



Accommodating a Growing Population



MAINTAINING QUALITY OF LIFE

Water quality impacts everyone

How we treat our wastewater and discharge it to the river impacts not only our river and our local quality of life, but also the river and quality of life of communities downstream all the way to the Gulf of Mexico.

Changes in downstream states affect us

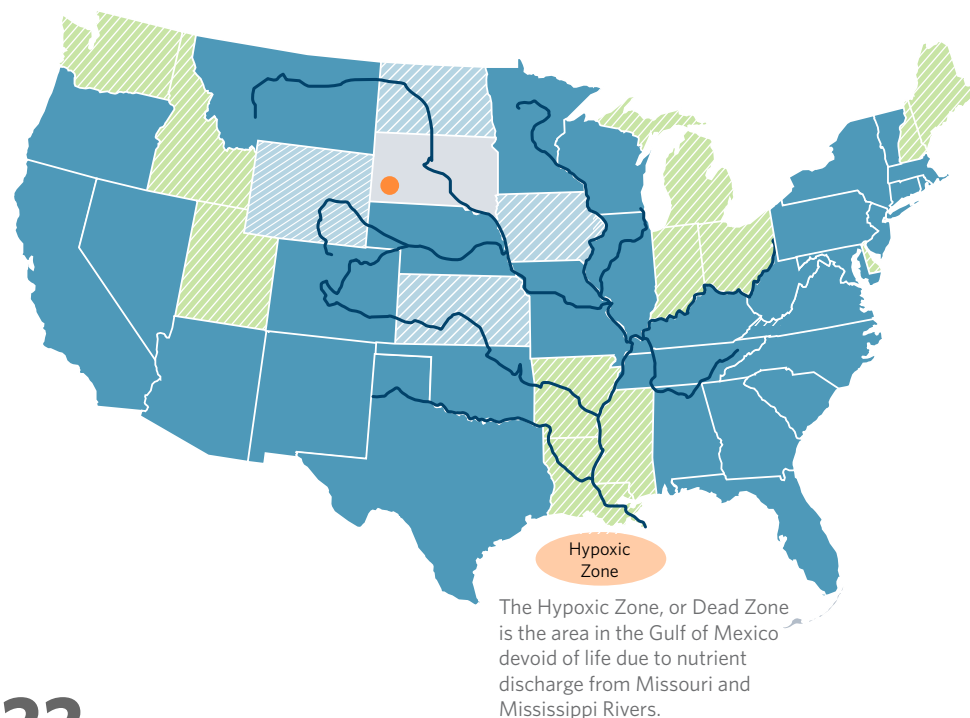
Our treated wastewater moves down the river and impacts water quality in states downstream. When those downstream states see unsustainable changes in their water quality, they look at upstream sources for partners in improving water quality.

Why plan for these changes now?

This Master Plan anticipates future regulations and our proactive planning approach will result in cost-effective investments.

Regulations are becoming stricter nationwide

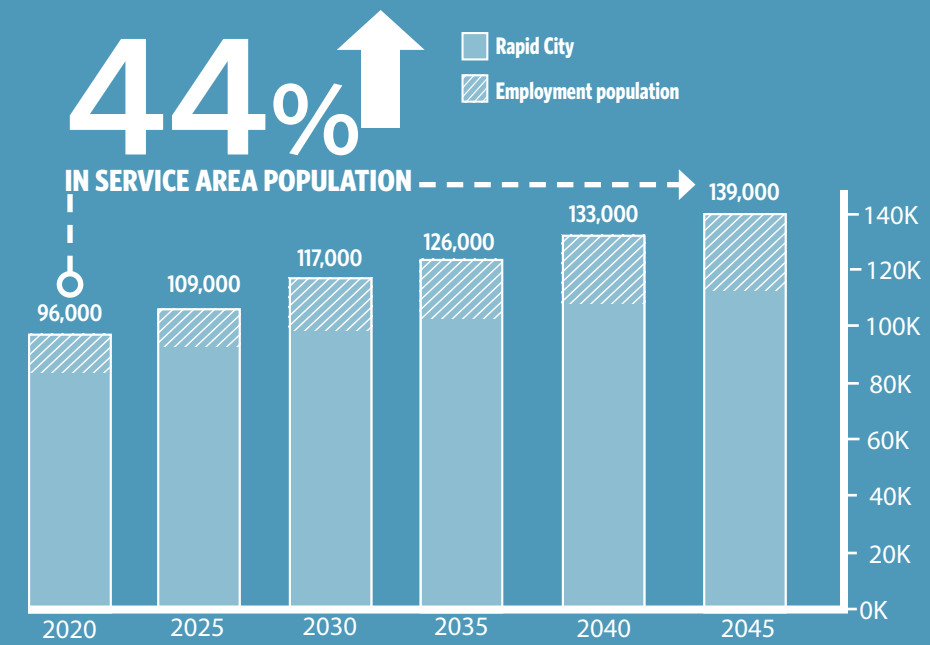
- States that have nutrient regulations in place
- States that are planning for nutrient reduction
- States with localized nutrient removal in place
- States that have no nutrient limits implemented or planned



Next Steps in 2022



PLANNING FOR THE NEXT 20 YEARS



Investing in our Water Reclamation Facility (WRF)

WHY ARE WE DOING THIS NOW?

<p>AGING INFRASTRUCTURE</p> <p>Our treatment facility is 10+ years past its design life</p> <p>North Plant at WRF is past its useful service life and needs to be decommissioned.</p>	<p>AVAILABLE FUNDING</p> <p>Current water infrastructure provides opportunity for funding assistance</p> <p>Outside funding minimizes impacts to rate payers.</p>	<p>FUTURE REGULATIONS</p> <p>Water quality regulations will be stronger in the future</p> <p>This plan prepares the facility for future regulations.</p>	<p>GROWING CUSTOMER BASE</p> <p>43,000 added service area population are anticipated by 2045</p> <p>New South Plant Improvements and Biosolids Handling expansion is needed to meet the permit requirements.</p>
--	--	---	---

A History of Reliable Service



Water Reclamation Facility Improvements Highlights

<p>1967 Original Plant Opened</p> <p>1985 North Plant Expansion</p> <p>2003 South Plant Activated Sludge Update</p>	<p>2013 Algae Control Improvements</p> 	<p>2014 Post Aeration and UV Improvements; Tricking Filter Arm Replacement</p> 	<p>2016 Facility Master Plan</p> 	<p>2019 Electrical Upgrades</p> 	<p>2020 - 2021 Age and Replacement Projects (MIPS)</p> 
--	---	---	--	--	---

Capitalize on Potential Federal Funding

- 1987 changes to CWA initiated the SRF program offering water and sewer loans vs. grants
- American Rescue Plan passed in March 2021
 - Provides an estimated \$600M of additional funds to the state of South Dakota
 - Administrative rules for the appropriation of these funds to be determined in 2022 legislative session
 - All or a portion of these funds could be allocated as SRF funds for water and wastewater projects
 - Costs incurred after March 3, 2021 are eligible
- Additional Federal Infrastructure funding has passed the Senate and is under consideration in the House
- Key Funding Dates
 - October 1, 2021 - Submit new application for requested WRF improvements to be included in State Water Plan. Requires submittal of updated Facilities Plan
 - January 1, 2022 - Submit funding application for improvements
 - March 2022 - SRF Review Board makes recommendations for funding approvals including grants and principal forgiveness

Preparing Our Water Reclamation Facility (WRF) for the Future

► In 2016, the City of Rapid City used a nationally-recognized wastewater planning and design firm to undergo a 12-month master planning process. These technical experts outlined a phased approach to prioritize improvements over the next 20 years. This plan is currently being updated to reflect present day and future planning period demands.

The North Plant will not meet permit or capacity requirements.

PRELIMINARY OPINION OF PROBABLE COST			
Project Grouping	Item No.	Item Description	Project Cost
1	1	One New Clarifier, Site Piping, Splitter Box	\$11,000,000
	2	Two Clarifiers with New Pumps and Blowers	\$21,000,000
2	3	Aeration Basin Expansion, PC Effluent Pump Station, Administrative Building Expansion	\$38,000,000
	4	Existing Biosolids Building HVAC and Electrical	\$1,000,000
3	5	Biosolids Dewatering Feed Tank	\$4,000,000
	6	Biosolids Handling Building and Equipment	\$25,000,000
Items 1-7 Subtotal			\$100,000,000
4	7	Anoxic Basins and Internal Mixed Liquor Pump Station	\$45,000,000
Project Total			\$145,000,000

