



2018
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 450,000 customers in Saint Paul and our surrounding suburban communities. Our staff of 256 employees ensures we are true to SPRWS' mission of providing quality water and services to our customers at a reasonable cost.

In 2018, SPRWS continues its focus on addressing current needs while planning for the future. Even though water consumption remains lower than normal due to higher than average rainfall, we continue to have sufficient revenue based on accurate estimates of future consumption. This revenue allows us to continue our investments, evidenced by replacement of a high service pump and 7.5 miles of aging water main, while providing 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.



We continue to assess other parts of the utility to ensure we have a plan moving forward to continually improve. In 2018, we have begun to plan for repairs and improvements to our 60- and 90-inch conduits that bring water from the Mississippi River to the McCarrons treatment plant. These repairs will bring decades of additional life to these critical assets. Current water treatment remains excellent and we continue to have minimal taste and odor complaints from our customers.

We sought and received the ability to use a design-build procurement process for the upcoming project that will replace and upgrade many of our treatment processes at the McCarrons treatment plant. This \$130 million project will upgrade our treatment capability so we are able to address future regulatory updates. All of this work could not be completed if we did not have a great group of support personnel who do excellent work maintaining the financial condition of the utility, providing great customer service, and maintaining the technology we have come to heavily rely upon. In 2018, we worked diligently to configure a major upgrade to the INFOR finance and procurement system and installed a new telephone system that uses Voice Over Internet Protocol.

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.

Sincerely,

A handwritten signature in blue ink that reads "Steve Schneider". The signature is fluid and cursive, with the first name "Steve" and last name "Schneider" clearly legible.

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 SENIOR MANAGERS



Jim Graupmann
ASSISTANT GENERAL
MANAGER
to March, 2018



Steve Gleason
BUSINESS
to April 11, 2018
ASSISTANT GENERAL
MANAGER
From April 12, 2018



Dolly Ludden
BUSINESS
From June 25, 2018

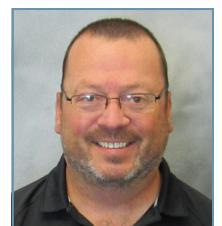
Brad Eilts
DISTRIBUTION



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. In 2018, public information was incorporated.

Workforce Changes and Challenges

The utility's work force history is of longevity and successfully retaining trained staff. Often pension, insurance, and regular hours helped promote working at SPRWS as a career. However, this is no longer assured. Employees may be looking for such things as new and stimulating assignments, more non-traditional work rules, flexibility in working off-site and flexibility in working hours, etc. An increase in voluntary turnover from 5.3 percent to 7.2 percent reflects this new generation of employees.

Our human resources consultant worked diligently toward the development of a new strategic plan effective 2019-2021. The effort included seeking ideas and feedback from employees. All employees were given the opportunity to share their experiences, concerns and recommendations. The result is a plan that promotes equity, innovation, resilience, continuous improvement, and employee development at the utility. The plan pushes the organization forward and positions SPRWS for continued success.

Succession Planning

In the next five years all division managers, the assistant general manager, and the general manager will be eligible to retire. Accordingly, promoting knowledge management and transfer across the utility is a focus of the division. In the five years 2012-2017, the average retirement age was 60 years old. At the end of 2018, nearly 28 percent of the utility's employees were 55 plus years of age.

Emergency Preparedness and Safety

Our emergency planning and security supervisor is working on our preparedness efforts. An updated emergency response plan was developed in 2018. We anticipate devoting more time to drills and tabletop scenarios to better prepare the utility for any emergency. The position also serves as process safety management (PSM) program coordinator.

Our safety officer facilitated compliance with new silica and walking surface regulations put in place by the Occupational Safety and Health Administration (OSHA). We continue to operate a management safety committee focusing on training, preventing workplace injury, inspection activities, and OSHA compliance.



Public Information and Community Outreach Efforts

Public information efforts included publishing the *Consumer Confidence Report*, the quarterly customer newsletter *Customer Service Connections*, and a new brochure on high water use.

In an effort toward expanded customer outreach, the website was updated to include information on water main construction projects.

Community outreach efforts including taking part in several community events, such as Safe Summer Nights and Water Fest, community input sessions, job fairs, and the state-wide Drinking Water Institute for Teachers. The utility also hosted Water Journey Camps for youth.

Other efforts include hosting two Highland Park water tower open houses and a treatment plant open house and tour, promoting them on social and traditional media platforms.



Lead Mitigation Efforts Continue

Our efforts in connection with lead in drinking water continued, using 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 and we continued replacing lead water services as part of our capital improvement projects.



Business Improvement Efforts

The Business Improvement Unit had a change in leadership in 2018. The team worked diligently on its initiatives including; enterprise level performance measures, document management improvements, and evaluating the utility against industry-wide effective utility management (EUM) practices. The unit worked on identifying areas of focus to consider for inclusion in the strategic plan.

Opposite page: The safety officer addresses staff at a safety picnic celebrating the end of a safe construction season.

Above: A water quality specialist and public information officer work with students from the Water Journey Camp to get water samples from the Mississippi River opposite our intake station in Fridley.

Left: A water quality specialist answers questions for visitors to Water Fest at Lake Phalen as they check out the informational display on lead in drinking water, where it comes from, and how to mitigate it.

White Bear Lawsuit Effects on SPRWS

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 2017.

The ruling and associated timelines, which compelled the DNR to place restrictions on all appropriation permits for wells within five miles of White Bear Lake, were postponed as part of 2018 legislative session.

Similarly, the appeals process with the DNR, in which SPRWS hoped to avoid the ban if we are not using our wells, was postponed.

The utility's raw water supply system has been identified as a possible source to augment White Bear Lake levels. Such a solution would require building a pipeline and pump station from a utility supply location such as Vadnais Lake to White Bear Lake.

Future Operations

The utility is preparing for an estimated \$130 million water treatment plant upgrade. After obtaining legislative approval for design-build procurement process, SPRWS worked to develop a request for proposal for an owner's agent (an engineering firm with experience developing contract documents, managing and directing design-build projects).

Looking ahead to 2019, we will select an owner's agent and work to select a design-build firm by year's end. The project may take three to four years to complete.

Process safety and emergency plans will be updated with the intent of ensuring ready access for all information employees may



Above: McCarrons treatment plant.

need. The security badging and access system is being analyzed and enhancements to badge definitions, operating procedures, and access controls are being considered.

Administration will continue directing efforts at the initiatives listed above.

We will work to implement strategic plan initiatives and continue to watch the Lead/Copper Rule as it is updated by

3M Lawsuit

In February 2018, the state of Minnesota settled a lawsuit against the 3M Company related to perfluoro chemicals. As a result, about \$720 million will be invested in drinking water and natural resource projects in the Twin Cities east metropolitan region.

Projects will be primarily focused on cities using wells and drawing ground water for drinking including the cities of Afton, Cottage Grove, Lake Elmo, Newport, Oakdale, St. Paul Park, and Woodbury and the townships of Grey Cloud Island and West Lakeland.

Utility staff actively recommended stakeholders include consideration of surface water as a long-term, sustainable, supply of drinking water. It was suggested that the utility's supply system and treatment plant have the capacity to meet the long-term water demands of these communities. On-going meetings of stakeholders continued through the year.

the Environmental Protection Agency (EPA).

We will keep an eye on changes with our water use that might be possible as a result of the White Bear Lake lawsuit and/or our water supply, should the utility be part of a solution toward meeting east metro water needs.

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

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 that provides materials required to construct and maintain the distribution system.

Preventative Maintenance

Uni-directional flushing was completed for 20 percent of the distribution system. Uni-directional flushing includes flushing main and operating valves on all 8-inch and smaller mains in the distribution system. The second time through the distribution system with UDF is on pace to complete the entire system in year 2021. All public hydrants were inspected and flushed in 2018. This continues the long-term practice of inspecting all public hydrants annually. We also met our goal of exercising 20 percent of the valves 12 inches and larger in the distribution system.

Reactive Maintenance

The utility 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 cities of Oakdale and Newport, as well as White Bear Township.

A new on-call system was negotiated with the Tri-Council union to ensure employees were available to respond to emergency repairs

Capital Program

Distribution crews used multiple methods to construct water main in 2018. Approximately 12,000 feet of water main was replaced in street paving projects with a contractor providing excavation and utility crews performing the pipework.

The pipe bursting method was used for approximately 11,000 feet of water main replacement. The utility excavated pits and a contractor pulled High-Density Polyethylene (HDPE) pipe through the old cast iron pipe with pipe bursting equipment. The utility completed the pipework required to connect the new pipe to the existing distribution system and reconnect the services.

Another 4,000 feet of water main was replaced using the open trench method, with utility crews providing the excavation and pipework and a contractor completing the street restoration.

Future Operations

In 2019, continued emphasis will be placed on infrastructure replacement, focusing on main replacement utilizing the pipe bursting method as well as cleaning and lining existing cast iron pipe.

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 business units of customer service and billing, financial services, information services, and meter operations.

Customer Service Meets Goals

During 2018, the customer service unit issued approximately 34,400 bills per month or 1,660 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. Approximately 53 percent of transactions were processed electronically with nearly 29 percent of payments made via credit card and 24 percent via auto withdraw from a bank account.

The customer service call center received 161,592 calls. About 76,966 calls, or 48 percent, were handled by call center staff, and 84,626 by the self-serve Interactive Voice Response unit (IVR). This equates to approximately 649 calls per business day, of which approximately 306 calls were answered by call center staff. The abandoned call percentage was 1.12 percent, substantially lower than our goal of less than 2 percent.

SPRWS to Move to Virtual Desktops

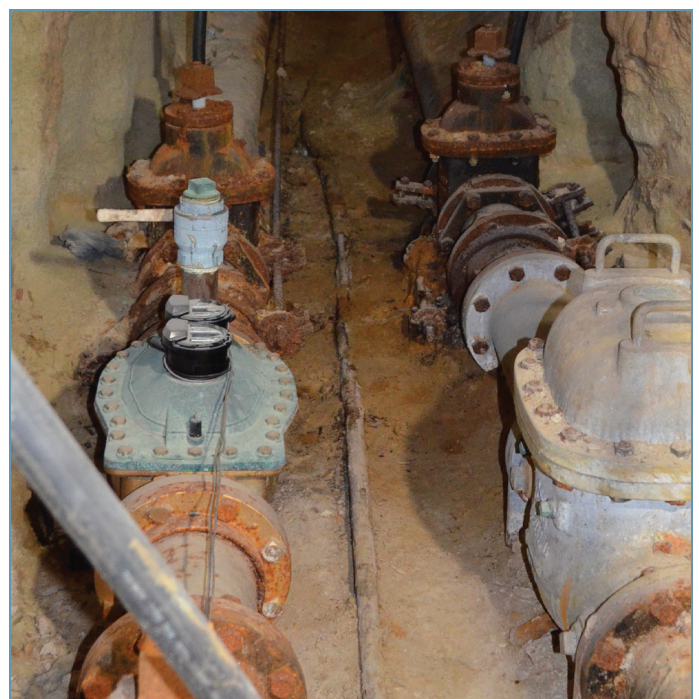
In 2018, the information services section completed a pilot project on virtual desktop infrastructure. The project offers many potential efficiencies and savings, including hardware, programming, backing-up systems and data, and troubleshooting. Target completion is by the end of 2019.

The city of Saint Paul and SPRWS implemented a new Voice Over Internet Protocol digital phone system and no longer receives phone service from Ramsey County.

Meter Operations Tracking Meters

The radio meters are functioning very reliably. As a result, we continue to have success basing water bills on actual usage and minimizing estimated bills. Meter operations will continue to track, trend, and report the register mis-reads and failures in an effort to keep the capture rate at 100 percent.

We configured a meter testing database in CIS and populated record historic test results back to 2013. With this data, we are continuing efforts to create 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 2018, we tested all meters 3-inch and larger.



Financial Services Keeps Utility on Track

Financial services staff created and published the 2017 *Comprehensive 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, a cost of service study for a possible wholesale agreement was developed by staff for the University of Minnesota's consideration.

Financial services staff work with many applications and systems, including:

- INFOR Enterprise Resource Planning (ERP) system, which includes financials and procurement/supply chain
- Computerized Maintenance Management System (CMMS)
- Time, Attendance and Scheduling System (TASS)
- Customer Information (and billing) System (CIS)

To ensure appropriate internal controls, financial services used these applications to compile and provide information necessary for SPRWS to manage its financial position by:

- Developing a budget
- Tracking spending and revenues
- Processing accounts payable and accounts receivable invoices
- Collecting and processing payments
- Providing monthly reports to managers and the Board of Water Commissioners

Financial services staff participated in the testing and implementation of the upgrade to the INFOR ERP system, which is scheduled to go live in January 2019.

Right: Distribution staff assist in counting product in the warehouse during the annual inventory day.

Opposite page: Large water meters underground in the tunnel system below the city.

Future Operations

Technology continues to be a current and future focus. A technology roadmap will be developed to assist with determining the future path of certain software and technologies.

The utility is partnering with the 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 SPRWS' CIS system.

An upgrade to our CIS on-line payment processing system called *Infinity Link* is planned for 2019. The enhanced software will offer customers the ability to register on-line to have payments drawn automatically from a credit card or a bank account; view past bills; and use mobile devices, such as a cell phones, tablets, and/or computers.

A new data analytics tool called Qlik will be implemented at the utility. The tool will serve as a report crafting tool to detail performance measures and other management reporting needs.





ENGINEERING DIVISION

The engineering division provides support to the utility in the planning, design, and construction administration on projects throughout the utility. It is responsible for managing maps and records; performing plumbing inspections; locating utilities; and performing related administrative functions.

We made significant progress on several large projects that will serve our customers well into the future. Highlights of our work include:

Condition Assessments

We completed condition assessments for the McCarrons water treatment plant foundation and 28 miles of our raw water supply conduit, which extend from the Mississippi River to the water treatment plant. We are now beginning work on improving the conduits, which includes preparation of specifications for the repair of concrete conduits. We are also beginning work on a cathodic protection system of the steel lines.

Historic Highland Water Tower

We were awarded a \$250,000 grant for repairs to the historic Highland water tower.

Main Capital Improvement Planning

The water main program continues to grow with increased funding in recent years. More replacement is being done independent of street reconstruction areas than in past years due to fewer street reconstruction projects being done by the city of Saint Paul's public works division. In 2018, we designed and constructed 7.5 miles of water main. This included approximately 5.3 miles of main replacement coordinated in collaboration with street reconstruction projects and 2.2 miles of main replacement in the highest risk category of our prioritization plan for replacement. We also began a project to review our corrosion control practices in the distribution system with an eye toward extending the life of these assets.

Above: A spent lime tank being constructed at McCarrons.

Centerville Water Supply Study

The Rice Creek and Centerville Lake system was the primary source water supply for the utility in the late 1800s and early 1900s. This continued to be used to varying degrees after the development of the Mississippi River as a supply source. However, Centerville has not been used as a water source for the last 30 years. A study is underway to provide information to help guide decision making as to the future of this source moving forward.



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 continuing to work through the self-assessment phase of this program for our distribution system.

Plant Softening and Ozone Project

In 2018, we received approval from the state legislature to use the design-build procurement process on our upcoming major plant upgrades. This project is one of the largest projects in decades for the utility.



Above: Highland water tower.

Maps and Records Improvement

In 2018, we continued to promote the use of Global Positioning Systems (GPS) technology throughout the utility, improving the accuracy of utility records. We continued to improve the standardization and categorization of our Geographic Information System (GIS) data. In addition, we created new and made enhancements to existing mapping applications for field users, including the use of improved construction planning tools.

Future Operations

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

We will begin the McCarrons water treatment plant upgrade, focusing on the procurement of a design-builder, and work to begin the framework for pilot testing the new processes.

We will continue to improve our aging, buried infrastructure within the distribution system. The water main capital improvement program will require extensive design and inspection.

We will put additional focus on improving public outreach on our distribution-related projects.

We will also do water auditing and leak assessment.

Top right: Centerville Lake intake pipe, 1896.

PRODUCTION DIVISION



The production division is responsible for processing raw water into finished water. This includes managing the equipment required in the process and the water supply chain to provide an adequate supply of high quality water to all customers. This encompasses 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.

SPRWS Earns the Partnership for Safe Water's President's Award

We had another excellent year of water quality. The McCarrons water treatment plant continued the Partnership for Safe Water's Presidents Award in 2018. 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 14 complaints of taste or odor being logged into the Customer Information System for the year.

Photo above: Seasonal and permanent staff at Vadnais Lake who maintain the SPRWS supply system.



Water Production Levels Constant

Annual production of water for 2018 was similar to the previous three years, with a daily average of 39.63 million gallons per day (MGD). Precipitation was 7.19 inches above normal for the downtown zip code for the year, according to the National Weather Service and Climatology Working Group data. River levels were also above normal for much of 2018, and drought was not a concern for the metro area. Our total annual pumpage from the McCarrons water treatment plant was 14,664 million gallons, of which 11,354 million gallons came from the Mississippi River. Groundwater was not used in 2018. The difference was made up from precipitation and runoff from the local watershed.

Chemical Costs Down

Chemical costs were down slightly, with a total chemical expenditure of \$3.3 million. This corresponds to a decrease of \$5.45 per million gallons of water treated. The majority of the decrease was caused by contract price drops for chemicals.

Top: A water quality specialist provides a tour of the water treatment plant.

System Improvements

A number of improvements were made or undertaken in 2018. Painting began on the West St. Paul water tower. Work also began on generator exhaust improvements and repair of parts of the exterior of the treatment plant.

Electrical improvements, including a back-up electric generator for the West St. Paul pump station, were completed.

We obtained a new 20 MGD high-service pump. This pump will replace an existing 35 MGD pump and be used at the water treatment plant in the winter months for improved cost efficiency. Installation will be completed in 2019.

A new 325,000-gallon holding tank for spent lime was built for holding softening residuals prior to dewatering. (See photo page 10.)

Our largest current project, plant electrical improvements, is ongoing with completion expected in 2019. This project involves replacing all the incoming electrical switchgear and the four incoming transformers, plus the main pump room switchgear and motor control cabinets.

Future Operations

New fluoride chemical tanks will be installed in 2019. The old tanks have passed their useful life endpoint.

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

Replacement of the electrical service, cabinets, switchgear, and motor controls are budgeted for replacement in 2019 for the west side pump station located on State Street.

2018 SELECT FINANCIAL INFORMATION

Condensed Statement of Net Position (in thousands)

| | Fiscal Year 2018 |
|----------------------------------|--------------------------|
| Assets | |
| Current and Other Assets | \$ 67,535 |
| Capital Assets - net | \$ 338,227 |
| Total Assets | <u>\$ 405,762</u> |
| Deferred Outflows of Resources | <u>\$ 3,714</u> |
| Liabilities | |
| Current Liabilities | \$ 16,213 |
| Noncurrent Liabilities | \$ 65,161 |
| Total Liabilities | <u>\$ 81,374</u> |
| Deferred Inflows of Resources | <u>\$ 3,438</u> |
| Net Position | |
| Net Investment in Capital Assets | \$ 302,079 |
| Restricted for Debt Service | \$ 11,912 |
| Unrestricted | \$ 10,673 |
| Total Net Position | <u><u>\$ 324,664</u></u> |

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

| | Fiscal Year 2018 |
|--|--------------------------|
| Operating Revenues | \$ 63,616 |
| Non-Operating Revenues (Expenses) | \$ (327) |
| Total Revenues | <u>\$ 63,289</u> |
| Operating Expenses | <u>\$ 48,249</u> |
| Income (Loss) Before Capital Contributions | <u>\$ 15,040</u> |
| Capital Contributions | <u>\$ 1,071</u> |
| Change in Net Position | \$ 16,111 |
| Net Position - January 1, as restated* | \$ 308,553 |
| Net Position - December 31 | <u><u>\$ 324,664</u></u> |

*Amount includes a change in accounting principle.

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

The complete financial report for 2018 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, GOALS

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.



SPRWS Pyramid of Success
High Level Overview of Organizational Goals

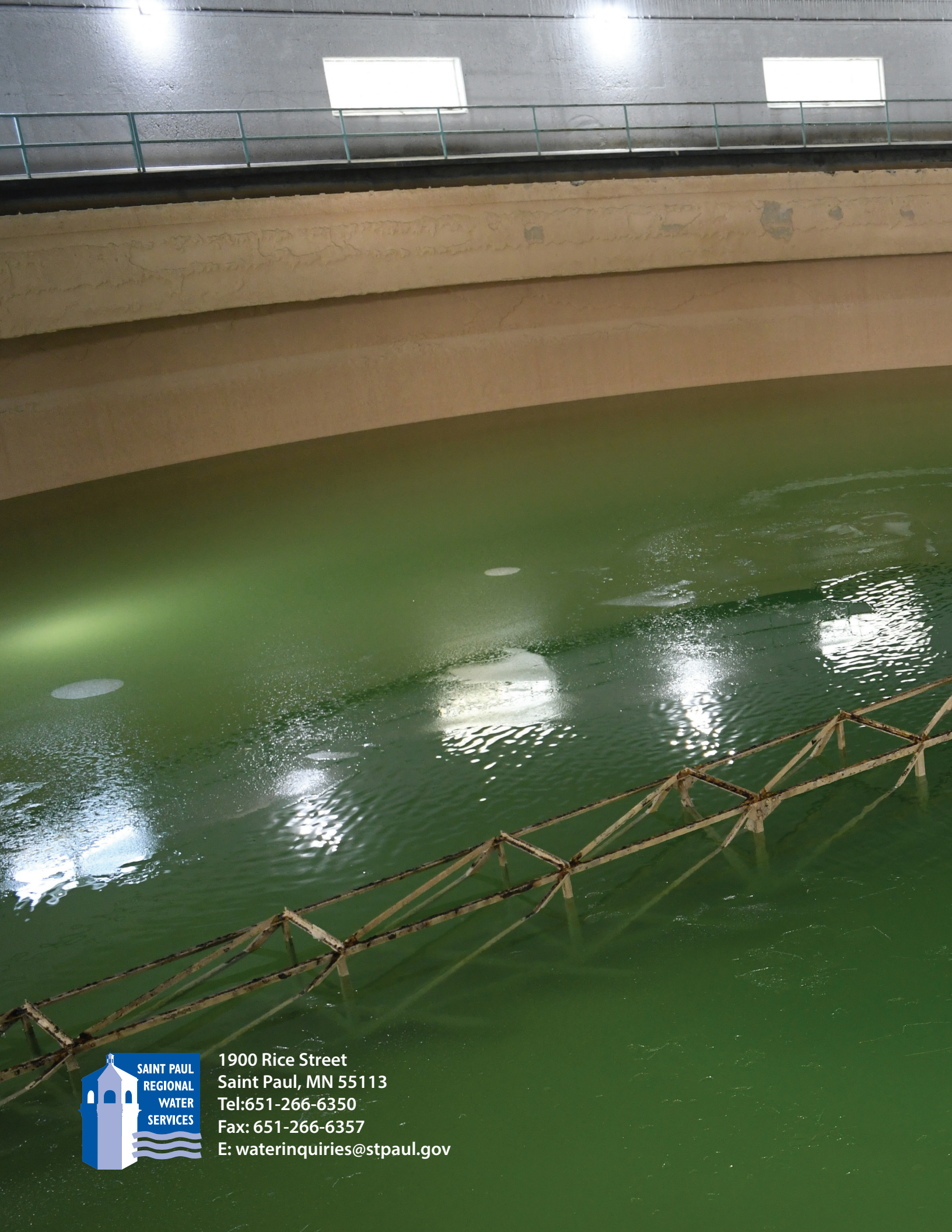
Each component of the new SPRWS Pyramid of Success is as important as the next in our overall ability to meet our mission.

We believe that the bottom layer of goals is the foundation to our success from which we can build upon.

As we become more efficient and grow at each layer of the pyramid, it then enables us to enhance what we are able to do with the next layer of goals.

The top of the pyramid is our ultimate goal of providing quality water to our customers now and into the future.





1900 Rice Street
Saint Paul, MN 55113
Tel: 651-266-6350
Fax: 651-266-6357
E: waterinquiries@stpaul.gov