

CHAPTER 11: WATER SUPPLY SYSTEM

Chapter 11 includes the following information:

1. Introduction
2. Water Supply Plan
3. Water System Overview
4. Utility Capital Improvement Plan
5. Asset Management
6. Water Utility
7. Goals and Strategies

1. INTRODUCTION

This chapter presents an executive summary of the Water Supply Plan, which is attached in Appendix D. The Water Supply Plan is based on the required template provided by the Minnesota Department of Natural Resources.

2. WATER SUPPLY PLAN

Every ten years, all public water suppliers in Minnesota that operate a public water distribution system are required to have a water supply plan approved by the Department of Natural Resources (DNR). Roseville's Water Supply Plan provides the City and its residents with assurance of adequate, safe water to meet their needs and procedures for water system emergencies. It also discusses measures the City is implementing to conserve this precious resource.

The Water Supply Plan consists of four parts:

- Part I: Water supply system description and evaluation
- Part II: Emergency response procedures
- Part III: Water Conservation Plan
- Part IV: Items for metropolitan area communities

3. WATER SYSTEM OVERVIEW

The City of Roseville purchases treated, potable water from Saint Paul Regional Water Services (SPRWS). The current wholesale water contract is for a 20-year period and is in place until 2025. SPRWS provides the required treatment processes before the water is introduced into the water distribution system in

Roseville; no further treatment is required by the City. The City distributes the water directly to its retail customers—the residential and commercial properties where water is used. Roseville also provides wholesale water via its system to the City of Arden Hills. To accomplish this, there are three always-open interconnection points with the City of Arden Hills, which are located at:

- Cleveland Avenue and County Road D
- Fairview Avenue and County Road D
- Glenhill Road and Hamline Avenue

Historically, the water utility has been managed to be self-supporting, with future replacement needs financed from revenue generated from the fees paid by customers. The City periodically reviews the contract with SPRWS to ensure that the City is obtaining the most cost-effective services.

In addition to the three interconnections providing wholesale water service to Arden Hills, Roseville’s water system consists of:

- 160 miles of mainline
- one water tower
- one booster station (water pumping facility)
- seven emergency interconnections
- 22 cross-connections

These seven interconnections (see [TABLE 11-1](#)) are normally closed but can be opened to meet Roseville’s emergency needs. Appropriate personnel are to be contacted before these connections are opened so operational changes can be implemented in the source city, if necessary.

The interconnections with the Cities of Little Canada, Lauderdale, and St. Paul are only of use in emergency situations related to the Roseville distribution system. The source water for these connections is from the City of St. Paul system and would be of little value during an emergency within the SPRWS production and treatment systems.

The interconnections with Shoreview, St. Anthony, and New Brighton could be opened in a wider variety of emergencies, as they produce their own water from wells within their system.

TABLE 11-1 ADJACENT COMMUNITY EMERGENCY INTERCONNECTIONS

City	Size	Location
Little Canada	8"	County Road C and Rice Street
Little Canada	12"	South of Woodlynn Avenue on Rice Street
Shoreview	8"	County Road D and Lexington Avenue
New Brighton	6"	Old Highway 8 and County Road D
St. Anthony	12"	West of Patton Road on County Road C
Lauderdale	6"	Roselawn Avenue and Lake Street
St. Paul	8"	Galtier Street and Larpenteur Avenue

Cross-connections are locations where the City of Roseville or an adjacent community provide water service to retail customers outside of their respective borders.

TABLE 11-2 CROSS-CONNECTIONS WITH ADJACENT COMMUNITIES

City	Drinking water flow TO Roseville	Drinking water flow FROM Roseville
Arden Hills	107 dwelling units (County Road D)	
Falcon Heights		16 dwelling units
Maplewood	6 dwelling units	Schroeder Milk (Rice Street)
St. Anthony		2 dwelling units
St. Paul	2 shopping centers, Taco Bell (Larpenteur Avenue)	
Totals	113 dwelling units 3 commercial	18 dwelling units 1 commercial

4. UTILITY CAPITAL IMPROVEMENT PLAN

The Capital Improvement Plan (CIP) is one tool that is used to plan for rehabilitation and/or replacement of facilities as appropriate. The CIP has been developed to identify needs to ensure proper, continuous operation of the water and sanitary sewer utilities. Since the physical infrastructure of Roseville is aging, the City recognizes the need to track and evaluate the condition of the City's infrastructure.

The CIP was developed to support the intent of the *Imagine Roseville 2025* goals to replace infrastructure, when appropriate, to minimize potential for failure of these systems.

5. ASSET MANAGEMENT

The City's Capital Improvement Plan is primarily determined by the City's Asset Management Program. This program is designed to provide a basis for creating and documenting the condition rating of all publicly owned assets within the city. Ratings for each asset vary based upon the type of asset, but the determination of each rating is obtained through the follow ways:

1. Visual inspections
2. Surveys
3. Full needs assessments and studies
4. History of issues or failures
5. Age of the asset
6. Type of material

This information is compiled and the Asset Management database is updated annually. This information is used while the Capital Improvement Plan is being developed, allows the City to be more strategic in its asset replacement, and also track the improvements over time.

6. WATER UTILITY

The City's Water Utility Division provides for the operation, maintenance, and replacement of water utility infrastructure. The division also ensures compliance with a host of regulatory requirements in the operation and maintenance of this system.

The Water Utility's long-range goals include:

- Provide for uninterrupted operation of the water system to ensure the health and welfare of Roseville residents and businesses.
- Meet the regulatory goals of Minnesota Department of Health and other regulatory agencies related to the provision of safe drinking water.
- Provide excellent customer service in the utility area.
- Plan and implement a long-term infrastructure replacement plan.

To support these goals, the existing complement of vehicles and equipment will need to be replaced when they reach the end of their useful life. Infrastructure will be evaluated for appropriate rehabilitation or replacement schedules.

Other regulatory agencies have an impact on operational needs due to required compliance at the local level. A long-term funding plan is necessary to meet infrastructure replacement needs. The City will see minimal growth that would affect this system. Capital needs are to support replacement of existing infrastructure and support existing operational equipment.

7. GOALS AND STRATEGIES

The City of Roseville provides a variety of public facilities and services. Utility services are essential to the health, safety, and welfare of its citizens. Clean and reliable drinking water is absolutely necessary for the efficient functioning of the City. The preservation and protection of the City's utilities is vital to the community's health and residents' quality of life. To accomplish this, the City of Roseville has identified the following goal and strategies:

Goal – Provide efficient and high-quality public facilities, services, and infrastructure.

Strategies:

- Provide reliable and high-quality water facilities.
- Work to provide efficient and cost-effective services through ongoing evaluation and intergovernmental coordination.
- Maintain an up-to-date emergency preparedness plan.
- Prepare long-term plans to identify, prioritize, and determine the costs to maintain and/or replace City's water facilities.
- Utilize the Capital Improvement Plan (CIP) and annual budgeting process for prioritizing major public expenditures.