Subfund Total	$1,600,000
Total	**$14,500,000**

Appendix A

Water and Environment Fund Special Condition Statement

WATER AND ENVIRONMENT FUND
Special Condition Statement
As of 6/30/2018

Cash Balance as of 6/30/2018		**24,278,396**
Projected SFY 2019 Revenues		
Capital Construction Fund	9,900,000	
Contractors' Excise Tax	25,000	
Investment Interest (Earned '18 deposited '19)	286,025	
Loan Principal & Interest Payments (Water)	400,000	
Loan Principal & Interest Payments (Solid Waste)	650,000	
Solid Waste Fees	1,775,000	
		13,036,025
FY2019 Transfer (Per SDCL 1-40-32)		
Environment & Natural Resources Fee Fund	(600,000)	
		(600,000)
Board of Water and Natural Resources Commitments as of 6/30/2018		
Consolidated Water Facilities Construction Program	(23,717,381)	
Solid Waste Management Program	(2,301,389)	
SWRMS Grants/Loans - Major Projects		
Belle Fourche Irrigation District	(44,613)	
DENR - Big Sioux River Flood Information System	(171,181)	
Lewis & Clark Regional Water System	(2,419,464)	
Sioux Falls Flood Control	(911,375)	
Southern Black Hills Water System	(500,082)	
Watertown Big Sioux Flood Control Study	(225,125)	
		(30,290,610)
Remaining Special Appropriation Authority as of 6/30/2018		
Consolidated Water Facilities Construction Program	(2,253,807)	
Solid Waste Management Program	(3,466,493)	
SWRMS Grants/Loans - Major Projects		
Hydrology and Water Management Studies	(93,080)	
		(5,813,380)
Projected Surplus/(Shortfall) for preparation of 2019 Omnibus Bill		**610,431**

Appendix B

Board of Water and Natural Resources Resolutions

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION NO. 2018-77

PROVIDING TO THE SOUTH DAKOTA LEGISLATURE AND GOVERNOR, THE BOARD OF WATER AND NATURAL RESOURCES' RECOMMENDATIONS FOR STATE WATER RESOURCES MANAGEMENT SYSTEM DESIGNATION.

WHEREAS, the Board of Water and Natural Resources ("the Board") pursuant to SDCL 46A-1-2, annually provides recommendations to the State Legislature and Governor regarding deletions and additions to the State Water Resources Management System component of the State Water Plan; and

WHEREAS, SDCL 46A-1-2.1 designates the water resource projects included on the State Water Resources Management System component of the State Water Plan that serve as the preferred, priority objectives of the State; and

WHEREAS, the Board has reviewed the list of projects currently included on the State Water Resources Management System component of the State Water Plan; and

WHEREAS, the Board has reviewed the applications submitted from various South Dakota water resource projects for inclusion on the State Water Plan.

NOW THEREFORE BE IT RESOLVED, that the Board recommends that all water resource projects on the State Water Resources Management System be retained as preferred, priority objectives of the State.

Dated this 8th day of November, 2018

(SEAL)

BY: /s/ Brad Johnson
Chairman, Board of Water and Natural Resources

ATTEST:

BY: /s/ Todd Bernhard
Secretary, Board of Water and Natural Resources

STATE OF SOUTH DAKOTA
BOARD OF WATER AND NATURAL RESOURCES
RESOLUTION NO. 2018-78

PROVIDING TO THE SOUTH DAKOTA LEGISLATURE AND GOVERNOR, THE BOARD OF WATER AND NATURAL RESOURCES' RECOMMENDATIONS FOR WATER AND ENVIRONMENT FUND FISCAL YEAR 2020 APPROPRIATION LEVELS.

WHEREAS, SDCL 46A-1-2 provides the means for the planning, funding, and construction of a state water plan and creates the State Water Resources Management System component and the State Water Facilities Plan components of the State Water Plan; and

WHEREAS, pursuant to the authority provided in SDCL 46A-1-7, the Board of Water and Natural Resources ("the Board") is responsible for approving all projects placed on the State Water Facilities Plan component of the State Water Plan, an annual listing of potential water related projects; and

WHEREAS, pursuant to the authority provided in SDCL 46A-1-10, the Board annually provides recommendations to the Governor and the State Legislature regarding deletions and additions to the State Water Resources Management System component of the State Water Plan; and

WHEREAS, pursuant to the authority provided in SDCL 46A-1-12 and 46A-1-13, the Board may recommend state funding levels to the Governor and the State Legislature; and

WHEREAS, the Board has reviewed the projected funding needs of projects on the State Water Resources Management System component of the State Water Plan; and

WHEREAS, the Board has reviewed the projected funding needs of projects on the State Water Facilities Plan component of the State Water Plan; and

WHEREAS, the Board has reviewed potential funding needs of solid waste disposal, recycling, and waste tire projects that may require funding from dedicated fees deposited in the Water and Environment Fund; and

WHEREAS, the Board has reviewed potential financial and technical assistance needs of projects that may require funding from the Clean Water State Revolving Fund Administrative Surcharge fees, Drinking Water State Revolving Fund Set-Asides, and Drinking Water State Revolving Fund Administrative Surcharge fees deposited in the Water and Environment Fund Subfunds; and

WHEREAS, the Board conducted a public hearing and adopted Intended Use Plans that include projects that require funding from the Clean Water State Revolving Fund Administrative Surcharge fees, Drinking Water State Revolving Fund Set-Asides, and Drinking Water State Revolving Fund Administrative Surcharge fees deposited in Water and Environment Fund Subfunds; and

WHEREAS, the Board conducted a public meeting on November 8, 2018, to take statements from all interested parties regarding water development and solid waste funding needs.

NOW THEREFORE BE IT RESOLVED, that the Board recommends to the Governor and the State Legislature a Water and Environment Fund fiscal year 2020 appropriation level of ten million five hundred thousand dollars ($10,500,000) for the Consolidated Water Facilities Construction Program; and

IT IS FURTHER RESOLVED, that the Board recommends to the Governor and the State Legislature the Water and Environment Fund fiscal year 2020 appropriation level of two million four hundred thousand dollars ($2,400,000) for the Solid Waste Management Program; and

IT IS FURTHER RESOLVED, that the Board recommends to the Governor and the State Legislature the following Water and Environment Fund Subfund fiscal year 2020 appropriation levels for the Drinking Water State Revolving Fund Set-Asides, the Clean Water State Revolving Fund Administrative Surcharge fees, and the Drinking Water State Revolving Fund Administrative Surcharge fees approved in the respective 2019 Intended Use Plans for the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF) programs:

State Revolving Fund Administrative Surcharge Fees	
CWSRF Water Quality Grants	$1,000,000
CWSRF Application and Administration Assistance	$200,000
DWSRF Application and Administration Assistance	$50,000
DWSRF Very Small System Compliance and Public Heath Grants	$200,000
Federal DWSRF Set-Aside Funds	
Small System Technical Assistance	$150,000
WEF Subfund Total:	$1,600,000

Dated this 8th day of November, 2018

(SEAL) BY: /s/ Brad Johnson

Chairman, Board of Water and Natural Resources

ATTEST:

BY: /s/ Todd Bernhard

Secretary, Board of Water and Natural Resources

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