



2017 ANNUAL REPORT

SAINT PAUL REGIONAL WATER SERVICES

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Dear Customers



Safe, reliable drinking water is essential to every community. Saint Paul Regional Water Services (SPRWS) provides that water to more than 435,000 customers in Saint Paul and our surrounding suburban communities. Our staff of 254 employees ensures we are true to SPRWS' mission of providing quality water and services to our customers at a reasonable cost.

In 2017, SPRWS continued its focus on addressing current needs and, at the same time, planning for the future. Even though we experienced our lowest water consumption in more than five decades, our financing plan and rate structure allowed for the continued provision of excellent quality water. In addition, we were able to increase reliability by installing backup generators at our West Saint Paul pumping station, replace eight miles of aging water main, replace an old high-service pump, and provide all the necessary preventive maintenance to our distribution system. All of these revenue-funded initiatives will allow us to continue our rich tradition of providing excellent service.

While these investments in our infrastructure are laid out in our long-term capital plan, we continue to assess other parts of the utility to ensure we have a plan, moving forward, to continually improve. In 2017, we completed an assessment of our 28 miles of buried 60- and 90-inch conduits that bring water from the Mississippi River to the McCarrons treatment plant. The study resulted in a modification to our capital plan to complete some improvements over the next decade to these critical pieces of our system.

Also, we will soon embark on the design of the treatment process improvements to the McCarrons treatment plant. This \$130-million project will upgrade our treatment capability and flexibility so we are better positioned to address any future regulatory changes.

The utility's work to supply, treat, and distribute water; maintain the financial condition of the utility; provide great customer service; and stay abreast of technology was recognized in 2017. The utility was ranked highest in customer satisfaction in the Midwest Region in a 2017 national survey.

As always, I am proud of our accomplishments and the daily efforts put forth by all of our employees. I hope you share in that sentiment and I thank you for your interest in SPRWS.

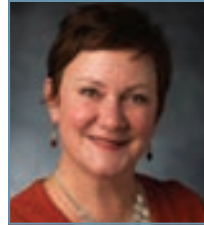
A handwritten signature in blue ink that reads "Steve Schneider". The signature is fluid and cursive, written on a light-colored background.

Steve Schneider,
General Manager

BOARD OF WATER COMMISSIONERS



Matt Anfang
PRESIDENT



Amy Brendmoen
VICE PRESIDENT



Mara Humphrey
COMMISSIONER



Will Rossbach
COMMISSIONER



Jeffrey Dains
COMMISSIONER



Rebecca Noecker
COMMISSIONER



Chris Tolbert
COMMISSIONER

SPRWS DIVISION MANAGERS



Jim Graupmann
ASSISTANT GM



Steve Gleason
BUSINESS



Brad Eilts
DISTRIBUTION



Dave Wagner
ENGINEERING



Jim Bode
PRODUCTION

ADMINISTRATION DIVISION

The administration division offers support services to all areas within the utility as well as direct contact with individual customers and communities at large. The division includes the Business Improvement Unit, safety and security, training and human resources, and the general manager and assistant general manager.



The new emergency planning and security supervisor addresses staff at a safety event.

INTEGRATED WORK TOOLS

Work to integrate our Computerized Maintenance Management System (CMMS) time records with the Infor Human Capital Management module (Infor HCM) was completed.

The CMMS system takes time records, validated against time punch information generated by the Time Attendance and Scheduling System (TASS) into the Infor HCM module. This integration allows for a single point of entry of time into CMMS, which interfaces into TASS and Infor HCM.

NEW EMERGENCY PLANNING AND SECURITY SUPERVISOR

After many months of effort working with human resources, we were able to establish the title of emergency planning and security supervisor, and we hired an employee in that title in August. The timing was good as we needed to respond to an Occupational Safety and Health Administration (OSHA) visit involving our process safety and emergency plans and this employee will help address both of those areas.

At year end, we were well on our way to completing the OSHA requirements. The new position will enable us to better coordinate emergency simulations with other departments and devote more time to developing and maintaining our emergency plans and our security systems.

NEW RESTRICTIONS ON WELLS

The lawsuit between the White Bear Lake Homeowners Association and Lake Restoration Association and the Minnesota Department of Natural Resources (DNR) was completed and a ruling made in August. The ruling compels the DNR to place restrictions on all appropriation permits for wells within five miles of White Bear Lake. SPRWS has a number of wells that are just inside of five miles from the lake, so the restrictions have been placed on our permit. The most impactful restriction is the irrigation ban, required if the lake is below 923.5 feet Mean Sea Level (MSL 1912), which it has been for most of the last ten years and is below now. We are negotiating with the DNR, with the intent of avoiding the ban if we are not using our wells.

LEAD EFFORTS

Our efforts in connection with lead in drinking water continued, though we did not change the policies and procedures developed in 2016. We continued to hand out filter pitchers to all residents who had their lead water service disturbed during the year. We still believe this is good practice to limit lead exposure that typically increases for a few months after work is done on a lead water service. As required, we tested our system in 2017 by sampling services in our system for lead. We passed the test with a 90th percentile level of 11 parts per billion, which is under the action level of 15 parts per billion. We will conduct our next round of required sampling in 2020. We will continue replacing lead water services as part of our capital improvement projects.



NEW WATER MAIN SANITATION PROCEDURE

A new standard operating procedure on water main sanitation practices was completed in time for the 2017 construction season. The goal was to achieve a higher rate of passing bacteriological tests that are required before placing the main in service on the first attempt.

Overall, by the end of the year, we think we have improved our success with passing the tests, and changed our procedures to give us a more sanitary product. One of the changes was adding consecutive testing, which was not done previously. This is an additional test and therefore more chances to fail, but also delivers a more sanitary result in the end. We look forward to 2018 and hope that our results continue to improve.



FUTURE OPERATIONS

Administration will continue directing efforts at the initiatives listed above, and monitor progress in all. We will continue to watch the Lead/Copper Rule as it is changed by the Environmental Protection Agency (EPA), and also the changes possible with our water use as a result of the White Bear Lake lawsuit.

As always, our goal is to be able to budget and finance the projects necessary to keep SPRWS operating as a top-notch utility.

Top of the page: A distribution employee distributes a water pitcher and extra filters as part of our efforts on lead mitigation.

Left: A worker uses the new water main sanitation procedure out in the field.

BUSINESS DIVISION

The business division offers support services to other divisions within the utility as well as direct contact with individual customers and communities at large. The business division includes the five business units of customer service and billing, financial services, information services, meter operations, and public information.

BILLING AND CUSTOMER SERVICE

During 2017, the customer service unit issued approximately 35,600 bills per month or 1,700 bills per business day. Throughout the year, meter reading and water billings continued to meet schedules. Customers' use of electronic payments has continued to expand. In 2017, approximately 50 percent of transactions were processed electronically with nearly 25 percent of payments made via credit card and 25 percent via auto withdrawal from a bank account.

The customer service call center received 164,622 calls in 2017. The call center staff handled 81,706 calls or 50 percent and 82,916 were handled by the self-serve Interactive Voice Response unit (IVR). This equates to approximately 660 calls per business day of which 325 calls were answered by call center staff. The abandoned call percentage remained under 1 percent, substantially lower than our goal of less than 2 percent.

PUBLICATIONS

We produced several external publications, including *Customer Service Connections*, a quarterly newsletter for customers, and the annual *Water Quality Report*.

Internally, we continued to provide employees with communication updates by featuring timely articles in our bi-weekly employee newsletter, the *Pipeline Express*.

CONTINUED LEAD AWARENESS

Information about lead water service line connections was made more available to customers. We developed and compiled information on our website about lead pipe and ways to minimize exposure to lead. A customer can visit our website and find information about lead in drinking water by viewing videos or brochures.

We developed a website where a customer can determine "What is my water service line made of?" This self-serve option has been well received. There is also an interactive map for customers to view showing water service line material across our service area.

METER RELIABILITY AND TESTING

The radio meters are functioning very reliably. As a result, we have continued success basing water bills on actual usage and minimizing estimated bills.

We configured a meter testing data base in the Customer Information System (CIS) and populated record historic test results back to 2013. With this data available, we are creating a comprehensive meter testing schedule with the goal of identifying the optimal interval or accumulated consumption for initiating meter testing and replacing meters by account.

In 2017, we tested all meters 3-inch and larger.

FINANCIAL SERVICES

Financial services staff created and published the 2017 annual financial report; the report was well received by the state auditor and reflected well on SPRWS. The group also published the annual budget and updated a 10-year water rate projection.

In addition, staff worked with engineering and other business staff on a cost of service study for the wholesale city accounts of Roseville and Little Canada. This study was used to develop revised water service agreements and will guide the water rates for the five year period of 2018 - 2022.

Financial services staff work with many systems and applications including the Infor Enterprise Resource Planning (ERP) system, which includes financials, procurement/supply chain, budget, and human capital management; CMMS; TASS; and CIS.

Staff have compiled and provided information necessary for SPRWS to manage its financial position by developing a budget, tracking spending and revenues, processing accounts payable invoices, accounts receivable invoices, collecting and processing payments, providing monthly reports to the managers and Board of Water Commissioners, and ensuring appropriate internal controls.



FUTURE OPERATIONS

In 2018 SPRWS plans to continue a Virtual Desktop Infrastructure (VDI) pilot project. The project offers many potential efficiencies and savings including hardware, programming, backing-up systems and data, and troubleshooting. Target completion is the end of 2019.

In 2018, SPRWS will partner with the city of Saint Paul Public Works department to implement a field mobile/data capture solution for processing work orders and service orders in the field. The solution will integrate with our shared CMMS system and the utility's CIS system.

The city of Saint Paul is upgrading the current Infor Enterprise Resource Planning (ERP) system to the Infor CloudSuite platform. Go-live is planned for January 1, 2019.

The city of Saint Paul and SPRWS are implementing a new Voice Over Internet Protocol (VOIP) digital telephone system. SPRWS will be using VOIP by January 1, 2019, and will no longer receive phone service from Ramsey County.

An upgrade to our CIS on-line payment processing system called Infinity Link will be coming. The enhanced software will offer customers the ability to register on-line to have payments auto drawn from their credit card or bank account, view past bills, and use mobile devices such as a cell phone, tablet and/or computer.

SPRWS plans to select a new business improvement reporting tool to craft reports and provide a dash board.

Accounting staff take inventory in the warehouse.



DISTRIBUTION DIVISION

The distribution division is responsible for the delivery of water from the water treatment plant to the customer. This includes the construction and maintenance of the water distribution system that consists of water mains, valves, service connections, hydrants, and related underground piping infrastructure. The division also includes dispatch, which provides customer service and emergency response 24 hours a day, seven days a week; a garage that maintains all equipment and vehicles; and a warehouse to provide materials required to construct and maintain the distribution system.

PREVENTATIVE MAINTENANCE

We completed the 20-year Uni-Directional Flushing (UDF) project, which involves flushing and operating valves on all eight-inch and smaller mains in the distribution system. UDF will be completed at a pace to complete the entire system every five years going forward.

All public hydrants were inspected and flushed in 2017. This continues the long-term practice of inspecting all public hydrants annually.

REACTIVE MAINTENANCE

SPRWS performs emergency repairs on water mains and services. We also provide water main break repair services to other municipalities outside our service area, responding to main breaks in the city of Oakdale, White Bear Township and the city of Newport. SPRWS repaired 139 main breaks within our service area in 2017.

DISTRIBUTION CAPITAL PROGRAM

Distribution crews completed two large capital projects in addition to the usual water main, hydrant, valve, and service connection work in 2017.

Approximately one mile of water main was replaced in Ford Parkway using the pipe bursting method. SPRWS excavated pits and a contractor pulled High-Density Polyethylene (HDPE) pipe through the old cast iron pipe with pipe bursting equipment. SPRWS completed the pipework required to connect the new pipe to the existing distribution system and reconnect the services.

Distribution crews also replaced 128 lead services with copper in coordination with the Minnesota Department of Transportation (MNDOT) High Bridge project on Smith Avenue.

Work also included replacing 141 of the 9,630 system hydrants during the year.



FUTURE OPERATIONS

In 2018, continued emphasis will be placed on infrastructure replacement. Starting in 2018, twenty percent of the large valves in the distribution system will be exercised.



Opposite page: Crews replace a section of 36-inch main.

Top: Crews install new water main.

Left: Restoration crews put down a layer of asphalt while repairing a section of roadway.



ENGINEERING DIVISION

The engineering division is comprised of five sections: project engineering, agreements, maps and records, plumbing inspection, and damage prevention. The division provides support to the utility in planning and design of projects for our distribution, production, and supply areas of the utility. Work in the division also involves utility locating, construction inspection, and plan review for new development projects. We are committed to providing high quality asset management in the utility.

WATER MAIN CAPITOL IMPROVEMENT PLANNING

In 2017, engineering staff designed and the distribution division constructed 8 miles of water main. This included approximately 6.5 miles of main replacement coordinated in collaboration with street reconstruction projects and 1.5 miles of main replacement in the highest risk category of our prioritization plan for replacement.

We also performed a trial on a new method of water main assessment using acoustical measurement to assess the condition of some of our intermediate-sized

distribution piping. In addition, a desktop prioritization analysis was completed on our large diameter concrete distribution mains.

WEST ST. PAUL BOOSTER STATION IMPROVEMENTS

A back-up generator was installed and electrical improvements were made to this station providing greater reliability of service to the city of West St. Paul.

Top: Employees remove the high service pump.

CONDITION ASSESSMENTS

Condition assessments were in progress for our McCarrons water treatment plant foundation and our raw water supply conduits. The assessment of our raw water conduits was an extensive project involving the field inspection of 28 miles of conduits.

The results of this study indicate that the conduits are in relatively good condition with respect to their age, with some deficiencies and defects that need to be addressed. In addition, significant investment is recommended in order to extend the life of the conduit system into the future.

PARTNERSHIP FOR SAFE WATER DISTRIBUTION

The Partnership for Safe Water is a program developed through the American Water Works Association designed to review, assess and optimize utility operations with the goal of improving performance. We are currently in the process of working through the self-assessment phase of this program for our distribution system, which will continue through much of 2018.

MAPS & RECORDS IMPROVEMENTS

We made strides to further utilize Global Positioning Systems (GPS) technology by working with our distribution division crews to capture as-built information as well as capturing data on upcoming projects to assist with planning. Work was also done to improve the standardization and categorization of our Geographic Information System (GIS) data. In addition, we developed new GIS maps of SPRWS's land ownership, which is quite extensive throughout the supply system.

The engineering division continues to improve asset management, infrastructure, and the operations and efficiency of the utility through its various projects and initiatives.

FUTURE OPERATIONS

IMPROVING INFRASTRUCTURE & INVESTING IN THE FUTURE

Work will begin on one of the largest projects to be done in decades. In 2018, preliminary design work is planned on the upcoming major water treatment plant project involving the construction of new softening basins, ozone, and related processes.

Work on other projects is continuing as a result of recently completed condition assessments, which includes: design for rehabilitation of the historic Highland Park water tower, repairs to our river station, and conduit improvements.

In 2018 we will start a lengthy program to mitigate corrosion and extend the life of the steel conduits.

Installation of a new and more efficient pump at the McCarrons water treatment plant should be completed in 2018. This pump, on our high service system, will supply over half of our residents with water on an average day.

Work on our distribution infrastructure will continue in order to improve our aging buried infrastructure.

A review of the Centerville water supply source will be done to help guide decision making regarding this source of water supply for the future.

IMPROVING CUSTOMER SERVICE & OPERATING EFFICIENTLY

Additional focus on water auditing and leak assessment is being done. We continue to expand the use of technology such as GPS and improve records management. Online plumbing permitting is also being implemented.

PRODUCTION DIVISION

The production division is responsible for processing raw water into finished water, including all the equipment required in the process and the water supply chain in order to provide an adequate supply of high quality water to all customers in the service area. This includes the operation and maintenance of the supply system, wells, the water treatment plant, pumping stations, water towers and reservoirs, and the water quality laboratory. The division is also responsible for regulatory reporting related to water quality, responding to water quality complaints, and public education, which involves giving tours and making presentations.

PRECIPITATION ABOVE NORMAL

Annual production of water in 2017 was, on average, 39.3 million gallons per day (MGD). Precipitation was 4.32 inches above normal for the year at the National Weather Service's weather station at Minneapolis-St. Paul Airport. River levels were also above normal for much of 2017, and drought was not a concern for the metro area. Our total annual pumpage from the McCarrons water treatment plant was 14,349 million gallons; 10,968 million gallons come from the Mississippi River; 1,225 million gallons from groundwater, with the remainder coming as direct precipitation and watershed runoff in the supply system.

SLIGHT INCREASE IN COSTS

Chemical costs were up slightly, with a total chemical expenditure of \$3.4 million. This corresponds to an increase of \$7 per million gallons of water treated. The majority of this increase was caused by contract price increases for chemicals.

Total finished water pumping electrical costs were up slightly in 2017, with a normalized cost of \$90.82 per million gallons compared to \$85.54 per million gallons in 2016.

WATER QUALITY

We had another excellent year of water quality. The McCarrons water treatment plant continued the Partnership for Safe Water's Presidents Award in 2017. We are one of only 31 surface water plants in the country to achieve this level of award. This program ensures safe drinking water from its member systems by promoting optimized treatment plant operation and continuous improvement in the operation, maintenance, administration and design of the facility.

The aesthetic quality of the water also continued to be excellent, with only ten complaints of taste or odor.



IMPROVEMENTS UNDERWAY

A number of improvements were made or undertaken in 2017. An inspection of our supply system conduits from the Mississippi River through the lake chain and to the plant is complete, with recommendations for future rehabilitation work included.

Electrical improvement work to the Hazel Park pump station was completed, as well as installation of a back-up electric generator for the West St. Paul pump station.

Specification and ordering of a new 20-million-gallon demand (MGD) high service pump was done, with delivery expected in June of 2018.

Our largest current project, the plant electrical improvements, is ongoing with completion expected in autumn of 2018. This project involves replacing all of the incoming electrical switchgear and the four incoming transformers, plus the main pump room switchgear and motor control cabinets.

The repairs to the 90-inch butterfly valve on the east Vadnais intake chamber were not completed and need to be rescheduled. The screens and screen rails in the chamber have been repaired.

A zebra mussel treatment chemical trial was expanded to both gate houses in 2017 and continues to show promise for prevention of zebra mussel growth in the conduits between Vadnais Lake and the plant. The chemical is under consideration for permanent use.

Plans and specifications for a new sludge holding tank at McCarrons Center were completed, with purchase and installation expected in 2018.

Photo opposite page: Production staff conduct annual maintenance on the paddles in the flocculation chamber.

Right: Staff remove the high service pump that will be replaced in 2018.

FUTURE OPERATIONS

A new 20 MGD pump will replace an existing 35 MGD pump and be used in the winter months for improved cost efficiency. The pump is expected to be delivered in June of 2018.

Work still needs to be done on some of the filter control systems in the plant, namely the old Programmable Logic Controllers (PLCs) and flow controllers need replacement. Also in the controls arena, the new Supervisory Control and Data Acquisition (SCADA) software development is underway, with the work being done by a contractor.

We hope to begin pre-design of our new softening and re-carbonation basins in 2018. SPRWS is hoping to gain authority for design-build methods for this project. Staff is currently working with legislators to have this authority included in the 2018 legislative session.

The supply system conduit assessment project identified areas in need of repairs. We expect to budget approximately \$1 million a year for the next decade or more to complete these repairs.

The West St. Paul water tower will be painted in the summer of 2018.

Replacement of the electrical service, cabinets, switchgear and motor controls in the plant is budgeted for 2018.



2017 SELECT FINANCIAL INFORMATION

Condensed Statement of Net Position (in thousands)

	Fiscal Year 2017
Assets	
Current and Other Assets	\$ 61,768
Capital Assets - net	\$ 333,212
Total Assets	<u>\$ 394,980</u>
Deferred Outflows of Resources	<u>\$ 3,814</u>
Liabilities	
Current Liabilities	\$ 17,055
Noncurrent Liabilities	\$ 61,841
Total Liabilities	<u>\$ 78,896</u>
Deferred Inflows of Resources	<u>\$ 2,963</u>
Net Position	
Net Investment in Capital Assets	\$ 293,493
Restricted for Debt Service	\$ 11,901
Unrestricted	\$ 11,541
Total Net Position	<u><u>\$ 316,935</u></u>

Condensed Statement of Revenue, Expenses, and Changes in Net Position (in thousands)

	Fiscal Year 2017
Operating Revenues	\$ 62,337
Non-Operating Revenues (Expenses)	\$ (114)
Total Revenues	<u>\$ 62,223</u>
Operating Expenses	<u>\$ 49,221</u>
Income (Loss) Before Capital Contributions	<u>\$ 13,002</u>
Capital Contributions	<u>\$ 668</u>
Change in Net Position	\$ 13,670
Net Position - January 1	\$ 303,265
Net Position - December 31	<u><u>\$ 316,935</u></u>

The notes to the financial statements are an integral part of these statements.

The complete financial report for 2017 is available from Saint Paul Regional Water Services. To obtain a copy please visit us at www.stpaul.gov/water or contact the financial services department at 1900 Rice Street, Saint Paul, MN 55113.

MISSION, VISION, VALUES

MISSION STATEMENT

To provide reliable, quality water and services at a reasonable cost.

VISION STATEMENT

To be a regional and national water industry leader emphasizing quality product, services, and cost containment.

STATEMENT OF VALUES

We commit to these values and expectations, taking pride in what we do together and promoting a positive image of Saint Paul Regional Water Services.

SENSE OF COMMUNITY

- Show respect to other's differences, take time to learn about each other, and treat each person as a unique individual.
- Create and maintain a positive, inclusive, diverse workforce to better serve our customers.
- Approach our work and interactions in a way that promotes and supports our community.
- Communicate openly and honestly, acting in a respectful and tactful manner.

COMMITMENT TO EXCELLENCE

- Have a shared vision of the future that gives us a clear sense of direction.
- Establish clear roles and responsibilities for all employees.
- Strive for excellence, continually improving and finding ways to be more effective and efficient.
- Keep our expertise current and willingly take on development opportunities.
- Demonstrate commitment to and effort in the work that we do.

SUSTAINABLE STEWARDSHIP

- Build trustworthy relationships, internally and externally, to achieve desired common goals.
- Protect and work to improve our water supply.
- Provide for a sustainable infrastructure entrusting reliability for future generations.
- Promote and enhance the use and respect of the environment by supporting environmental, social, and economic sustainability where possible.

QUALITY CUSTOMER SERVICE

- Put the customer first.
- Demonstrate our customer service standards of responsiveness, empathy, honesty, respectfulness, and reliability.
- Promise only what we can deliver and deliver what we promise.
- Create great customer interactions.
- Carry out our work in a professional manner.

BUILDING FOR THE FUTURE

- Promote innovation, change, and continuous improvement as we plan for the future.
- Commit to doing things effectively, making calculated decisions that result in organizational stability and desired change.
- Demonstrate adaptability and flexibility, adjusting to changing priorities and multiple demands within the organization and community.
- Exercise fiscal responsibility.





**SAINT PAUL
REGIONAL
WATER
SERVICES**

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