
PROJECT BACKGROUND**1.1 INTRODUCTION**

The City of Oroville (City) is located in Butte County, approximately 65 miles north of Sacramento and 85 miles southeast of Redding. Figure 1.1 presents a location map for the general vicinity of the City. The routes of regional significance within the City are State Route 70, State Route 162 (Oro Dam Boulevard), Montgomery Street, Myers Street, Table Mountain Boulevard, Lincoln Boulevard, Oro Quincy Highway, Olive Highway, Oro Bangor Highway, and Nelson Avenue (Figure 1.2). The City's estimated 2008 population was 14,490¹ persons. The City occupies an area of approximately 12.1 square miles.

The City owns and operates a sanitary sewer collection system for the benefit of residents and businesses within the City. As of June 2008, the collection system included approximately 66 miles of sanitary sewer, approximately 1,350 manholes, and 7 sewage lift stations. The sewer system conveys wastewater to a treatment plant owned and operated by the Sewerage Commission - Oroville Region (SC-OR). SC-OR was created in 1973 under a joint powers agreement between the City, Thermalito Water and Sewer District (TWSD), and the Lake Oroville Area Public Utility District (LOAPUD). The individual agencies maintain and operate their own wastewater systems that discharge into the SC-OR plant. Figure 1.3 illustrates the jurisdictional boundaries of SC-OR and its member agencies.

This master plan:

- Evaluates the capacity of the existing sanitary sewer collection system using dry and wet weather flows,
- Determines future capacity needs to support the City's 2030 General Plan buildout,
- Develops a Capital Improvement Program (CIP) that provides the City with a reliable plan to mitigate existing system deficiencies and expand the wastewater collection system to service future customers,
- Determines the revenue and rates necessary to finance the CIP and sanitary sewer operation and maintenance (O&M) costs through a detailed financial analysis.

¹ State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2007 and 2008. Sacramento, California, May 2008.

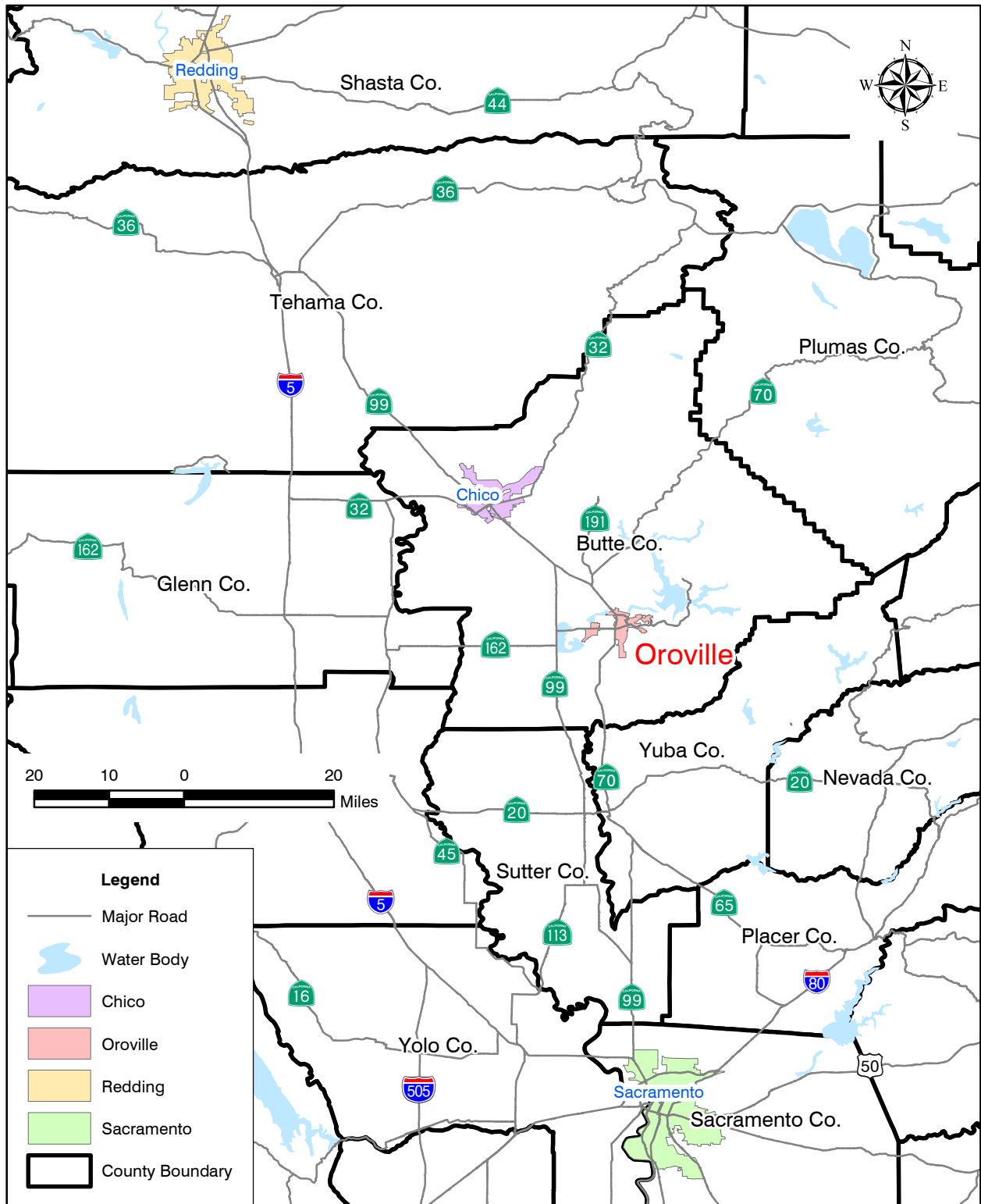
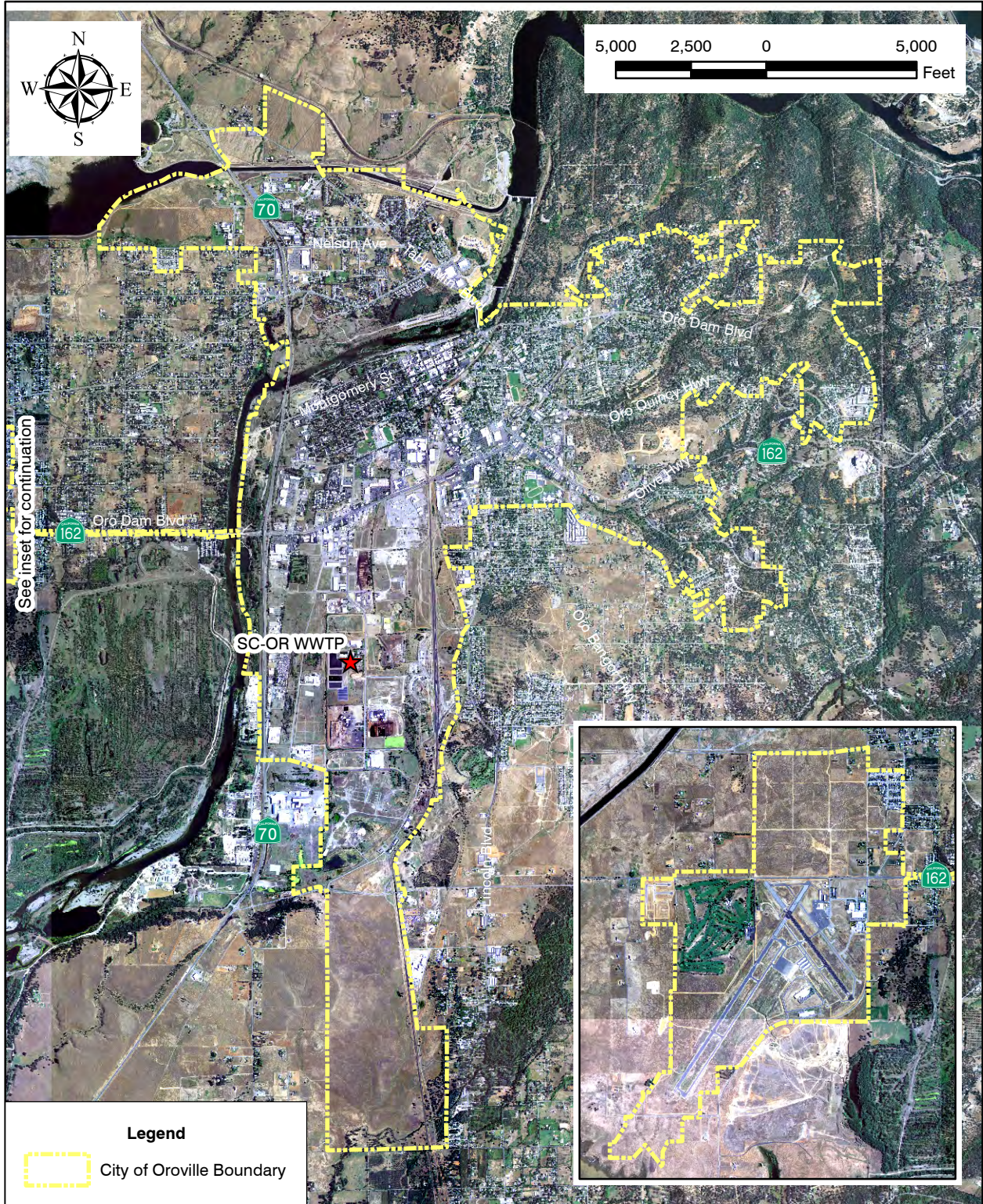


Figure 1.1
GENERAL LOCATION MAP
SANITARY SEWER MASTER PLAN
CITY OF OROVILLE





Legend


 City of Oroville Boundary

Figure 1.2
CITY AERIAL PHOTO
SANITARY SEWER MASTER PLAN
CITY OF OROVILLE



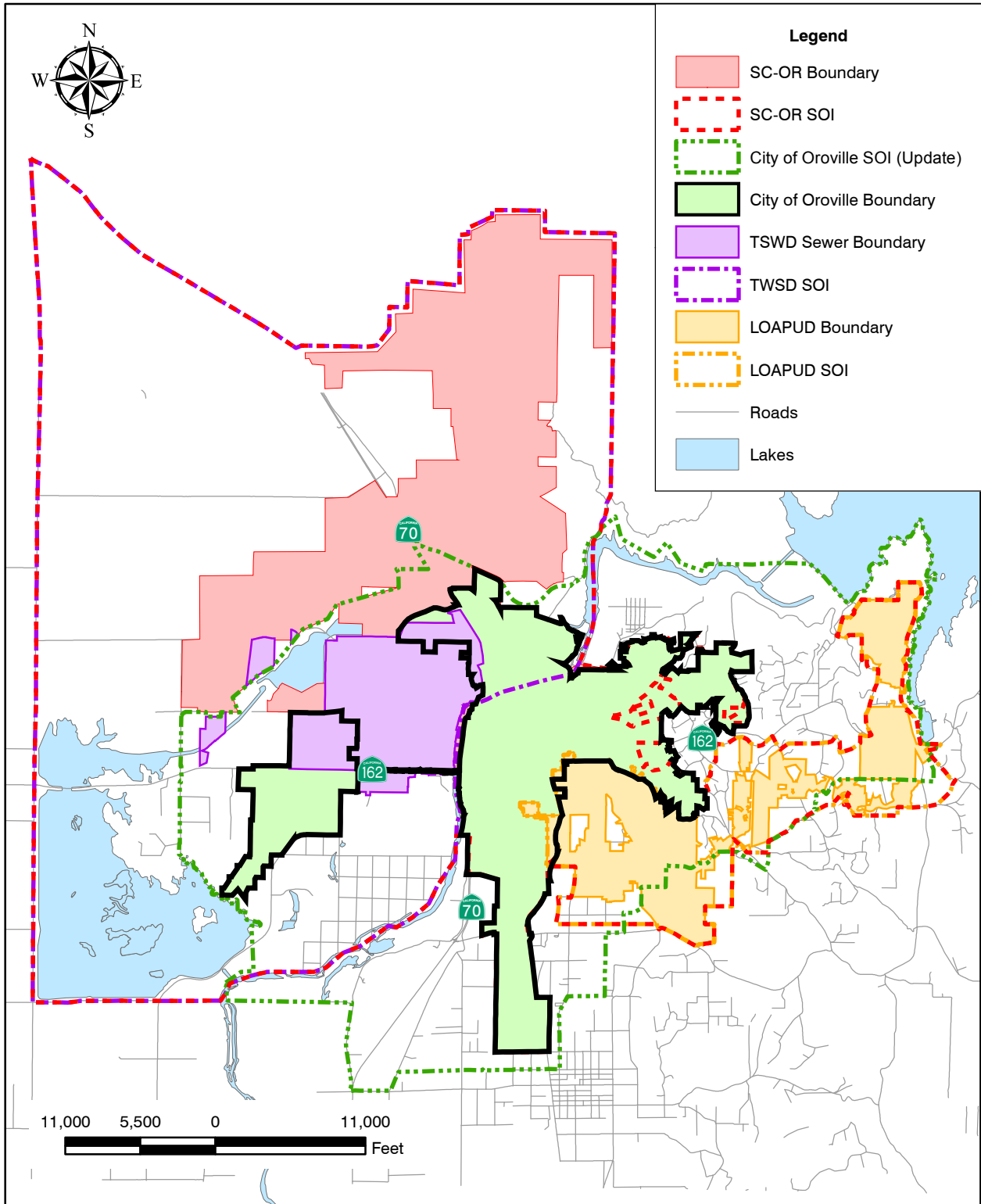


Figure 1.3
UTILITY SERVICE
JURISDICTIONAL BOUNDARIES
SANITARY SEWER MASTER PLAN
CITY OF OROVILLE



1.2 STUDY OVERVIEW

In accordance with the scope of work for this project, the following major tasks were completed:

Data Collection and Review - The collection system and land use data were obtained from the City's geographical information system (GIS) database. In addition, the previous master plan and other specific area reports were reviewed.

Perform Temporary Flow Monitoring Program - Temporary flow monitoring was conducted from February 7 to May 9, 2007, through a subconsultant agreement with Villalobos & Associates Consulting Engineers (V&A). A total of twelve flow meters and four rain gauges were installed to measure dry and wet weather conditions. The V&A data was supplemented with additional flow data from City and SC-OR meters. The flow monitoring and rain gauge data were analyzed to determine which rainfall event to use for hydraulic model calibration and the inflow and infiltration analysis.

Develop Flow Criteria - Existing and future wastewater flow estimates were based on City parcel level land use and unit flow factors.

Develop Hydraulic Model - Several hydraulic model software packages were evaluated and MWH Soft, Inc.'s (now Innowyze InfoWater) H2OMAP Sewer hydraulic model was selected. The hydraulic model was developed using the City's existing GIS database, updated and corrected based upon a citywide manhole survey. The collection system model was calibrated to dry and wet weather flow data supplied by the temporary flow monitoring program.

Wet Weather Capacity - A design storm was run through the hydraulic model to develop peak wet weather flows.

Hydraulic Capacity of System - Capacity deficiencies and restrictions were identified under peak wet weather flow conditions for both existing and future flows.

Identify Future Improvements - A CIP was developed that identifies necessary improvements until the year 2030. Cost estimates and project phasing are also included.

Sewer Utility Financial Analysis - Existing rate and revenue was evaluated and fiscal policy changes were recommended.

Prepare Master Plan Report - This report serves as the project summary for the master plan update. The contents of the report are provided in the next section and summarize the work completed for the hydraulic modeling, flow estimates, and the CIP.

1.3 REPORT CONTENTS

This report contains the following chapters with a brief description of each chapter's contents.

- **Chapter 1: Project Background** - Provides background information for the report and presents the scope of work involved in the master plan.
- **Chapter 2: Planning Area Characteristics** - Provides a description of the existing and future land use for the City service area.
- **Chapter 3: Wastewater Flow Components** - Provides a description of flow components.
- **Chapter 4: Temporary Flow Monitoring Program** - Summarizes the temporary flow and rainfall monitoring effort and the inflow and infiltration analysis.
- **Chapter 5: Collection System Modeling** - Summarizes the existing collection system facilities and the hydraulic modeling effort. This chapter includes the flow estimates, the development of the hydraulic model, and the calibration process.
- **Chapter 6: Capacity Analysis** - Discusses the development of the design storm used to assess the performance of the collection system. This chapter summarizes the results of the hydraulic model simulations during peak wet weather flows and identifies system deficiencies per the City's design criteria.
- **Chapter 7: Capital Improvement Program** - Provides a CIP, cost summary, and phased list of improvements.
- **Chapter 8: Sewer Utility Financial Analysis** - Provides a funding vehicle for implementing the CIP and O&M Program.