

City of Riverside

**WASTEWATER COLLECTION AND TREATMENT
FACILITIES INTEGRATED MASTER PLAN**

**VOLUME 2: BASIS OF PLANNING
CHAPTER 1: INTRODUCTION**

FINAL
February 2008



City of Riverside

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INTRODUCTION

1.1 PURPOSE

The purpose of this Basis of Planning volume is to document the basic planning criteria used in facility planning for the City of Riverside (City) Integrated Master Plan. This volume should be periodically reviewed and updated as needed. Revisions may be required to reflect new operational modes, changes in influent flow quantities or characteristics, changes in discharge requirements that could impact the level of treatment, and/or new design philosophies.

This Chapter 1 of the Basis of Planning Volume provides an introduction to the volume. It outlines the goals and objectives for the Integrated Master Plan and presents the organizational structure of the Master Plan Volumes.

1.2 BACKGROUND

The City Sewerage System Division is responsible for collection and treatment of wastewater flows generated within the City and the communities of Jurupa, Rubidoux, Edgemont, and Highgrove. The City's collection system consists of over 800 miles of gravity sewers ranging from 6 to 48 inches in diameter and 18 wastewater pump stations. The wastewater pump stations range in size from 100 gallons per minute (gpm) up to 2,000 gpm. Treatment is provided at the Regional Water Quality Control Plant (RWQCP), which provides preliminary, primary, secondary, and tertiary treatment for a rated capacity of approximately 40 million gallons per day (mgd).

1.3 GOALS AND OBJECTIVES

The City seeks to develop an Integrated Master Plan for the Wastewater Systems Facilities, including both treatment and collection system facilities, to identify and plan for expansion and replacement needs. The Integrated Master Plan will incorporate the findings and recommendations of previous and ongoing plans and studies. More specific goals for the Integrated Master Plan include:

- Develop a wastewater system capital improvement plan (CIP).
- Develop an asset management program that will provide capital rehabilitation and replacement schedules and costs.
- Perform financial planning and establish rates to fund operations, maintenance, and the CIP.
- Develop an Environmental Impact Report.

- Identify, analyze, and recommend alternatives for various wastewater treatment system processes.
- Create easily updateable Volumes and Chapters within the Integrated Wastewater Master Plan.
- Use the Master Plan Manager™ (MPM™) software so the City can modify the CIP, financial plan, and rates based on needed changes to the planning criteria (i.e., regulatory and influent flow projection changes).

1.4 ORGANIZATIONAL STRUCTURE

The Integrated Master Plan is organized into thirteen Volumes, as described in Table 1.1.

Table 1.1 Integrated Master Plan Volumes Wastewater Collection and Treatment Facilities Integrated Master Plan City of Riverside
<u>Volume 1: Executive Summary</u>
<u>Volume 2: Basis of Planning</u>
Chapter 1: Introduction
Chapter 2: Regulatory Requirements
Chapter 3: Population and Flow Projections
Chapter 4: Basis of Cost Estimates
<u>Volume 3: Wastewater Collection System</u>
Chapter 1: Wastewater Collection System
<u>Volume 4: Wastewater Treatment System</u>
Chapter 1: Existing Facilities
Chapter 2: Summary of Planning Studies
Chapter 3: Process Design and Reliability Criteria
Chapter 4: Plant Hydraulics
Chapter 5: Preliminary Treatment
Chapter 6: Primary Treatment
Chapter 7: Secondary Treatment
Chapter 8: Tertiary Treatment
Chapter 9: Disinfection
Chapter 10: Recycle Stream Management
Chapter 11: Plant Utilities and Support Facilities
Chapter 12: Primary Effluent Equalization

**Table 1.1 Integrated Master Plan Volumes
Wastewater Collection and Treatment Facilities Integrated Master Plan
City of Riverside**

Chapter 13: Proposed Expansion Plan and Site Layout
Chapter 14: Implementation Schedule and Cost

Volume 5: Air Quality and Emissions Control

Chapter 1: Review of the 2005 Odor Control Master Plan
Chapter 2: Review Applicable Regulatory Requirements

Volume 6: SCADA Management Plan

Chapter 1: SCADA Management Plan

Volume 7: Reclamation and Reuse

Chapter 1: Reclamation and Reuse

Volume 8: Solids Treatment and Handling

Chapter 1: Existing Facilities
Chapter 2: Summary of Planning Studies
Chapter 3: Design Criteria
Chapter 4: Solids Production and Thickening Options
Chapter 5: Solids Processing
Chapter 6: Solids Dewatering
Chapter 7: Solids Disposal
Chapter 8: Implementation Schedule and Cost

Volume 9: Energy Management

Chapter 1: Existing Energy Systems
Chapter 2: Summary of Planning Studies
Chapter 3: Existing and Future Energy Uses
Chapter 4: Energy Saving Options
Chapter 5: Power Supply Alternatives
Chapter 6: Standby Power
Chapter 7: Implementation Schedule and Cost

Volume 10: Capital Improvement Plan and Overall Implementation Schedule

Chapter 1: Capital Costs and Implementation Schedule
Chapter 2: Operation and Maintenance Cost

**Table 1.1 Integrated Master Plan Volumes
Wastewater Collection and Treatment Facilities Integrated Master Plan
City of Riverside**

Volume 11: Financial Plan and User Rates and Fees

- Chapter 1: Master Plan Manager™
- Chapter 2: Financial Planning Tool
- Chapter 3: Master Plan Manager™ Help Menu

Volume 12: Asset Management

- Chapter 1: Strategic Vision
- Chapter 2: Condition Assessment

Volume 13: Environmental Impact Report (EIR)

- Public Draft EIR
- Final Draft EIR
- Final Mitigation Monitoring and Reporting Program Report
- Final Response to Comments
- Final Statement of Overriding Consideration and Findings of Fact
- Notice of Determination