



Helena Water Facilities Plan
CHAPTER 2 – INTRODUCTION

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Table of Contents

Introduction	2
Chapter 1 – Executive Summary	2
Chapter 2 – Introduction.....	2
Chapter 3 – Description of Water System	2
Chapter 4 – Water Quality and Regulatory Review	2
Chapter 5 – Water Demand Forecast	2
Chapter 6 – Treatment Plant Analysis for Current Roles	2
Chapter 7 – Distribution System Analysis.....	3
Chapter 8 – Role Reversal Analysis.....	3
Chapter 9 – Recommended Plan.....	3

Introduction

This report presents the results of a review of Helena water supplies, treatment facilities and distribution system. This plan provides direction for the City's Water Capital Program for the next 20 years. The last Water Master Plan was compiled eight years ago (1997). A number of capital changes have been made since then:

- An Eastside reservoir and pump station (Nob Hill) were constructed.
- The filters at the Missouri River Water Treatment Plant have been replaced.
- A 40-year agreement for water from the Missouri River was signed with the Bureau of Reclamation.

These changes have had a positive impact on the water system. The reservoir and pump station allowed for future growth to the east. The filter replacement eliminated a pathogen pathway at the MRTP. The Bureau of Reclamation agreement secured the City's source of supply for the next 40 years.

A number of other programmatic changes have taken place:

- Regulations have become more stringent.
- Superfund improvements at the Rimini site in the Tenmile basin sparked a renewed interest in improving the Missouri River Treatment Plant to allow more flow to remain in Tenmile Creek for dilution.

This report is organized into nine chapters as follows:

Chapter 1 – Executive Summary

Provides a brief summary of the contents of the plan.

Chapter 2 – Introduction

Chapter 3 – Description of Water System

Describes the existing water system in detail from water supply and raw water delivery through the treatment facilities and into the distribution system.

Chapter 4 – Water Quality and Regulatory Review

Describes existing system raw water and finished water quality and compares with upcoming regulations.

Chapter 5 – Water Demand Forecast

Reviews growth projections for the service area and projects water demands to meet growth.

Chapter 6 – Treatment Plant Analysis for Current Roles

Reviews the ability of the existing treatment plants and the Hale Zone to meet both the future regulations described in Chapter 4 and the water demands described in Chapter 5.

Recommends improvements, gives projects priority and provides cost estimates. The analysis assumes the plant roles remain as they are.

Chapter 7 – Distribution System Analysis

Reviews the ability of the existing distribution system (storage tanks, pipes and pump stations) to meet current and future demands and fire flows. Recommends an array of possible improvements and presents costs.

Chapter 8 – Role Reversal Analysis

Discusses the differences between operation of the two main City treatment plants in their current roles (MRTP as a summer facility, TTP as a year-round plant) and reversed roles (MRTP as a year-round plant, TTP as a summer facility). Provides cost comparison and completes an alternative comparison.

Chapter 9 – Recommended Plan

Provides a summary overview of the recommended capital projects at the treatment plants and in the distribution system. Gives project cost totals and priorities.