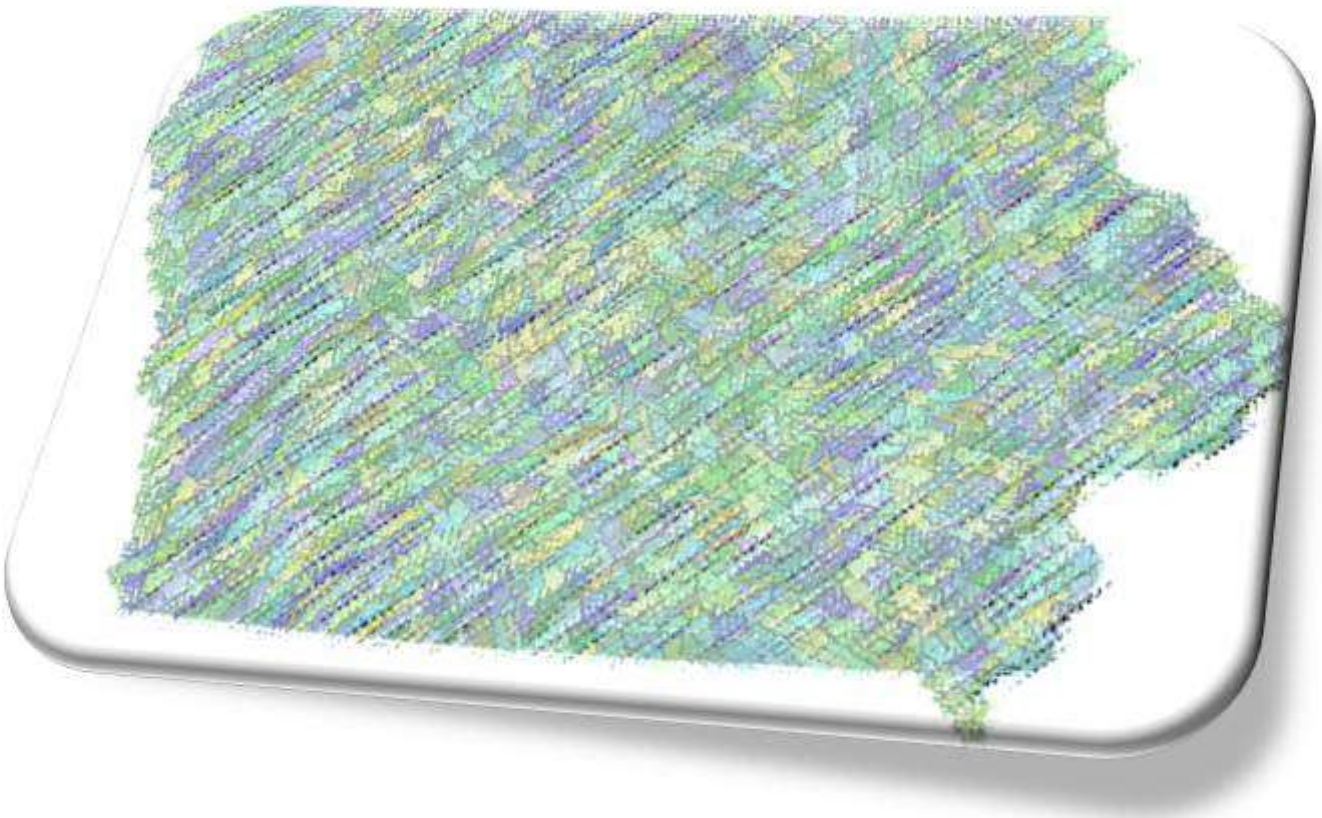


INVESTING IN IOWA'S WATER

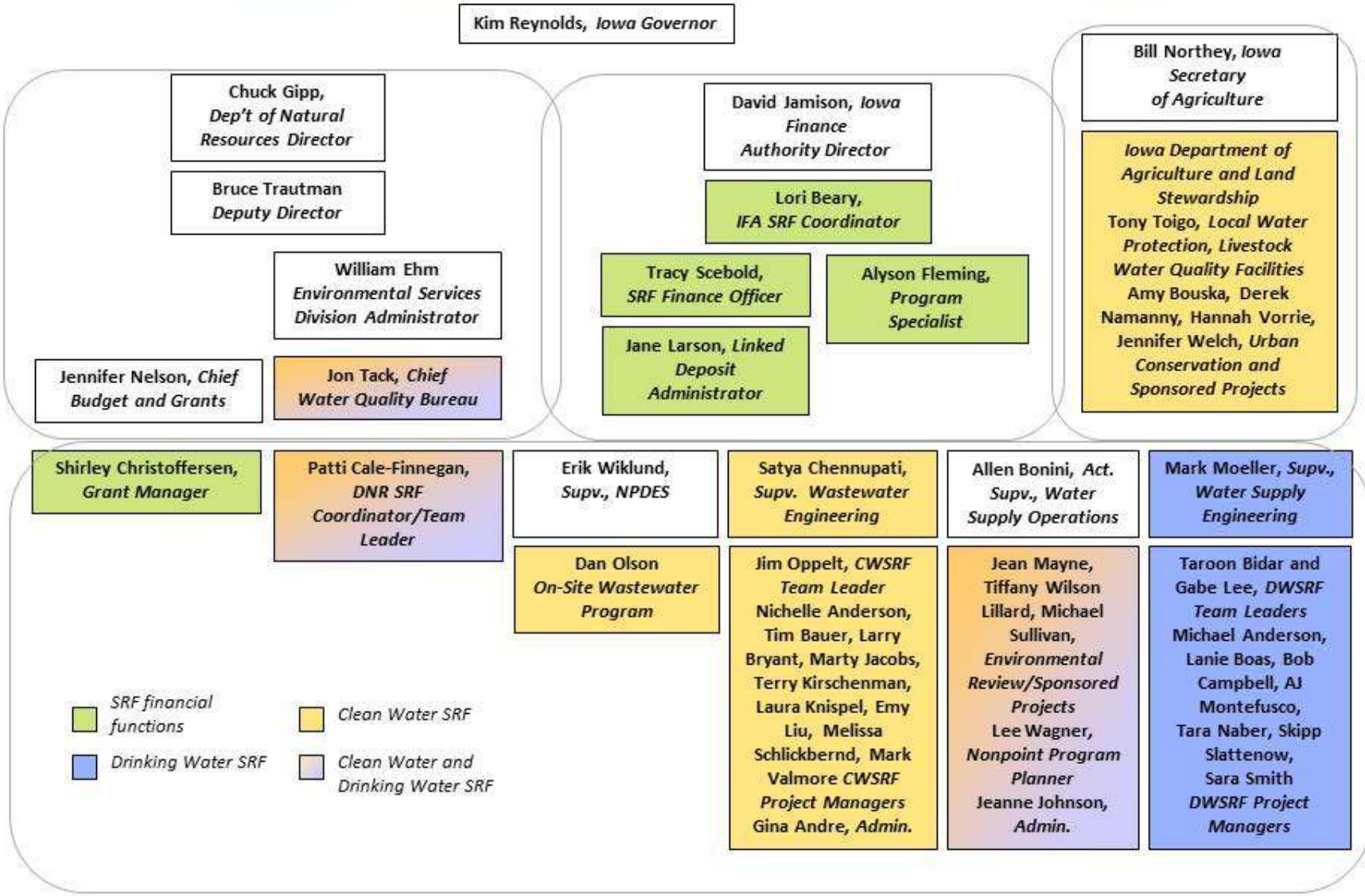
SRF STATE REVOLVING FUND

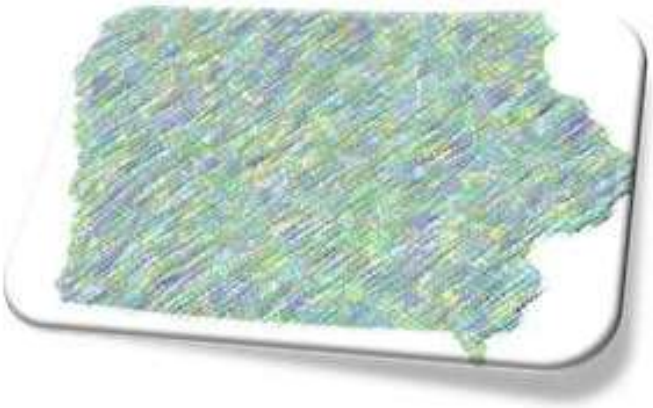
ANNUAL REPORTS

Clean Water State Revolving Fund
Drinking Water State Revolving Fund
Fiscal Year 2017

Iowa Department of Natural Resources
Iowa Finance Authority

State Revolving Fund Organizational Structure -- Iowa





ANNUAL REPORT

Clean Water State Revolving Fund
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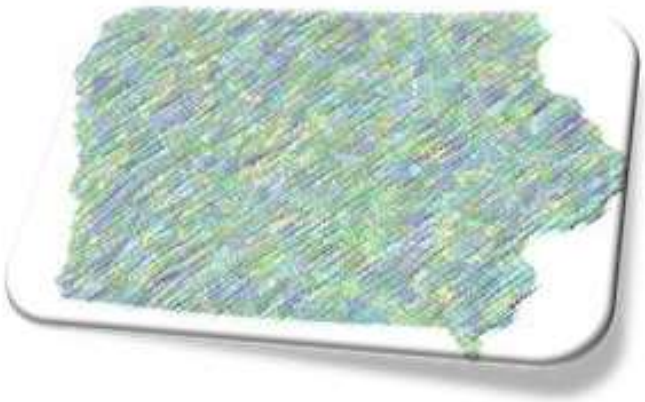
INVESTING IN IOWA'S WATER



EXECUTIVE SUMMARY

Annual reports usually contain a lot of data, and this one is no different. It includes dollar amounts financed, numbers of projects receiving assistance, return on capital figures, and more. But underlying the facts and figures are the stories of the Iowa communities, utilities, farmers, landowners and others solving problems and making investments in Iowa's water and the future of the state.

Here are a few examples that show the varying issues that are being tackled. Read on to learn more about how the State Revolving Fund (SRF) is helping.

- ***The City of Clemons*** is similar to other small towns that have lost population but still need to maintain and upgrade their wastewater infrastructure. From a peak of 240 people in the 1930s, Clemons has stabilized over the last fifteen years at 148. The sewage lift station, built in 1969, is unsafe and obsolete. The City was able to borrow $43,000 through a Clean Water SRF planning and design loan to study the problem, apply for financial assistance, and prepare to make improvements.

- ***The City of North Liberty*** is working on keeping up with population growth. It is one of the fastest growing communities in Iowa, jumping from 5,000 in 2000 to more than 18,000 today. North Liberty received a $22 million loan from the Drinking Water SRF to finance the construction of a new water treatment plant, new well and raw water main. According to City Clerk, Tracey Mulcahey, "We selected the State Revolving Fund financing because it provides us with a lower interest rate and borrowing costs as well as a longer repayment cycle compared to other financing options."

- Managing storm water for quality and quantity is a challenge for many communities. ***The City of Rockwell City*** took advantage of funding through the Clean Water SRF Water Resource Restoration Sponsored Projects and the state's Water Quality Initiative programs to construct bioretention cells. These innovative practices reduce runoff and contaminants in storm water runoff.

- ***A farmer in Davis County*** constructed a grade stabilization structure to reduce sediment running from fields into South Chequest Creek. Even with cost-share funds for the $25,000 project, the young farmer had to come up with $6,000 for her share. A low-interest loan through the Clean Water SRF's Local Water Protection Program helped make the project affordable.

- ***The City of Brooklyn*** faced several issues with their wastewater system typical of many communities in Iowa. First, the original treatment plant was built in the 1930s and most recently updated in 1986 and had reached its useful life. Second, new water quality standards required the City to add ammonia removal and to disinfect their wastewater discharge. Unlike some cities, the population of Brooklyn has stayed stable. The City borrowed $2.6 million through the Clean Water SRF to improve treatment, enhance reliability, and comply with regulatory requirements.

- ***The Iowa Natural Heritage Foundation*** used a $3.9 million SRF General Nonpoint Source loan to purchase 1,021 acres of land in Madison and Clarke Counties in cooperation with the Department of Natural Resources.

  The property, christened "Heritage Hills," will protect a stretch of the South Fork of Clanton Creek. The creek is a tributary of the Middle River, an impaired water which flows into Lake Red Rock.

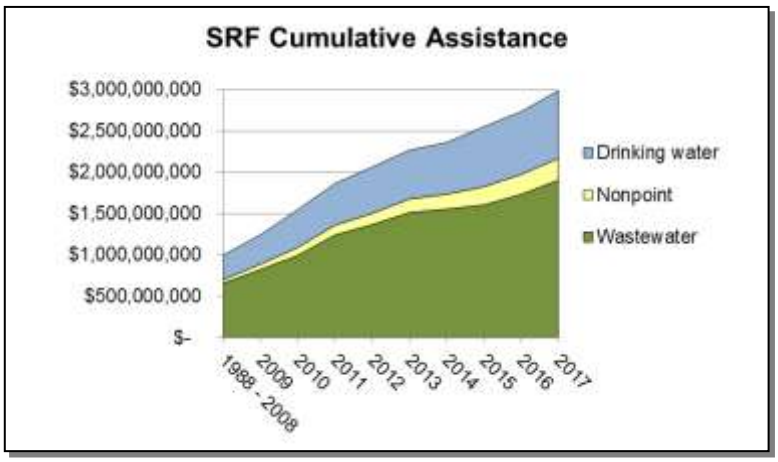
  According to Central College biology professor Dr. Russ Benedict, "With its mature forests and a creek that remains in a fairly natural state, this area is an important part of a broader landscape in south-central Iowa."

The State Revolving Fund (SRF) is one of Iowa's primary sources for investments in safe and clean water.

Since 1989, the Clean Water SRF has provided subsidized loans to meet Iowa's publicly owned wastewater infrastructure needs. This includes assistance agreements with cities, counties, sanitary districts, and utility management organizations**.**

Since 2000, the Drinking Water SRF has provided loans to help Iowa's water systems keep drinking water safe. This includes assistance agreements with cities, municipal utilities, rural water associations, and homeowners' associations.

The SRF was just shy of the $3 billion mark in cumulative assistance provided during SFY 2017, as shown in the graph. Because the funds are continually being loaned out and repaid with interest, the SRF continues to grow. This source of financing will continue to meet future needs for a wide variety of water issues.



Financial Management to Meet Program Demand. Not every state can fund all eligible projects. Iowa is able to keep up with demand through its financial management strategies. Iowa's SRF serves from the smallest to the largest communities in the state with funding when they need it. Iowa is also able to provide assistance to nonpoint source project borrowers such as farmers, livestock producers, landowners, watershed organizations, and others, unlike many states that are only funding water and wastewater infrastructure.

For the DWSRF, the loan amounts in SFY 2017 ranged from $70,000 for the ***City of Murray's*** planning and design loan, to a $22 million loan to the ***City of North Liberty*** for water system upgrades including new wells and new treatment plant. The smallest CWSRF loan was $35,000 for planning and design to the ***City of Melbourne***. The largest loan of $40 million went to the ***Des Moines Wastewater Reclamation Authority*** for a major sewer interceptor project.

Keeping Interest Rates and Costs Low to Make Projects More Affordable. One of the ways that Iowa is able to keep up with program demand is through leveraging. Leveraging involves borrowing from the bond market when needed and pledging a portfolio of loans to repay the bonds. Because of its high AAA bond rating, the SRF program can borrow at lower rates than most utilities in Iowa. The leveraged funds are combined with the revolved and federal funds to allow a below-market interest rate to SRF borrowers. Iowa's current interest rate is 1.75% for loans up to 20 years. Other cost savings utilities gain by using SRF include no reserve requirements, a lower debt service coverage ratio, and lower fees.

Many of the Iowa borrowers are communities with no bond rating. They would be borrowing at 4% or more if they had to borrow on their own from the market. Savings for these communities are estimated at approximately $250,000 for each million dollars borrowed.

Use of Loan Forgiveness. Additional subsidization, which Iowa provides in the form of loan forgiveness, has been a required part of both the Clean Water SRF and the Drinking Water SRF since 2010. Because loan forgiveness reduces the amount of dollars being paid back and affects the loan-term capacity of the revolving funds, Iowa has used loan forgiveness strategically. For both programs, Congress has set a required minimum amount of the federal capitalization grant each year as well as a maximum allowed amount. Iowa has targeted loan forgiveness in order to provide as close to the minimum required amount as possible.

For the Drinking Water SRF, since 2010, a minimum of $25 million has been required and a maximum of $62 million was allowed. Through the end of SFY 2017, $22 million has been allocated in binding loan commitments. Additional projects have been identified on the DWSRF project priority list for loan forgiveness. During SFY 2017, loan forgiveness totaling $2.6 million was used to help a disadvantaged community with project

affordability, to incentivize completion of urgent public health projects, and to encourage installation of emergency backup power generation. Iowa's Drinking Water SRF offered loan forgiveness of 75% to public health projects in order to help communities overcome financial or other hurdles and more quickly address these urgent issues. Here is an example of a public health project:

- ***City of Dyersville*:** The water in the City's second well contained radium concentrations higher than the level considered safe. Long term consumption of water containing high radium concentrations leads to an increased risk of cancer. The City borrowed almost $1.4 million from the Drinking Water SRF to construct a new water treatment facility that by feeding hydrous manganese oxide, is removing radium and allowing the system to comply with public health standards. The project was completed during the fall of 2016. Dyersville received 75% loan forgiveness as a public health project.

For the Clean Water SRF, the total minimum required amount is $10.7 million, with a maximum of $37 million. Iowa has allocated $13.6 million through the end of SFY 2017 to disadvantaged communities and for green projects. During SFY 2017, one disadvantaged community received loan forgiveness:

- ***City of Albert City*:** Albert City was facing needed upgrades to its wastewater treatment plant. The plant was unable to meet the more stringent effluent limits for ammonia and bacteria in a new National Pollutant Discharge Elimination System (NPDES) permit. In addition, the plant's capacity was being exceeded, not because of population growth but due to a sanitary sewer system with high infiltration and inflow. This resulted in emergency bypasses and discharge of untreated sewage. By tackling the sewer collection system first in Phase I of the project, the treatment plant upgrade could be designed to the right size for the community.

  In Phase I, the City lined and rehabilitated sewers and replaced manholes to tighten up the system and keep excess water out. Albert City borrowed $400,000 from the Clean Water SRF in 2012 for this phase. The results were apparent during a 5.6" rainfall event in May 2013 when the peak amount of water entering the treatment plant was lower than in previous years and basement backups were avoided.

  With Phase I complete, Albert City moved on to Phase II in SFY 2017, treatment upgrades which included ammonia removal and disinfection. The City borrowed an additional $1 million in a 20-year loan and $2.7 million with a loan term of 30 years. Albert City received 30% loan forgiveness for the entire project based on being a disadvantaged community. The 30-year term also helped keep user rates lower.

The SRF programs are based on partnerships to provide effective financing tools, streamlined procedures, and exceptional service to program participants.

The most important partnership is between the SRF and the assistance recipients. These are Iowa's cities, counties, rural water systems, sanitary districts, farmers, livestock producers, homeowners, watershed organizations, and others.

With any government program, there are requirements that must be met to become eligible to participate. The SRF is no different. SRF recipients must comply with a variety of state and federal regulations, so the goal of the SRF staff is to make that compliance as easy as possible. One of the ways that SRF helps borrowers navigate the process is to conduct required environmental reviews on their behalf. These reviews can become complicated when, as in this example, historic properties might be impacted:

- ***The Des Moines Metro Wastewater Reclamation Authority (WRA)*** needed to construct an interceptor sewer running several miles through older residential, commercial, and industrial areas as well as crossing the Des Moines River. The route had the potential to impact cultural resources such as cemeteries, brick streets, brick sewers constructed by the Works Progress Administration, and streetcar rails. SRF staff helped negotiate a Programmatic Agreement between the WRA, State Historic Preservation Office, Office of State Archaeologist, and the U.S. Army Corps of Engineers to allow the project to move forward.

The partnership between the state agencies that administer the SRF programs and their governing boards is crucial to success. Iowa statute directs the Iowa Department of Natural Resources (DNR) and the Iowa Finance Authority (IFA) to jointly operate the SRF. DNR, with oversight by the Iowa Environmental Protection Commission, handles program prioritization, project permitting, environmental review, and EPA compliance. IFA covers financial management, issues bonds, disburses loan funds, and services loans. While each partner carries out their individual responsibilities, they coordinate on programmatic and financial strategies to make the most effective use of the funding.

Another partnership is between the federal government and the state. The U.S. Congress created the SRF programs in the Clean Water Act and the Safe Drinking Water Act and provides annual appropriations via the U.S. Environmental Protection Agency (EPA). The annual capitalization grants form the core of the SRFs but leveraged bonds, repayments and interest expand the reach of the federal investment. Iowa's SRFs have delivered almost $3.00 in assistance for every $1.00 of federal funds.

Within the broad framework set by the legislation, federal regulations, and EPA guidance, states have flexibility to set their own priorities and manage their own programs. In Iowa, that flexibility has allowed the SRF to target the specific needs of our state and to develop new program tools when needed. These include planning and design loans, extended term financing, linked deposit mechanisms for funding nonpoint source practices, and sponsored projects.

Another set of partnerships is between DNR/IFA and the other organizations that implement or help with certain SRF programs. These include:

- The Iowa Department of Agriculture and Land Stewardship, which, under contract to DNR, provides technical expertise for loan programs for both agricultural and urban water quality practices.

- The Soil and Water Conservation Districts commissioners and staff, who deliver loan programs at the local level and work directly with farmers, landowners, and others.

- County environmental health boards and staff, who participate in a program to help homeowners replace failing onsite septic systems.

There are also more than 400 lending institutions across the state that make low-costs loans available to borrowers through a linked deposit arrangement with the SRF.

- ***First Whitney Bank & Trust*** in Atlantic, Iowa, was named SRF Top Lender of the Year during the Conservation Districts of Iowa conference in August 2016. First Whitney has financed more than $636,000 through the SRF since 2006, assisting 26 landowners with water quality improvements. "I commend First Whitney Bank & Trust for their commitment to ensuring that Iowa landowners have access to affordable financing to make vital water quality projects a reality," said Iowa Finance Authority Executive Director David Jamison.

Coordination between SRF and other funding agencies makes costly infrastructure projects possible.

Joint funding that combines SRF loan dollars and grants from other agencies is crucial to making projects to upgrade their water and wastewater infrastructure more affordable for many communities. While SRF offers the lowest loan rates, many of Iowa's small and disadvantaged cities need additional help in the form of grants.

Iowa's SRF staff work closely with the Iowa Economic Development Authority (IEDA), which implements the federally funded Community Development Block Grant (CDBG) program to plan and implement coordinated funding. During SFY 2017, IEDA switched from an annual CDBG funding cycle to quarterly. This allowed more effective matching of CDBG and SRF efforts since SRF also operates on a quarterly basis.

To qualify for CDBG, the percentage of low- and moderate-income (LMI) residents must be at least 51%. "Low-income" is less than 50% of the area's median income, and "moderate-income" is less than 80%. The following are examples of co-funding between CDBG and SRF:

- The ***City of Bedford***, population 1,440, received a $500,000 grant, allowing them to reduce their borrowing from the Drinking Water SRF to $350,000. Sixty-seven percent of Bedford's population is LMI. The City had prepared an Asset Management Plan for the system, which indicated the risk level for the various parts of the distribution system and which needed to be monitored and which replaced. The funded project allowed the City to replace those crucial segments as well as to loop the water lines to improve water pressure and prevent health and safety issues.

- The ***City of Clarence***, population 974, funded a project to reline and repair sanitary sewers and replace manholes to control inflow and infiltration. The LMI percentage for Clarence's residents is 53%. Clarence qualified for a $300,000 grant from CDBG and borrowed the remaining $1.3 million from the Clean Water SRF.

SRF planning and design (P&D) loans are helpful to communities even when they don't use SRF for construction financing. P&D loans, since they are offered at 0% interest and no fees for up to three years, can be used by communities to prepare to compete for the most advantageous funding sources.

- In June 2016, the ***City of Walnut*** borrowed $170,000 through a Drinking Water SRF P&D loan to cover the costs of preparing a Preliminary Engineering Report (PER) for a new well. The new well will give Walnut a redundant source of water. Having a PER allowed the City to apply for and receive a combination of CDBG and U.S. Department of Agriculture-Rural Development (USDA-RD) funding in SFY 2017.

The USDA-RD typically provides its recipients with loan funding in combination with their grants, so projects co-funded with SRF are rare. However, during SFY 2017 one project was jointly funded:

- ***Denison Municipal Utilities*** experienced drought conditions in 2012 which caused concerns for their ability to produce a consistent quantity and quality of water to meet demand. Denison received $500,000 from USDA-RD under the Emergency and Imminent Community Water Assistance Grant program. The Drinking Water SRF evaluated trends in usage and production and funded the construction of three new alluvial aquifer wells with a $1.6 million loan.

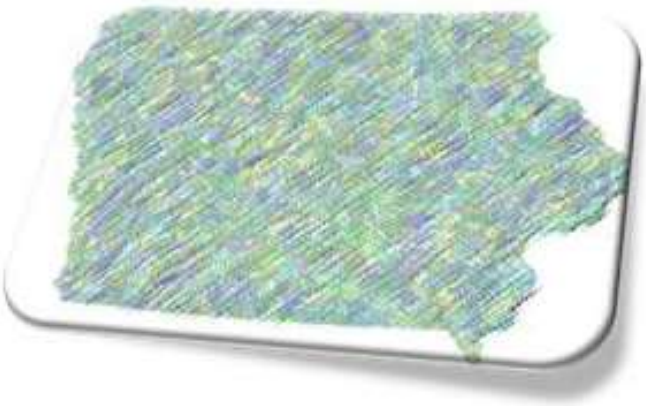
The programs discussed above are all federally funded. Currently Iowa has no water/wastewater infrastructure funds available.

Conclusion

Individual communities in Iowa face challenges in providing safe drinking water, meeting regulatory requirements for wastewater treatment, replacing aging infrastructure, and planning for shrinking or growing population. Nationally, $600 billion is needed for water infrastructure improvements over the next 20 years. In Iowa, surveys show more than $10 billion worth of needs.

Iowa's SRF program cannot meet all of those needs, but it continues to be an effective and cost-efficient vehicle for financing projects to protect water quality and public health, as intended by Congress and state policy-makers. Iowa dynamically manages its SRF to fully utilize available resources, serve its borrowers, and create opportunities for innovative financing. Iowa's results are visible in the pages of this report.

Iowa's SRF issues two bookend documents each year for the Clean Water SRF and the Drinking Water SRF: The Intended Use Plans (IUPs) at the beginning of the year outline the goals and objectives for each program area, and the Annual Reports at the end of the year show results and accomplishments and how well the goals and objectives were met. Detailed information is included in the Clean Water SRF and Drinking Water SRF Annual Reports which follow, covering July 1, 2016 through June 30, 2017.

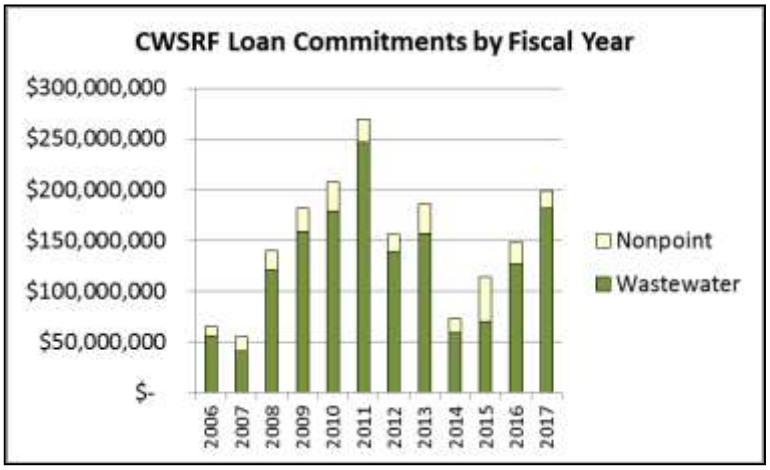


ANNUAL REPORT

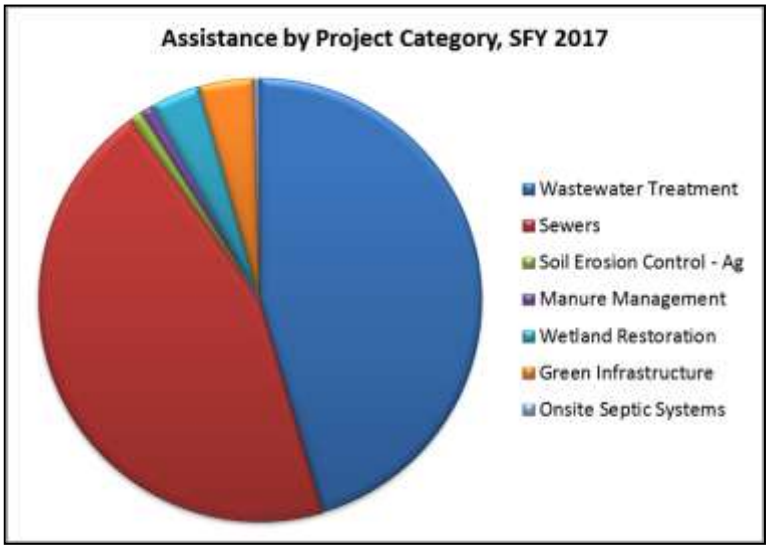
Clean Water State Revolving Fund
Fiscal Year 2017

The goals and objectives for the Clean Water SRF were laid out in the state fiscal year (SFY) 2017 Intended Use Plan (IUP), which was updated quarterly. This annual report examines the activities carried out and the progress made toward meeting those goals.

As of the end of June 2017, the CWSRF has entered into net financial commitments totaling $2,166,000,000, including $263 million for nonpoint source pollution control. During SFY 2017 the CWSRF executed new assistance agreements totaling $198 million. This total represents an increase over the previous year's total of $148 million, as shown in the graph.



The CWSRF funds publicly owned wastewater and sewer infrastructure, shown in the pie chart under Wastewater Treatment, Sewers, and Combined Sewer Separation. Ninety percent of the CWSRF dollars in SFY 2017 went to these needs. The remaining dollars went to both publicly and privately owned projects in the nonpoint source area, including Onsite Septic Systems, Green Infrastructure, Wetland Restoration, Manure Management, and Agricultural Soil Erosion Control Practices.



CWSRF Goals and Accomplishments

The primary long-term goal of the Iowa CWSRF is to protect the environment and public health and welfare through a perpetual financial assistance program. Shorter-term goals and objectives were established in the SFY 2017 IUP. The goals and progress toward meeting them are discussed below.

Goal: Commit loan funds to as many recipients as possible in accordance with the state priority rating system, the IUP, staff resources, and available funding, in order to assist in the construction of projects with the highest water quality impacts. During SFY 2017, the Intended Use Plan was updated quarterly. A total of 43 requests for wastewater infrastructure construction financing and 37 planning and design loan applications were added to the IUP project priority list. Loan funds were committed only after the projects had received construction permits, an environmental review was conducted, and bidding documents were reviewed for cost eligibility.

During SFY 2017, the DNR's Wastewater Engineering Section (WES) project managers accomplished the following project milestones to help move CWSRF projects toward loan readiness and completion. The permitted projects addressed numerous wastewater needs of Iowa communities to provide a wide range of environmental benefits - reduce/eliminate CSOs and SSOs, eliminate a surface water discharge, wastewater service, infiltration/inflow reduction, treatment capacity expansion for growth, address unsewered community needs, address aging infrastructure, improve system reliability with new infrastructure, ammonia reduction, pathogen reduction/public health protection:

- Conducted 47 project initiation meetings to assist applicants, engineers and planners understand the planning, permitting and loan process;
- Approved 21 anti-degradation alternatives analyses evaluating less degrading reasonable treatment alternatives;
- Approved 45 facility plans/engineering reports recommending the selected project alternative and site;
- Issued 56 construction permits and plans and specifications approval;
- Reviewed 58 sets of bid documents for CWSRF eligibility of project costs; and
- Conducted 29 final inspections relating to 39 construction permits to close out CWSRF projects.

Customer feedback surveys were sent after project initiation meetings, facility plan approvals and construction permits. The surveys were sent to applicants and engineering consultants. The responses rated mostly good and excellent for the CWSRF project planning and construction permitting effort. The following comments were provided:

- "Engineer stated that the meeting helped the City understand the process and was well done by IDNR staff. The City stated that the DNR staff followed an agenda, professional and educational, and answered all questions."
- "DNR staff quickly answered or looked into all questions professionally and immediately."
- "Project Manager was very easy to work with and very timely in responses. We look forward to working with PM again on future projects."
- "Good communication and example of working together. DNR Project Manager was efficient and let us know of questions and following up in a timely manner."
- "Project Manager was extremely easy to work with and made very available for questions and provided timely responses to all submissions. We look forward to working with PM again in the future."
- "Very pleased with quick turnaround time on the review of the facility plan."
- "DNR asked a question to clarify our submittal and approved it before I had a chance to call and follow up on status."

Goal: Require applicants to engage a registered Municipal Advisor (MA). Beginning in SFY 2015, SRF projects are required to have a registered MA work with the community to analyze the current income and expenses of the utility, assist with setting rates and advise the community on financial planning. The purpose of this SRF

requirement is to give SRF borrowers the professional support they need to ensure their wastewater utility will be financially sound. The SRF program pays up to $4,000 for MA expenses because we believe financial sustainability is so important. In SFY 2017, a total of $40,000 was paid in MA fees to ten communities that have CWSRF projects.

Goal: Implement the "Use of American Iron and Steel (AIS)" requirements enacted by Congress on January 17, 2014. During SFY 2017, SRF staff identified which wastewater projects were covered by AIS and which were exempt. Although most projects did not have exemptions, they were still possible for projects which had construction permits issued or planning and design loans executed prior to the deadline. Phased projects were also considered exempt. For those wastewater projects which have to comply, SRF staff developed revised front-end specifications which included the new requirements, suggested contract language, and template certifications and materials checklists. SRF staff continued to answer questions from consultants and owners concerning what is covered by AIS, and consulted with EPA when needed. During SFY 2017, site visits were conducted by DNR Field Office staff. The purpose of the site visits is to check compliance status and provide education about AIS requirements.

Goal: Fund green projects to meet the requirements of the Green Project Reserve. During SFY 2017, Iowa met and exceeded the Green Project Reserve requirements for the FFY 2010-2016 cap grants, as shown in the table. Additional green projects were completed during SFY 2017 and will be reported when the FY 2017 capitalization grant is received.

FFY	GPR Required	GPR Actual	%
2010	$5,515,000	$5,516,792	100%
2011	$3,997,000	$12,042,485	301%
2012	$1,912,800	$3,924,060	205%
2013	$1,806,900	$3,477,000	192%
2014	$1,897,600	$2,480,000	131%
2015	$1,900,300	$29,329,179	1543%
2016	$1,808,300	$4,788,500	265%
TOTAL	**$18,837,900**	**$61,558,016**	**327%**

Goal: Apply additional subsidization available in FFY 2011 – 2014 and FFY 2016 capitalization grants to disadvantaged community projects and green projects. Iowa has provided loan forgiveness based both on disadvantaged status and as an incentive for innovative, green projects. As shown in the chart, for each cap grant year there has been a minimum and maximum amount allowed. Additional subsidization was optional for the FY 2015 capitalization grant.

FFY	Minimum	Maximum	Actual	% of Minimum
2010	$4,129,860	$13,766,200	$4,491,767	109%
2011	$1,851,928	$6,173,093	$2,918,377	158%
2012	$1,063,065	$1,594,597	$1,548,000	146%
2013	$851,127	$1,276,691	$1,276,000	150%
2014	$1,032,630	$1,548,944	$1,548,000	150%
2015	$0	$5,700,900	$0	n/a
2016	$1,808,300	$7,233,200	$1,838,300	102%
TOTAL	**$10,736,910**	**$37,293,625**	**$13,620,353**	**127%**

Goal: Comply with EPA guidance on reporting under the Federal Funding Accountability and Transparency Act (FFATA). SRF has identified a primary borrower, the ***Des Moines Wastewater Reclamation Authority (WRA)*** that is meeting the several requirements of FFATA and equivalency, which include:

- Section 602(b)(14) of the Clean Water Act: "A contract to be carried out using funds directly made available by a capitalization grant…for program management, construction management, feasibility studies, preliminary engineering, design, engineering, surveying, mapping, or architectural related services shall be negotiated in the same manner as a contract for architectural and engineering services is negotiated under Chapter 11 of title 40, United States Code…."
- Federal socioeconomic cross-cutters.
- Federal environmental cross-cutters.
- EPA signage guidance.
- Single audit requirements.

WRA executed a $40 million loan in December 2016 for construction of the East Side Interceptor Sewer. This loan was reported to satisfy FFATA reporting for an equivalent amount of the following capitalization grants:

- FFY 2015: $18,879,000
- FFY 2016: $18,083,000

Goal: Comply with EPA guidance on cost and effectiveness requirements under Section 602(b)(13) of the Clean Water Act, which states: "Beginning in (federal) fiscal year 2016, the State will require as a condition of providing assistance…that the recipient of such assistance certify…that the recipient – A) has studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project…; and B) has selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account – i) the cost of constructing the project or activity; ii) the cost of operating the project or activity over the life of the project or activity; and iii) the cost of replacing the project or activity." During SFY 2017 CWSRF required those borrowers whose applications were received after October 1, 2015 to submit a self-certification form indicating compliance with this requirement.

Goal: Promote and identify sustainable practices in projects proposed for funding. In 2010 the U.S. Environmental Protection Agency issued a policy to make water and wastewater utilities, and the communities they serve, more sustainable. The policy provided four strategies for EPA and the states, and the table below shows the strategies and Iowa's efforts to implement them during SFY 2017.

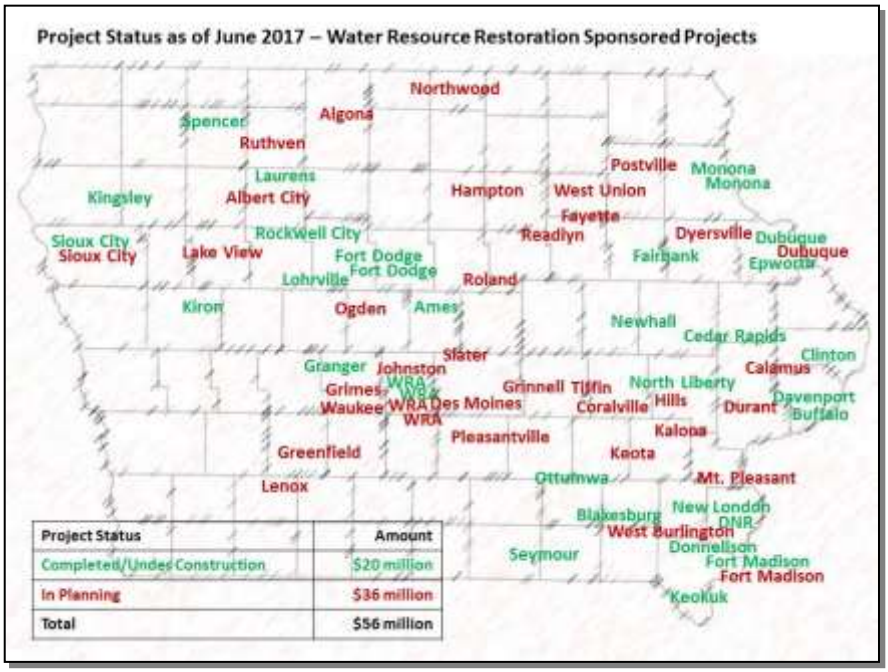
Strategy	Implementation	SFY 2017 Outcomes
Promote planning processes that support sustainability	Iowa participates in training sessions to inform potential borrowers about using SRF to implement sustainable practices	During SFY 2017, SRF staff made presentations on CWSRF opportunities at the following conferences and workshops: • July 2016, Agricultural Drainage Workshop, Clear Lake • September 2016, Iowa League of Cities annual conference, Des Moines • September 2016, Community Development Block Grant application workshop, Ankeny • October 2016, Growing Sustainable Communities annual conference, Dubuque • October 2016, One Water Iowa Listening Session, Ankeny • October 2016, Water Resource Restoration Sponsored

	Iowa provides planning and design (P&D) loans to assist communities with project development	Project Workshop, Johnston • October 2016, American Council of Engineering Companies meeting, Ankeny • December 2016, Story County Conservation Board water quality workshop, Ames • January 2017, Iowa House of Representatives Environmental Protection committee meeting, Des Moines • February 2017, Watershed Symposium, Dubuque • February 2017, Iowa Rural Water Association annual conference, Des Moines • February 2017, Chariton Valley Planning and Development annual meeting, Moravia • February 2017, Iowa Certified Landscape Professionals annual meeting, Cedar Rapids • March – April 2017, six Iowa Water Environment Association small community workshops in New Hampton, Lake City, Washington, Eagle Grove, Monroe, and Red Oak • June 2017, Iowa Water Environment Association annual conference, Ottumwa • June 2017, Kirkwood Community College Water Conference, Cedar Rapids As shown in CWSRF Exhibit 2, 35 communities received planning and design loans during SFY 2017.
Encourage community sustainability	The Clean Water SRF promotes green infrastructure and sustainable storm water practices	A loan to the ***City of Johnston*** allowed them not only to provide sewer and upgraded water service to an area previously on septic tanks, but to install practices to infiltrate storm water. The City, with SRF assistance, is moving ahead with several additional sustainable projects. Loan amendments for 11 sponsored projects totaling $5.5 million were executed. The sponsored projects allowed communities to implement sustainable green infrastructure practices. The ***City of Storm Lake*** used $4.6 million in SRF financing during SFY 2016 to implement two major green infrastructure efforts. The City Manager, Jim Patrick, was recognized in March 2017 with an Iowa Stormwater Award by the Iowa Stormwater Education Partnership.
Promote sustainable water and	Iowa SRF requires that borrowers work with a municipal advisor to set rates	This ensures that the utility can sustain itself without the need for grant or other non-user generated funds.

wastewater systems	sufficient to repay debt service while maintaining the system.	
Target SRF assistance	Iowa's SRFs promote the "fix-it-first" approach for water and wastewater infrastructure in existing communities and prohibit "speculative growth"; required additional subsidization is used for disadvantaged communities and green projects.	CWSRF sewer rehabilitation and inflow/infiltration correction projects: ***Cities of Ames, Atkins, Clarence, Duncombe, Grimes, Harris, Hartford, Nora Springs, Roland, Ruthven, and Union*** The ***City of Albert City*** received loan forgiveness as a disadvantaged community for a two-phase project to tighten up the sewer collection system and then to make wastewater treatment upgrades.

Goal: Continue to implement the Water Resource Restoration Sponsor Program authorized in Iowa Code 384.84. As of the end of SFY 2017, $56 million has been committed to 65 projects. During SFY 2017, fourteen new sponsored project applications were accepted from the ***Cities of Algona, Coralville, Des Moines, Fort Dodge, Grinnell, Hills, Lenox, Mount Pleasant, Pleasantville, Readlyn, Roland, and Waukee, and from the Wastewater Reclamation Authority***.

The map shows the status of each project as of June 2017 and indicates the progress that was made on sponsored projects during SFY 2017.



Loan amendments for 11 sponsored projects were signed during SFY 2017, including the following:

Borrower	Project Description	Sponsored Project Amount
City of Blakesburg	Grade stabilization project to control erosion in a creek that bisects Lagoon Road, which is the access road for the wastewater treatment facility. Some minor re-grading and native vegetation was placed to direct and filter surface water flowing to a new inlet on the north side of the road through a culvert underneath the road to the grade stabilization structure on the south side of the road.	$28,000
City of Durant	Replacement of a half block of South 6th Street with permeable pavers in order to treat and infiltrate storm	$558,000

	water runoff. Conversion of an urban storm water drainage ditch to a bioswale in order to treat and infiltrate storm water runoff. Conversion of agricultural row crop land to native prairie vegetation in order to reduce agricultural runoff to the stream along the property and create a riparian buffer along a portion of the stream. These practices will also serve to demonstrate and educate the public on the benefits of urban storm water best management practices in order to garner favor to construct more of these practices in the future.	
City of Epworth	Installation of permeable pavers and two biocells in the Western Dubuque High School parking area. The purpose of the practices is to improve water runoff quality through increased infiltration resulting in the treatment and removal of urban pollutants. These include suspended solids, motor oils off the parking lot, and trash. The infiltration practices also slow down the volume of water into a tributary of Whitewater Creek, reducing erosion of the streambanks.	$389,000
City of Fairbank	Installation of permeable pavers in parking areas and an alley in the downtown area to prevent runoff of pollutants into the Little Wapsipinicon River. The downtown business district is a highly impervious environment, with storm water discharging directly into the river. The Little Wapsi flows through Fairbank, with a low-head dam that creates an impoundment which is used for boating, fishing, and other recreation. A city park exists along the riverbanks and on an island in the impoundment. The project will protect the water quality of this valuable resource to the citizens of Fairbank.	$325,000
City of Fort Dodge	Completion of the project to stabilize a 30-foot eroding vertical bank on Solider Creek in Snell Crawford Park in order to eliminate sediment loading from the continued erosion of the bank. Slope stabilization methods included re-aligning the stream channel away from the bank, stone toe protection, bend- way weirs, soil lifts to create a stable bank slope, erosion control and native vegetation plantings and seed on the newly created bank.	$108,000
City of Fort Madison	Restoration of a segment of Dry Creek between Avenue A and Richards Drive. Dry Creek is a tributary to the Mississippi River and is a healthy, wooded, and sandy stream in its upper reaches. A stream assessment identified issues of bank erosion and failure in the lower reaches inside the city limits. The project included removal of materials used in previous stabilization attempts, reconstruction of a stable stream channel with rock riffles to dissipate energy in the creek downstream of storm water culverts.	$324,000

City of Keokuk	Permeable roads within Rand Park and a permeable parking lot at 5th and Main streets. Rain water flows through the permeable surface and is filtered and cooled as it moves down into a 2-3 foot-deep rock chamber. The water is then infiltrated into the ground or discharged to the storm sewer system if the rock chamber is full. The permeable surface at Rand Park and the 5th Street parking lot consists of brick pavers that collect water through small gaps between each paver.	$828,000
City of North Liberty	Implementation of a soil quality restoration program and installation of permeable pavers, bioswales, and native landscaping in Centennial Park. The City of North Liberty is in the Clear Creek and Muddy Creek subwatersheds, tributaries to the Iowa River. Rapid development has led to increased runoff and stream erosion. The goal of the project is to water runoff quality through increased infiltration and removal of sediment, nitrates, bacteria, and other pollutants. The City offered rebates to residential and commercial property owners to aerate and apply compost to turf grass areas. The improved soil is more able to infiltrate and manage rainfall.	$1,426,000
City of Rockwell City	Construction of bioretention cells which temporarily pond storm water and infiltrate it slowly through engineered soil mixture and rock layers. Rockwell City is located in the Prairie Pothole Region of Iowa, with clay soils and flat terrain which make it a challenge to manage runoff. The biocells are designed to infiltrate the smaller rain events which transport the most pollutants off city streets and surrounding agricultural land and prevent them from entering Lake Creek.	$94,000
City of Sioux City	Storm water best management practices at Southern Hills Mall to capture and infiltrate storm water from a portion of the Southern Hills Mall roof and parking lot runoff in order to treat urban pollutants found in surface runoff and reduce flows to the storm sewer and Quick Creek. Practices include construction of a bioretention cell, enhanced raingarden, soil quality restoration and native landscaping.	$474,000
Wastewater Reclamation Authority	Four Mile Creek stream restoration north of Broadway Avenue to address priority areas identified in the Four Mile Creek Watershed Management plan in order to reduce sediment loading to the stream. Stream restoration methods included: stone toe protection, bend-way weirs, bank sloping and flood plain benches, establishment of native vegetation on the sloped banks, and flood plain benches.	$924,000
	TOTAL	**$5,478,000**

Several communities received awards and recognition for their sponsored projects during SFY 2017, including the following:

- Three sponsored projects received one of the annual Governor's Iowa Environmental Excellence Awards in July 2016: ***City of Clinton***, for green infrastructure; ***City of Donnellson***, for agricultural and urban water quality practices; and the ***City of Monona***, for green infrastructure.
- ***The City of Kiron's*** bioswale project was featured in the October 11, 2016 edition of the *Denison Bulletin*, with the headline, "A win-win for water quality: Kiron project shows respect for those downstream."
- The Dubuque area Catfish Creek project was profiled in the *Working for Clean Water* publication of the Iowa Department of Natural Resources. The article was titled, "Community rallies behind Catfish Creek."
- "Clinton goes green for stormwater," was the title of another feature in *Working for Clean Water* on the ***City of Clinton's*** green infrastructure sponsored project.
- The American Public Works Association's *Reporter* February 2017 edition included an article titled, "Innovations for Interest: how Iowa is multiplying the water quality impacts of its State Revolving Fund." The article was written by Amy Foster, the ***City of Coralville's*** storm water coordinator.

Iowa SRF staff also presented the sponsored project program during three national/international events in SFY 2017:

- October 2016, Council of Infrastructure Financing Authorities annual conference, Austin, TX
- December 2016, A Community on Ecosystem Services international conference, Jacksonville, FL
- April 2017, U.S. EPA/U.S. Forest Service webinar

The sponsored projects effort is successful due to the partnership between the SRF and the Iowa Department of Agriculture and Land Stewardship urban conservationists. These staff members received Iowa Stormwater Awards in March 2017 from the Iowa Stormwater Education Partnership.

Goal: Comply with the EPA Signage Guidance. During SFY 2017 SRF issued news releases and posted regular IUP updates that showed loans signed. Each month, the SRF program sends out a press release listing all the SRF loans that were signed in the past month. The press release lists the names of the loan recipients, the amount of each loan, a description of each project and a contact for each community for more information. Many of the local papers are eager to print these releases.

Goal: Update the CWSRF Operating Agreement. The objective of working with EPA Region 7 to update the Clean Water SRF Operating Agreement between DNR and EPA was not met. This goal will be carried over into SFY 2018.

Goal: Work with other state and federal agencies to coordinate water quality funding. During SFY 2017, the CDBG program adopted a quarterly application schedule. According to an Iowa Economic Development Authority news release, "Starting in January 2017, IEDA began soliciting applications for the Water and Sewer Fund on a quarterly basis. Moving from an annual application process to a quarterly application process better aligns with the State Revolving Fund review and approval process, which provides matching fund for the majority of CDBG water and sewer infrastructure projects."

SRF staff also met regularly with staff from the Community Development Block Grant (CDBG) program and USDA Rural Development.

Goal: Apply program requirements that are simple and understandable and do not add unnecessary burdens to applicants or recipients. During SFY 2017 SRF staff continued to assist applicants with completing the federal cross-cutting requirements for environmental and historical review. The SRF environmental review staff completed 56 assessments, including:

- 35 categorical exclusions (CXs); and
- 21 full assessments that ended in Findings of No Significant Impact (FNSIs).

Customer satisfaction surveys were sent when the environmental reviews were completed. The surveys were sent to project owners, engineering consultants, and grant administrators. The cumulative average score through the end of SFY 2017, with 5 indicating highest satisfaction, was 4.3.

The following comments were typical of the level of satisfaction:

- Consulting engineer on wastewater treatment facility upgrade project: "I always appreciate that this happens so smoothly in the background. Not many things are so reliable! Great job! Thanks!"
- Consulting engineer on lagoon improvement project: "Great staff and very professional and patient with questions and requests!!"
- City official on lagoon expansion project: "I appreciate the correspondence so I am informed."
- Consulting engineer on wastewater treatment facility upgrade project: "Did well at communicating the environmental review process, schedule, and needs."
- City official on collection system and wastewater treatment improvement project: "Thank you for explaining and helping us especially since this is all new! Thanks."

Goal: Continue the option of extended financing terms for CWSRF infrastructure projects. Applicants seeking extended financing complete a worksheet outlining the anticipated life of the project components and their related costs. That worksheet produces a weighted average which determines the extended term between 20 and 30 years. During SFY 2017, the following communities took advantage of extended terms for their SRF loans: Calamus, Deloit, Fort Madison, Northwood, Postville, and the Wastewater Reclamation Authority.

Goal: Maintain mechanisms for funding the on-going administration of the program if federal funding is reduced or eliminated. During SFY 2017 initiation and servicing fees were collected on CWSRF loans for deposit to administrative accounts outside the SRF. Funds to administer the Clean Water SRF program come from capitalization grants and from loan fees.

Goal: Manage the CWSRF to maximize its use and impact through sound financial management. SRF staff and financial advisors continually monitor the financial health of the fund. The Iowa CWSRF program uses its equity fund to originate loans. When a sufficient number of loans have been made, the SRF program issues bonds, backed by those CWSRF loans, and uses the bond proceeds to replenish the equity fund. The leveraging capacity of the CWSRF is robust due to the maturity of the fund and the current loan portfolio. SRF staff has analyzed the future financial capacity of the CWSRF in light of the discussion over water quality standards and other future wastewater needs. Using relatively conservative assumptions, it is projected that the CWSRF could loan an average of $300 million per year over the next 10 years, or a total of $3 billion.

Goal: Implement programs that effectively address water quality needs and target appropriate audiences. The Iowa SRF currently has a diverse suite of programs and financing tools with which to address the state's water quality needs. The programs are geared to specific audiences, such as cities, farmers, rural homeowners,

livestock producers, and others. During SFY 2017 SRF staff also educated users and potential users about the program offerings through presentations, displays, program materials, project meetings, and the IowaSRF.com website.

During SFY 2016 Iowa's SRF had revived the "Advanced SRF" training effort. Two workshops were held in SFY 2017, for the City of Des Moines/Wastewater Reclamation Authority, and for southeast Iowa communities in cooperation with French-Reneker Associates. The training covers the features, processes and procedures of the State Revolving Fund programs. It provides borrowers, consulting engineers, council of governments staff, and others a chance to review requirements, clarify issues, ask questions, and discuss possible program improvements.

Clean Water SRF Program Data

1. Publicly Owned Wastewater and Sewer Facilities

During SFY 2017, several SRF milestones were tracked to indicate project status, including when the loan was signed, when construction was started, and when the facility initiated operations.

The Clean Water SRF Intended Use Plan (IUP), as amended throughout the year, included requests for P&D and construction loans. The total list of projects that were included on the IUP during SFY 2017 is shown as CW Exhibit 1.

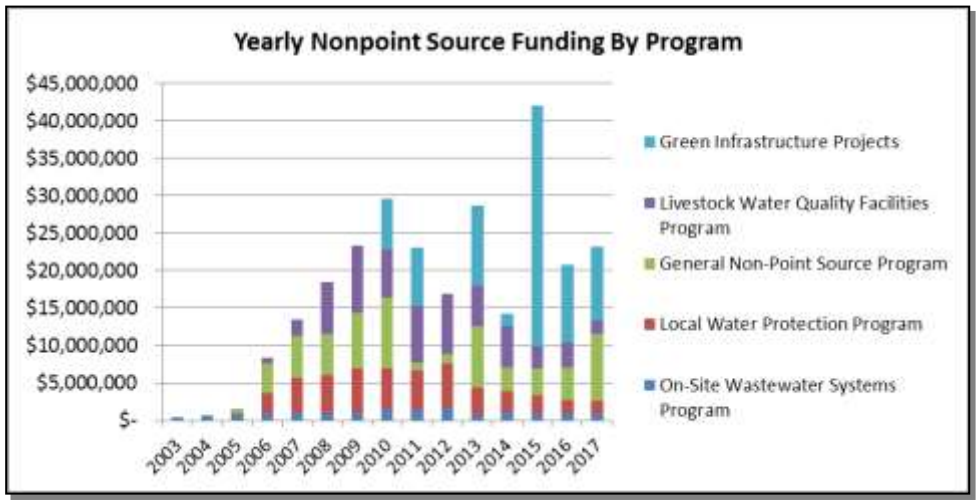
CW Exhibit 2 shows the planning and design (P&D), construction loans, and sponsored project loans signed during SFY 2017. Binding commitments totaling $191,557,007 were executed (adjusted net total was $178,369,162). Loans ranged from a $28,000 sponsored project with the ***City of Blakesburg***, to a $35,000 P&D loan to the ***City of Melbourne*** to pursue a wastewater treatment upgrade, to $40 million to the ***Wastewater Reclamation Authority*** for their East Side Interceptor project.

CW Exhibit 2A shows that during SFY 2017, 43 projects reported construction starts. A total of 42 projects reported that they had initiated operations, as shown in CW Exhibit 2B.

CW Exhibit 2C is a list of projects for which the environmental and historical review process was completed during SFY 2017. These reviews resulted in either a Categorical Exclusion (CX) or a Finding of No Significant Impact (FNSI). DNR issued 35 CXs and 21 FNSIs.

2. Nonpoint Source Programs

During SFY 2017, a total of $23 million was loaned to farmers, livestock producers, homeowners, cities, and watershed organizations to mitigate or prevent nonpoint source pollution. The loans were delivered through several targeted programs. The total provided for nonpoint source loans cumulatively



is almost $265 million.

Onsite Wastewater Systems Assistance Program (OSWAP). OSWAP continues to be a tool to meet Iowa's goal of addressing the widespread problem of inadequate septic systems, with $868,812 in loans during SFY 2017. Low-interest loans for septic system replacement have been useful since time of transfer legislation took effect.

Local Water Protection Program (LWPP). The LWPP is administered by the Iowa Department of Agriculture and Land Stewardship's Division of Soil Conservation. Disbursements in the program for SFY 2017 totaled $1.7 million.

LWPP's focus is on practices that prevent soil erosion and address sediment and nutrient control on agricultural land. Many LWPP loans are made in conjunction with other state and federal cost-share grants. However, about 20% of the borrowers do not receive cost-share and are borrowing the total project amount. This shows the importance of loan programs in putting more practices on the land, used alone or to supplement other financial assistance.

Livestock Water Quality Facilities (LWQ) Program. The LWQ program is available for facilities that are not designated as Concentrated Animal Feeding Operations (CAFOs). Facilities over 1,000 animal unit capacity are automatically considered CAFOs, but CAFOs can also be designated based on pollution discharges.

In SFY 2017, $1.8 million was disbursed for linked deposits to facilitate LWQ loans, an increase from the previous year. LWQ loans can be used in conjunction with EQIP (Environmental Quality Incentive Program) grants from the U.S. Department of Agriculture, or can cover up to 100% of the water quality components of projects.

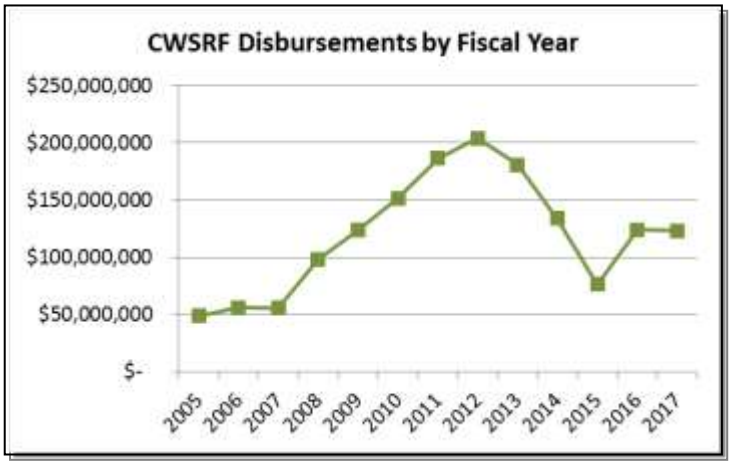
General Non-Point Source (GNS) Program. The GNS program was established to cover a wide range of possible water quality-related projects and practices. Eight loans were executed in SFY 2017, totaling $8,805,400, through the Iowa Natural Heritage Foundation, which works with the DNR, county conservation boards, and other partners to purchase land to protect streams, rivers, lakes, and wetlands.

Green Infrastructure. Green infrastructure projects, using innovative storm water infiltration practices, were funded during SFY 2017 for a total of $9.9 million. These included a loan to the City of Johnston and 11 sponsored projects.

Clean Water SRF Financial Data

Binding Commitments. CW Exhibit 2 details the projects and loan types and amounts for planning and design loans and construction loans for wastewater infrastructure projects, and for sponsored projects attached to wastewater loans.

Sources of Funds. CW Exhibit 4 shows the sources of CWSRF funds on a cash basis for the period July 1, 2016 to June 30, 2017. During the period, the State of Iowa received draws on federal capitalization grants for projects and administration. Actual investment interest is shown.



Disbursements. CW Exhibit 8 shows the proportionality of federal draws to the disbursements.

a. *Loan disbursements* - As can be seen in CW Exhibit 7, loan disbursements during SFY 2017 totaled $122,988,000. Disbursements are back on an upward trend after peaking and dropping from 2011 through 2015.

b. *Bond costs of issuance* - The Cost of Issuance Fund is outside the CWSRF. However, the EPA has asked the state to report on the Cost of Issuance Fund, as it is funded with state bond proceeds. The reason the Cost of Issuance Fund is outside the CWSRF is to avoid the crediting of costs of issuance to the state's 4% administrative expense ceiling. Otherwise, this fund is reported herein as a CWSRF account.

c. *Administrative costs* - As shown in CW Exhibit 6, $5,204,000 was disbursed, or accrued, for program administration in SFY 2017. Included in this total are trustee and bond counsel fees, Iowa DNR and IFA administrative costs, contracts for nonpoint source program operation, financial advisor services and program consulting services.

d. *Interest on bonds* - Also shown in CW Exhibit 6, $24,208,000 was disbursed, or accrued, for payment of interest on bonds to bond holders.

e. *Grants and aid* - Recent appropriations have included a requirement to provide principal forgiveness. CW Exhibit 6 shows that no disbursement were made in SFY 2017 that are intended to be forgiven and not repaid.

Total operating expenses for SFY 2017 were $29,412,000 as shown in CW Exhibit 6.

Financial Statements. CW Exhibit 5 is a statement of net assets prepared on an accrual basis for the Iowa CWSRF as of June 30, 2017 and June 30, 2016. As of June 30, 2017, the CWSRF had total assets of $1,433,465,000. The Cost of Issuance Fund is outside the CWSRF but is included in this report as previously mentioned.

CW Exhibit 6 is a statement of revenues, expenses, and changes in net assets on an accrual basis for SFY 2017 and SFY 2016. CW Exhibit 7 is a statement of cash flows.

Credit Risk of the CWSRF. Each of the three rating agencies rates Iowa SRF bonds AAA. That rating comes from the diversity of the loan portfolio, the substantial balance sheet and the cross-collateralization of the CW and DW bonds.

State rules require that recipients demonstrate their ability to provide necessary legal, institutional, managerial, and financial capability to complete the project. Each SRF loan is backed by either a revenue bond or a general obligation bond.

Clean Water SRF Benefits Data

The environmental benefits of the Clean Water SRF program are tracked through a U.S. EPA project database. Iowa reports environmental benefits for construction projects, whether they are wastewater infrastructure or nonpoint source projects. Planning and design loans have yet to result in actual impacts so no environmental benefits are reported for them. Iowa's SFY 2017 data show the following results per EPA's definitions.

Impact Human Health. Wastewater treatment systems are required to meet water quality standards that protect human health and aquatic life. For human health, systems typically must meet A1 (primary contact recreation use), A2 (secondary contact recreation use), or A3 (children's contact recreation use). For SFY 2017, 81% of the Clean Water SRF funds went to wastewater systems with human health requirements in their discharge permits. In

particular, eleven communities installed wastewater disinfection systems to meet more stringent discharge limits for bacteria to meet the designated use of the receiving stream.

Achieve or Maintain Compliance: Assistance for sewer and wastewater infrastructure projects generally helps communities either maintain their compliance with their NPDES discharge permit, or make upgrades to achieve that compliance.

For SFY 2017:

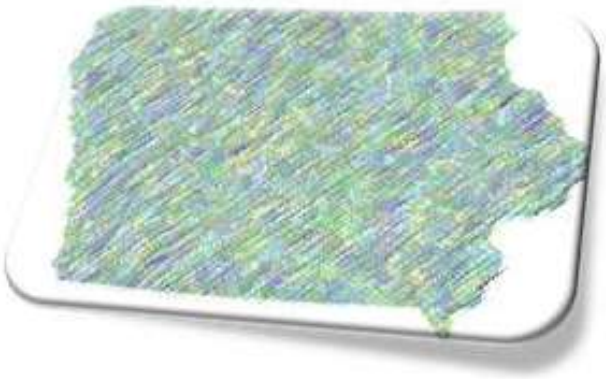
- 25% of facilities/systems receiving assistance were out of compliance before the project and will be in compliance at project completion
- 75% of facilities/systems were in compliance before the project and have a lower risk of falling out of compliance after the project

Improve or Maintain Water Quality: According to EPA, to contribute to water quality "improvement," a project must reduce pollutant loading to the receiving waterbody. A project that simply sustains the treatment capacity of a facility counts for water quality "maintenance." These definitions were developed primarily for Section 212 POTW (point source) projects.

Iowa has applied the "improvement" criteria to nonpoint source projects as well since they also reduce pollutants to groundwater, streams, and lakes.

For SFY 2017:

- 30% of the funds, including both point source and nonpoint source loans, were for the purpose of improving water quality
- 70% of the funds will help point sources maintain water quality

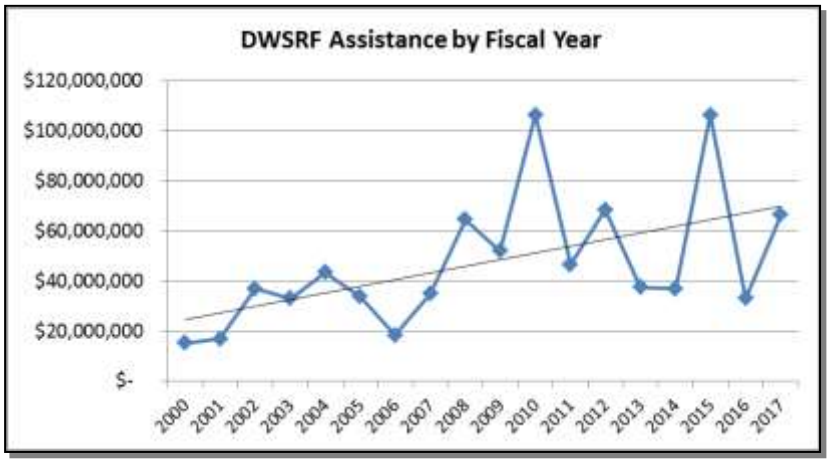


ANNUAL REPORT

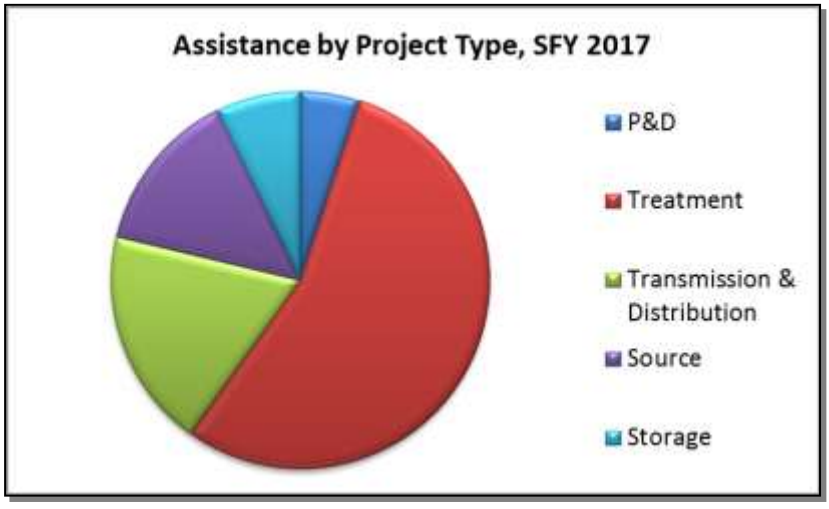
Drinking Water State Revolving Fund
Fiscal Year 2017

The goals and objectives for the Drinking Water SRF were laid out in the state fiscal year (SFY) 2017 Intended Use Plan (IUP), which was updated quarterly. This annual report examines the activities carried out and the progress made toward meeting those goals. As of the end of June 2017, the Drinking Water SRF has entered into loan commitments totaling $813 million. The program funds projects to help public water supplies provide safe drinking water and protect public health.

During SFY 2017, the Drinking Water SRF signed loan commitments totaling $66 million, up from $33 million in the previous fiscal year. This included 23 construction loans. As shown in the graph, the dollar amount of loans may vary widely from year to year. The spikes in 2010 and 2015 are attributable to the federal stimulus and a $76 million loan, respectively. During SFY 2017, two large loans of $8 million and $22 million were executed.



The largest amount of dollars, $34 million, was used for water treatment upgrades. Other uses during SFY 2017 were for transmission and distribution, source water (e.g. new wells), and water storage.



Planning and design loans to 15 water systems will allow them to prepare for future upgrades and needs.

The DWSRF is also an important source of funding for Iowa's public water supply program. The DWSRF allows up to 31% of federal capitalization grants to be set aside for other activities supporting the

goals of the Safe Drinking Water Act. During SFY 2017, DWSRF set-asides were used for technical assistance to small systems, state water program management, and capacity development and source water protection staffing.

Drinking Water SRF Goals and Accomplishments

The primary long-term goals of the Iowa DWSRF are to support the protection of public health through a perpetual program of financial assistance for the purposes of constructing facilities to properly and adequately treat drinking water, protecting source water for drinking water systems, and ensuring the long-term viability of existing and proposed water systems.

Shorter-term goals and objectives were established in the SFY 2017 IUP. The goals and progress toward meeting them are discussed below.

Goal: Commit loan funds to as many recipients as possible in accordance with the state priority rating system, the IUP, staff resources, and available funding. During SFY 2017, the Intended Use Plan was updated quarterly. A total of 27 requests for construction financing, and 17 planning and design loan applications, were added to the IUP project priority list. Loan funds were committed only after the projects had received construction permits, an environmental review was conducted, and bidding documents were reviewed for cost eligibility.

During SFY 2017, the DNR's Water Supply Engineering (WSE) project managers accomplished the following to help move DWSRF projects toward loan readiness:

- Reviewed 26 Intended Use Plan applications
- Approved 23 preliminary engineering reports for DWSRF projects
- Issued 28 construction permits, 37 approvals, and 64 supplements for DWSRF projects
- Reviewed 27 sets of bid documents for DWSRF eligibility
- Conducted 14 final inspections of DWSRF projects

Goal: Ensure that borrowers are able to provide safe drinking water at a reasonable cost for the foreseeable future. During SFY 2017, viability assessments were completed by each applicant and reviewed by SRF staff prior to signing the loan agreement. Systems determined nonviable were provided with an enforceable compliance schedule listing all actions that must be completed to return the system to viable status.

Since 2000, the DNR has worked to implement a strategy to assist public water supply systems in developing their technical, financial, and managerial capacity as required by the federal Safe Drinking Water Act amendments of 1996. The activities completed during FFY 2016 were detailed in a separate document entitled, "Report on the Capacity Development Program for the Period October 1, 2015 through September 30, 2016," submitted to EPA on October 18, 2016. In addition, the "Report to the Governor: Water Safe to Drink in Iowa," which summarizes three years of effort in the Capacity Development program, was published September 30, 2017.

Goal: Require applicants to engage a registered Municipal Advisor (MA). Beginning in SFY 2015, SRF projects are required to have a registered MA work with the community to analyze the current income and expenses of the utility, assist with setting rates and advise the community on financial planning. The purpose of this SRF requirement is to give SRF borrowers the professional support they need to ensure their water utility will be financially sound. The SRF program pays up to $4,000 for MA expenses because we believe financial sustainability is so important. In SFY 2017, a total of $33,375 was paid in MA fees to nine communities that have DWSRF projects.

Goal: Implement the "Use of American Iron and Steel (AIS)" requirements enacted by Congress on January 17, 2014. During SFY 2017, SRF staff identified which drinking water projects were covered by AIS and which were exempt. Although most projects did not have exemptions, they were still possible for projects which had construction permits issued or planning and design loans executed prior to the deadline. Phased projects were also considered exempt. For those drinking water projects which have to comply, SRF staff developed revised front-end specifications which included the new requirements, suggested contract language, and template certifications and materials checklists. SRF staff continued to answer questions from consultants and owners concerning what is covered by AIS, and consulted with EPA when needed.

During SFY 2017, site visits were conducted by DNR Field Office staff. The purpose of the site visits is to check compliance status and provide education about AIS requirements.

One AIS waiver request was received during SFY 2017. It was reviewed for completeness and forwarded to the U.S. EPA in June 2017. As of the date of this annual report the waiver request has not been approved.

Goal: Apply additional subsidization available in FFY 2010 - FFY 2016 capitalization grants to disadvantaged communities and public health projects. Iowa has provided loan forgiveness based on public health, disadvantaged status, and as an incentive for innovative, green projects. As shown in the chart, for each cap grant year there has been a minimum and maximum amount allowed.

FFY	Minimum	Maximum	Actual	% of Minimum
2010	$ 6,950,700	$23,200,000	$6,976,336	100%
2011	$ 4,746,300	$15,821,000	$4,786,555	101%
2012	$ 3,064,400	$ 4,596,600	$3,064,000	100%
2013	$ 2,875,000	$ 4,312,500	$2,896,004	101%
2014	$ 2,645,800	$ 3,968,700	$2,656,838	100%
2015	$ 2,626,400	$ 3,942,600	$2,091,088	79%
2016	$ 2,486,400	$ 6,216,000	$0	0%

To be able to allocate the remaining required additional subsidization from the 2015, 2016, and upcoming 2017 capitalization grants, SRF adopted a policy in the SFY 2016 IUP that the following projects would be eligible for loan forgiveness:

- To address immediate public health threats: up to 75% loan forgiveness
- For green projects, including water and energy efficiency: up to 30% loan forgiveness
- To incentivize the installation of emergency backup power: up to 75% loan forgiveness

Applications were accepted for inclusion on the SFY 2017 IUP. In addition, projects already on the SFY 2016 IUP were qualified for loan forgiveness.

The following projects executed loans and received loan forgiveness (D = Disadvantaged, PH = Public Health, G=Green Project, EP=Emergency Power) during SFY 2017.

Type	Project	Loan Amount	% of Loan Forgiveness
PH	***City of Dyersville***	$1,373,000	75% of project cost
PH	***City of Farley***	$1,200,000	75% of project cost
EP	***City of Hawkeye***	$1,005,000	75% of cost of emergency generator
EP	***City of Marshalltown***	$8,344,000	75% of cost of emergency generator
D	***City of Ralston***	$550,000	40% of project cost
EP	***City of Solon***	$1,891,000	75% of cost of emergency generator

Goal: Promote and identify sustainable practices in projects proposed for funding. In 2010 the U.S. Environmental Protection Agency issued a policy to make water and wastewater utilities, and the communities they serve, more sustainable. The policy provided four strategies for EPA and the states, and the table below shows the strategies and Iowa's efforts to implement them during SFY 2017.

Strategy	Implementation	SFY 2017 Outcomes
Promote planning processes that support sustainability	Iowa participates in training sessions to inform potential borrowers about using SRF to implement sustainable practices Iowa provides planning and design (P&D) loans to assist communities with project development	During SFY 2017, SRF staff made presentations on DWSRF opportunities at the following conferences and workshops: • September 2016, Iowa League of Cities annual conference, Des Moines • September 2016, Community Development Block Grant application workshop, Ankeny • October 2016, One Water Iowa Listening Session, Ankeny • October 2016, American Council of Engineering Companies meeting, Ankeny • January 2017, Iowa House of Representatives Environmental Protection committee meeting, Des Moines • February 2017, Iowa Rural Water Association annual conference, Des Moines • February 2017, Chariton Valley Planning and Development annual meeting, Moravia • June 2017, Kirkwood Community College Water Conference, Cedar Rapids As shown in DWSRF Exhibit 2, 15 communities received planning and design loans during SFY 2017.
Encourage community sustainability	The Drinking Water SRF promotes green practices such as upgrades to water meters	Loan forgiveness for installation of or upgrades to water meter systems was allocated to six projects during SFY 2017. Each of these projects will receive 30% loan forgiveness on the purchase and installation of water meters, remote read systems, and water usage monitoring programs.
Promote sustainable water and	Iowa SRF requires that borrowers work with a municipal advisor to set rates	This ensures that the utility can sustain itself without the need for grant or other non-user generated funds.

wastewater systems	sufficient to repay debt service while maintaining the system.	
Target SRF assistance	Iowa's SRFs promote the "fix-it-first" approach for water and wastewater infrastructure in existing communities and prohibit "speculative growth"; required additional subsidization is used for public health projects, disadvantaged communities and green projects.	DWSRF water main replacement projects were financed in: ***Cities of Bedford and Johnston*** Loan forgiveness is discussed above.

Goal: Comply with EPA guidance on reporting under the Federal Funding Accountability and Transparency Act (FFATA). During SFY 2017, the following loans were reported for the corresponding capitalization grants:

Borrower Name	DWSRF Number	FFATA Amount	FFATA Report Date	Capitalization Grant Year
Marshalltown Water Works	FS-64-16-DWSRF-005	$4,828,000	August 2016	FFY 2014
Marshalltown Water Works	FS-64-16-DWSRF-005	$3,516,000	August 2016	FFY 2015
City of North Liberty	FS-52-14-DWSRF-020	$7,626,000	March 2017	FFY 2015
City of North Liberty	FS-52-14-DWSRF-020	$13,096,000	March 2017	FFY 2016

Goal: Comply with the EPA Signage Guidance. During SFY 2017 SRF issued news releases and posted regular IUP updates that showed loans signed. Each month, the SRF program sends out a press release listing all the SRF loans that were signed in the past month. The press release lists the names of the loan recipients, the amount of each loan, a description of each project and a contact for each community for more information. Many of the local papers are eager to print these releases.

Goal: Update the DWSRF Operating Agreement. The objective of working with EPA Region 7 to update the Drinking Water SRF Operating Agreement between DNR and EPA was not met. This goal will be carried over into SFY 2018.

Goal: Prioritize the provision of funds, to the extent practicable, to projects that address the most serious risk to human health and are necessary to ensure compliance with the national primary drinking water standards. Project managers continued to utilize the Project Scoring System outlined in 567 IAC Chapter 44 to score projects; projects that address a human health risk receive a relatively higher score to indicate their priority. Projects addressing high priority issues are provided with loan forgiveness.

During SFY 2017 SRF staff worked closely with DNR field office, water supply operations, and water supply engineering staff to provide incentives to systems on the EPA's Enforcement Tracking Tool list. For example, ***Lacina Meadows Homeowners Association (HOA)*** has exceeded the Maximum Contaminant Level for radium

for several years. With 75% loan forgiveness offered, DNR staff encouraged the HOA to apply for Drinking Water SRF. First, the HOA received a planning and design loan in March 2017 which provided them with funds to pay an engineering consultant to explore solutions, including a possible connection to the City of Iowa City. An agreement was signed between the City and HOA in April 2017. Second, when Lacina Meadows is ready for construction, the DWSRF construction loan with loan forgiveness will be available.

Goal: Apply program requirements that are simple and understandable and do not add unnecessary burdens to applicants or recipients. During SFY 2017 SRF staff continued to assist applicants with completing the federal cross-cutting requirements for environmental and historical review. The SRF environmental review staff completed 26 assessments, including:

- 14 categorical exclusions (CXs); and
- 12 full assessments that ended in Findings of No Significant Impact (FNSIs).

Customer satisfaction surveys were sent when the environmental reviews were completed. The surveys were sent to project owners, engineering consultants, and grant administrators. The cumulative average score through the end of SFY 2017, with 5 indicating highest satisfaction, was 4.3.

The following comments were typical of the level of satisfaction:

- City official on water system consolidation project: "There are many steps involved in the environmental review process and the SRF ER specialist helped guide us along."
- Consulting engineer on project to connect a homeowners association to a municipal water system: "The ER specialist: 1) provided pro-active explanations to client (a small rural subdivision completely unfamiliar with SRF; 2) provided response time of just hours after client submittals for issuance of notices and FNSI; and 3) very professional, pleasant, and helpful."
- Consulting engineer on water meter replacement project: "The ER specialist helped immensely in explaining the process and the rules which made it easier and efficient for the project. Plus TIMELY! Thanks."
- Consulting engineer on well and water main project: "The ER specialist was very helpful and accommodating throughout the review process. She provided status updates and reminders for outstanding items that needed to be completed."

Goal: Continue the option of extended financing terms for DWSRF infrastructure projects. In SFY 2016 the Iowa SRF Program got approval to offer extended term financing for all DWSRF projects. Applicants seeking extended financing complete a worksheet outlining the anticipated life of the project components and their related costs. That worksheet produces a weighted average which determines the extended term between 20 and 30 years. No borrowers used extended financing in SFY 2017.

Goal: Maintain mechanisms for funding the on-going administration of the program if federal funding is reduced or eliminated. During SFY 2017 initiation and servicing fees were collected on DWSRF loans for deposit to administrative accounts. Funds to administer the Drinking Water SRF program come from capitalization grants and from loan fees.

Goal: Manage the DWSRF to maximize its use and impact through sound financial management. SRF staff and financial advisors continually monitor the financial health of the fund. The Iowa DWSRF program uses its equity fund to originate loans. When a sufficient number of loans have been made, the SRF program issues bonds, backed by those DWSRF loans, and uses the bond proceeds to replenish the equity fund. The leveraging

capacity of the DWSRF is robust due to the maturity of the fund and the current loan portfolio. SRF staff has analyzed the future financial capacity of the DWSRF in light of the discussion over water quality standards and other future wastewater needs. Using relatively conservative assumptions, it is projected that the DWSRF could loan an average of $100 million per year over the next 10 years, or a total of $1 billion.

Goal: Implement programs that effectively address water system needs and target appropriate audiences. During SFY 2017 SRF staff educated users and potential users about the program offerings through presentations, displays, program materials, project meetings, and the IowaSRF.com website.

Drinking Water SRF Program Data

1. Loan Projects
During SFY 2016, several SRF milestones were tracked to indicate project status, including when the loan was signed, when construction was started, and when the facility initiated operations.

The Drinking Water SRF Intended Use Plan (IUP), as amended throughout the year, included requests for P&D and construction loans. The total list of projects that were included on the IUP during SFY 2017 is shown as DW Exhibit 1.

DW Exhibit 2 shows the planning and design (P&D) and construction loans signed during SFY 2017. Binding commitments totaling $66,504,350 were executed (adjusted net total was $59,568,332). Loans ranged from a $70,000 P&D loan for the ***City of Murray*** to pursue water distribution system improvements, to the ***City of North Liberty's*** $22 million construction loan for a new water treatment plant.

DW Exhibit 2A shows that during SFY 2017, 22 projects reported construction starts. A total of 24 projects reported that they had initiated operations, as shown in DW Exhibit 2B.

DW Exhibit 2C is a list of projects for which the environmental and historical review process was completed during SFY 2017. These reviews resulted in either a Categorical Exclusion (CX) or a Finding of No Significant Impact (FNSI). DNR issued 14 CXs and 12 FNSIs.

2. Set-Asides
States are allowed to take or reserve up to 31% of each federal capitalization grant for a number of activities that enhance the technical, financial, and managerial capacity of public water systems and protect sources of drinking water. There are four different set-asides, including:

- Small System Technical Assistance (2% of capitalization grants)
- DWSRF Administration (4%)
- State Program Management (10%), requires a 1:1 match with state funds
- Other Authorized Uses (15%, with no more than 10% to any one activity)

During SFY 2017, DNR used set-aside funds to accomplish goals and proposed activities set forth in the DWSRF Set-Aside Workplan approved by EPA. These items are briefly summarized below.

Technical Assistance for Small Systems. Through a contract with Des Moines Area Community College (DMACC), DNR provided training for 43 operators to become certified Grade A operators (smallest community systems) and additional training for continuing education credits for 107 existing Grade A operators.

A two-day course was held for DNR Parks employees with Grade 1 and Grade 1 Water Treatment Certifications, with 22 in attendance.

Through a contract with DMACC, the Grade A curriculum was updated, including a resource manual and powerpoint presentation.

DNR administered 1,188 operator certification exams during SFY 2017. The examinations are offered at 6 locations around the state and can be scheduled any business day at the operator's convenience. In the 2005 Annual Operator Certification Report, the last year paper examinations were given once a month, there were 139 small systems that did not have a properly certified operator. In the 2017 Report, there were 24 small systems. The convenience of offering electronic exams, daily, in every region facilitates better compliance when it comes to properly certified operators.

Iowa is a small system state, with 97.5% of the public water supply systems classified as small systems. All community and non-transient non-community systems are required to have a properly certified operator for the water treatment and water distribution facilities. The operator certification examination process benefits all systems and operators by making it more convenient to take the examination at the time and place that is beneficial to the operator. Several of the large system operators also run small systems as affidavit operators.

DWSRF Administration. This set-aside was used for the administration of the DWSRF, with $453,455 expended. Work included the following:

- Reviewed 26 new applications for listing on the IUP
- Approved 23 DWSRF reports
- Issued 28 permits, 37 approvals, and 64 supplements for DWSRF projects
- Conducted 14 final construction inspections
- Updated the NIMS report on 9/7/2016
- Submitted the annual program report to EPA on 9/29/2016
- EPA completed the DWSRF annual program audit of the Iowa program on 1/18/2017
- Completed 13 archaeological assessments

The Iowa Finance Authority completed one bond issue and executed 38 planning and design and construction loans.

State Program Management. This set-aside was used for the implementation of all activities associated with the Public Water Supply Supervision program not covered by other funding, including the following:

- Completion of four quarterly meetings with U.S. EPA
- Issuance of project approvals for non-DWSRF projects, including 27 reports (reviewed), 564 construction permits, 199 approvals, and 129 supplements
- Ongoing design and support for the SDWIS and safe drinking water databases
- Provided 7 wasteload allocations for discharging public water supplies
- Completed two Influenced Groundwater determinations and worked on three others
- Approved seven contact time determinations and nine corrosion control studies

Note: 50% funded from this Set-aside ($907,214), and 50% funded from State sources ($907,214).

Other Authorized Uses. The primary uses of this set-aside in SFY 2017 were for the development of technical, managerial, and financial capacity for Iowa's public water supplies and for the coordination and administration of the Source Water Protection program. Accomplishments included:

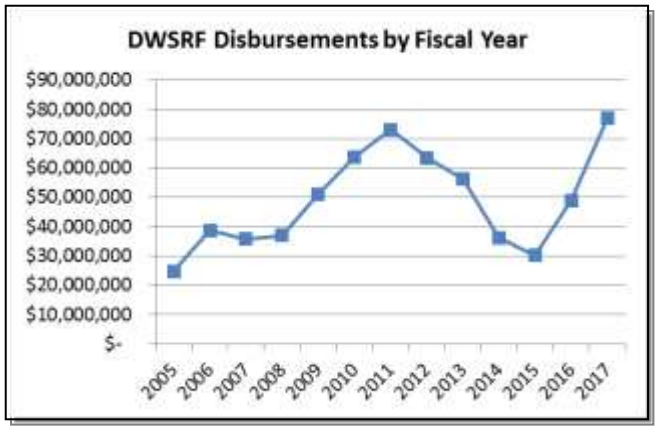
- Sanitary surveys completed: 554 completed by DNR and 104 completed by counties via 28-E agreements
- Technical assistance contacts (DNR) including compliance follow-up and assistance: 1,771
- Number of additional onsite visits completed: 233 by DNR; 246 by counties via 28-E agreements
- Capacity development reviews for SRF applicants, new systems, and existing systems as required: 23
- Number of public water supplies assisted through Iowa Association of Municipal Utilities contract: 58
- Two comprehensive performance evaluation training events
- Number of new Phase 1 Source Water Protection Plan (SWPP) reports: 18
- Number of existing Phase 1 SWPP reports updated: 759
- Number of updates to Phase 2 Source Water Plans (SWP): 7
- Number of completed Phase 2 SWPs: 2
- Number of systems in the Phase 2 SWP development and implementation process: 8
- Contract with Conservation Districts of Iowa for two staff to develop Phase 2 plans: two staff were hired, one located in Spencer ESD FO and one in Atlantic ESD FO.
- Project for surveillance of the cyanotoxin microcystin in the source waters at Iowa CWS project, with weekly sampling of raw water at the intakes of 28 plants (26 systems) for 51 weeks.

Drinking Water SRF Financial Data

Binding Commitments. DW Exhibit 2 details the projects and loan types and amounts.

Sources of Funds. DW Exhibit 4 shows the sources of DWSRF funds on a cash basis for the period July 1, 2016 to June 30, 2017. During the reporting period, the State of Iowa received draws on federal capitalization grants for loan projects and set-aside expenditures. Interest earnings on investments actually received are shown.

Disbursements. DW Exhibit 8 shows the proportionality of federal draws to the disbursements and verifies that the federal participation to date does not exceed that allowed.



a. *Loan disbursements* - As can be seen in DW Exhibit 7, loan disbursements during SFY 2017 totaled $76,983,000. Disbursements are back on an upward trend after peaking and dropping from 2011 through 2015.

b. *Bond costs of issuance* - The Cost of Issuance Fund is outside the DWSRF. However, the EPA has asked the state to report on the Cost of Issuance Fund, as it is funded with state bond proceeds. The only reason the Cost of Issuance Fund is outside the DWSRF is to avoid the crediting of costs of issuance to the state's 4% administrative set-aside ceiling. Otherwise, this fund is reported herein as a DWSRF account.

c. *Set-aside costs* - As shown in DW Exhibit 6, $4,714,000 was disbursed, or accrued, for program administration, technical assistance for small systems, state program management, and other authorized uses.

DW Exhibit 10 shows how DWSRF program set-aside funds have been disbursed or reserved from each capitalization grant. The set-asides used in Iowa include administrative, technical assistance to small systems, local assistance and other authorized activities, and state program management. Administrative expenditures are described above. Technical assistance, other authorized activities and state program set-asides are used primarily for staff support and contractual assistance.

d. *Interest on bonds* - As shown in DW Exhibit 6, $8,372,000 was disbursed, or accrued, for payment of interest on bonds to bond holders in SFY 2017.

e. *Grants and aid*. Recent appropriations included a requirement to provide principal forgiveness. DW Exhibit 6 shows that $5,355,000 in loan disbursements were made in SFY 2017 that are intended to be forgiven and not repaid. Total operating expenses for SFY 2017 were $13,061,000 as shown in DW Exhibit 6.

Financial Statements. DW Exhibit 5 is a statement of net assets prepared on an accrual basis for the Iowa DWSRF as of June 30, 2017 and June 30, 2016. As of June 30, 2017, the DWSRF had total assets of $556,796,000. The Cost of Issuance Fund is outside the DWSRF but is included in this report as previously mentioned.

DW Exhibit 6 is a statement of revenues, expenses, and changes in net assets on an accrual basis for SFY 2017 and SFY 2016. DW Exhibit 7 is a statement of cash flows.

Credit Risk of the DWSRF. Each of the three rating agencies rates Iowa SRF bonds AAA. That rating comes from the diversity of the loan portfolio, the substantial balance sheet and the cross-collateralization of the CW and DW bonds.

State rules require that recipients demonstrate their ability to provide necessary legal, institutional, managerial, and financial capability to complete the project. Each SRF loan is backed by either a revenue bond or a general obligation bond.

Public Health Benefits of DWSRF Projects

As stated in the 2016 U.S. EPA *Drinking Water State Revolving Fund Eligibility Handbook*:

"The principal objective of the DWSRF is to facilitate compliance with national primary drinking water regulations or otherwise significantly advance the public health protection objectives of the Safe Drinking Water Act (SDWA)."

Each DWSRF project is evaluated for the public health and other benefits it will provide. The table below outlines the benefits of construction loans executed in SFY 2017.

Borrower	DWSRF No.	Benefits Description
City of Alta	FS-11-16-DWSRF-011	The project involved installation of a replacement well for one of two wells. The well had failed because of casing failure. The community was reduced to one well active without redundancy. The project was needed to provide for a back-up water source.
City of Bedford	FS-87-15-DWSRF - 016	Water mains under Main Street and Highway 148/2 had deteriorated and experienced constant water main breaks. This

		project is replacing the existing water main. The new water main will minimize a pathway for contamination to the distribution system.
City of Coralville	FS-52-15-DWSRF-008	Construction includes new aerators for water quality improvement and dual media filters, chlorine system replacement, and electrical/controls, to provide redundancy and adequate capacity to meet demand within the design period. The City is also rehabilitating its ground storage reservoir for reliability.
Denison Municipal Utilities	FS-24-16-DWSRF-004	Denison experienced drought conditions in the past and has had long-lasting impacts on the groundwater levels in the alluvial aquifer. The project includes expansion of the utility's well field which will help the conservation of the groundwater resources, allow efficiency in managing the well field, i.e. draw-downs and pumping sequences, and mitigate operational threats such as de-submerging the pumps.
City of Dyersville	FS-31-15-DWSRF-003	The project addresses radium removal from well water to meet Maximum Contaminant Level (MCL) requirements. The community had received a Notice of Violation from DNR for Radium MCL exceedance. As a project that addresses an immediate public health issue, Dyersville received 75% loan forgiveness.
City of Farley	FS-31-16-DWSRF-001	Farley experienced a Radium MCL exceedance. The proposed Hydrous Manganese Oxide treatment system will help Farley into compliance. As a project that addresses an immediate public health issue, Farley received 75% loan forgiveness.
City of Grimes	FS-77-16-DWSRF-003	The City's water facility was lacking in storage for lime needed for the water softening process at the water treatment plant. Additional storage is being added through this project.
City of Hawkeye	FS-33-13-DWSRF-007	Replacement of the failing back-up well will provide redundancy to the city's water supply. The project also includes replacing all 2" water mains with 4" water mains for provide better pressure and flow to customers. Water main looping is part of this project to eliminate dead-ends and deterioration of water quality. The City also installed an emergency generator and received 75% loan forgiveness for the cost and installation.
City of Hull	FS-84-14-DWSRF-023	The new connection to Rock Valley Rural Water increases the City's capacity to meet water demand. The City imposed water restrictions for several years.
City of Johnston	FS-77-16-DWSRF-018	The project scope includes the oldest neighborhood in Johnston. The water distribution system in this area is aging with failing private septic systems. This project also includes a CWSRF loan to fund replacing the septic systems with a sanitary sewer system. The aging water distribution system will be replaced. The water main project will help by minimizing pathways for water main contamination and to accommodate the alignment of the new sanitary sewer system as these systems are limited by narrow streets and right-of-way.
Marshalltown Water Works	FS-64-16-DWSRF-005	The existing 1.5 million gallon ground storage reservoir was structurally unsound. A new 2.0 million gallon ground storage

		reservoir will be constructed to replace the existing one. An existing 1 million gallon ground storage reservoir will be rehabilitated. The project also involves rehabilitation of the water treatment plant to bring it up to standards to maintain compliance. The City received 75% loan forgiveness for the cost and installation of an emergency generator.
City of New London	FS-44-11-DWSRF-001 2	This supplemental loan allowed the City to complete the replacement of aging and deteriorated infrastructure at the water treatment plant to meet reliability standards.
City of North Liberty	FS-52-14-DWSRF-020	A new water treatment plant was needed as there would be insufficient water to meet demand in less than 5 years due to rapid population growth in North Liberty.
City of Palmer	FS-76-16-DWSRF-020	The City's water treatment plant removes iron from well water. Backwash water was being discharged to a nearby water body. In 2013 the City was issued an Administrative Order with a National Pollutant Discharge Elimination System permit. Rather than install treatment of the backwash water, the City opted to connect to the sanitary sewer. An equalization basin, pump station, and force main were constructed.
City of Pierson	FS-97-17-DWSRF-018	The existing water treatment plan was flooded and was constructed below grade; all controls and electrical equipment were immediately damaged. There was no telemetry links between the wells, water treatment plant and elevated storage tank. The new water treatment plant will be constructed in an area not prone to flooding.
City of Ralston	FS-14-11-DWSRF-034	The city had a single water source. An additional well provides redundancy. Also there are low pressures in the distribution system. The project involved the construction of a second well, booster pump installation, and ancillary treatment plant upgrades.
City of Shenandoah	FS-73-10-DWSRF-065 2	This supplemental loan was for final costs of the construction of a LEED-certified water treatment plant to replace one that was severely deteriorated.
City of Sioux City	FS-97-13-DWSRF-001	The Iowa Department of Transportation is reconstructing and rerouting Interstate 29 through Sioux City. This required the City to relocate and replace water mains in the project area.
City of Solon	FS-52-16-DWSRF-016	The City's population is growing and while water supply and treatment is adequate, the storage capacity was not. The City installed a ground storage reservoir and booster pump station. The City received 75% loan forgiveness for the cost and installation of an emergency generator.
City of Spirit Lake	FS-30-16-DWSRF-021	Zebra mussels, an invasive species, are present in the Iowa Great Lakes and were clogging water system intake lines. The City installed free copper ion feed equipment for zebra mussel control, an additional intake line, and replacement of sections of buried raw water transmission mains.
City of Wahpeton	FS-30-16-DWSRF-014	The City did not have adequate storage to meet demand during the summer months. The project involved construction of a 150,000 gallon elevated storage tank.

West Des Moines Water Works	FS-77-16-DWSRF-022	The existing water supply was below the capacity of the water treatment plant and did not provide adequate redundancy in the event with largest well is out of service. The project involved construction of one Jordan aquifer and two shallow alluvial aquifer wells to provide redundancy of source water supply.