

The Chino Basin Optimum Basin Management Program (OBMP) was developed pursuant to the Judgment (*Chino Basin Municipal Water District v. City of Chino, et al.*) and a ruling by the Court on February 19, 1998 (WEI, 1999). The OBMP maps a strategy that provides for the enhanced yield of the Chino Basin and seeks to provide reliable, high-quality, water supplies for the development that is expected to occur within the Basin. An important element of the OBMP is the monitoring of the Chino Basin and the periodic analysis and reporting of these data.

Monitoring is performed in accordance with *OBMP Program Element 1 – Develop and Implement a Comprehensive Monitoring Program* which includes the monitoring of basin hydrology, pumping, recharge, groundwater levels, groundwater quality, and land subsidence. The monitoring is performed by basin pumpers, Chino Basin Watermaster (Watermaster) staff, and other cooperating entities. Watermaster staff collects and compiles the monitoring data into relational databases to support data analysis and reporting.

As a reporting mechanism and pursuant to the OBMP Phase 1 Report, the Peace Agreement and its associated Implementation Plan, and the November 15, 2001 Court Order, Watermaster staff prepares a *State of the Basin Report* every two years. In October 2002, Watermaster completed the *Initial State of the Basin Report* (WEI, 2002). The baseline for this report was on or about July 1, 2000—the point in time that represents the adoption of the Peace Agreement and the start of OBMP implementation. Subsequent *State of the Basin Reports* (WEI, 2005; 2007; 2009a; 2011c) were used to:

- describe the then-current state of the Basin with respect to production, recharge, groundwater levels, storage, groundwater quality, land subsidence, and hydraulic control.
- demonstrate the progress made since July 1, 2000, when Watermaster commenced several OBMP-spawned investigations and initiatives related to groundwater levels and quality, land subsidence, recharge assessments, recharge master planning, hydraulic control, desalter planning and engineering, and production meter installation.

This 2012 *State of the Basin Report* is an atlas-style document. It consists of detailed exhibits that characterize groundwater production, groundwater levels, storage changes, groundwater

quality, land subsidence, and recharge through fiscal year 2011/12. These exhibits are grouped into the following sections:

Introduction: This section describes the background and objectives of the *State of the Basin Report* and contains exhibits that show the Chino Basin Management Zones (MZ) and water service areas of the major water purveyors that overlie the Basin.

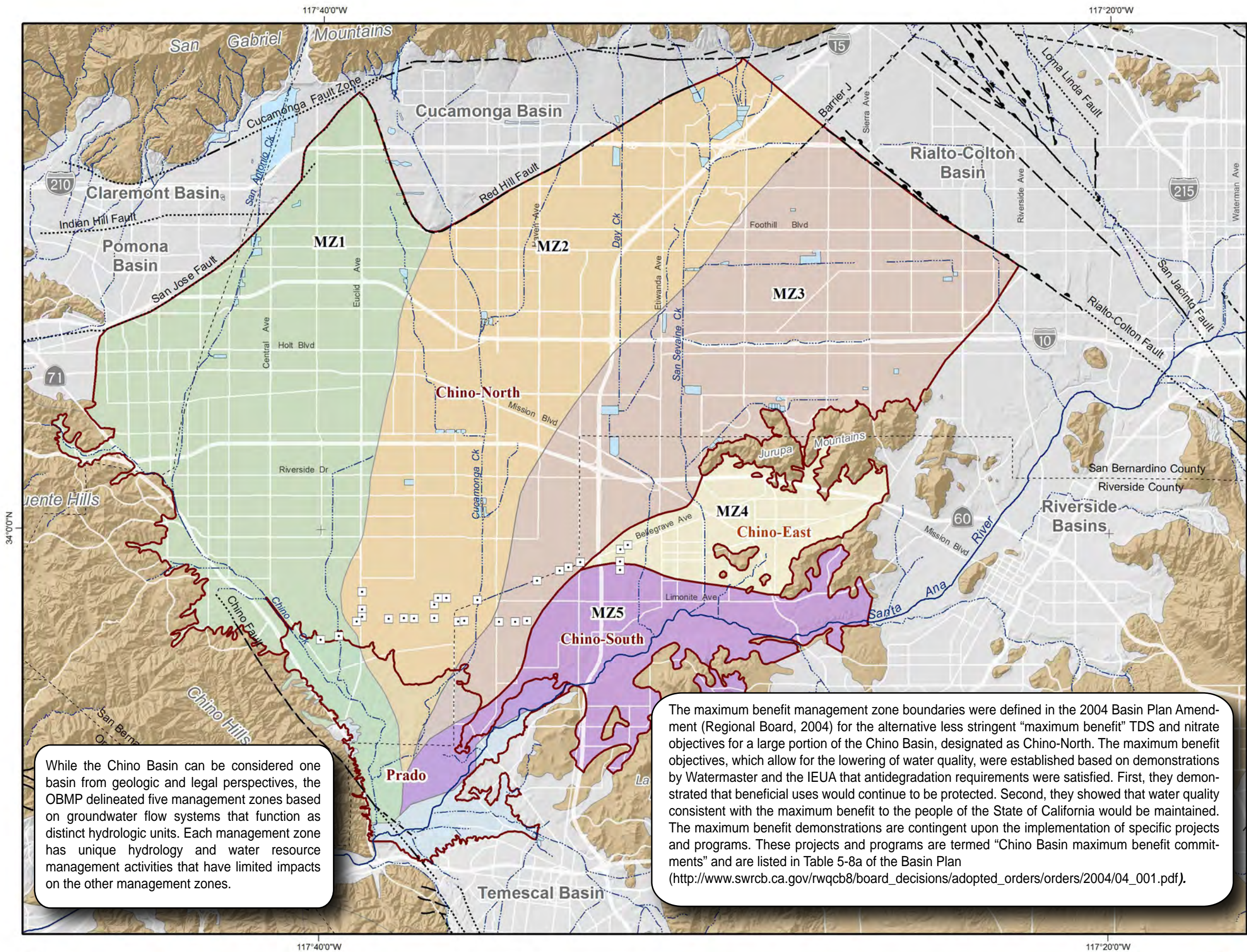
General Hydrologic Conditions: This section contains exhibits that characterize the hydrologic history of the Basin during the base period for the Judgment (1965-1974), the period of the Judgment (1978 to the present), and the period of the Peace Agreement (2000 to the present). This information is useful for characterizing other changes in Basin conditions, including groundwater levels, storage, water quality, recharge and subsidence.

Basin Production and Recharge: This section contains exhibits that characterize groundwater production and recharge over time and space. This information is useful in understanding historical changes in groundwater levels and quality.

Groundwater Levels and Storage: This section contains exhibits that characterize groundwater flow patterns, the change in groundwater elevations, and the change in groundwater storage since 2000. The section includes groundwater-elevation maps for spring 2000, spring 2010, and spring 2012; groundwater-elevation-change maps for 2000 to 2012 and 2010 to 2012; and storage-change maps for 2000 to 2012 and 2010 to 2012. The section also includes exhibits that characterize the time history of groundwater levels throughout the Chino Basin and correlates the change in groundwater levels to observed precipitation, recharge, and pumping patterns.

Groundwater Quality: This section contains exhibits that characterize the groundwater quality across the Chino Basin. The constituents characterized include total dissolved solids (TDS), nitrate, and other constituents of concern. This characterization includes time-series charts of TDS and nitrate, maps of the spatial distribution of constituent concentrations, and a current map of the known point-source contaminants in groundwater as of 2012.

Land Subsidence Monitoring: This section contains exhibits that characterize the history and current state of land subsidence and ground fissuring in the Chino Basin.



OBMP Management Zones

- MZ1
- MZ2
- MZ3
- MZ4
- MZ5

Maximum Benefit Management Zones

- Chino North
- Chino East
- Chino South
- Prado Basin

- Chino Desalter Well
- Streams & Flood Control Channels
- Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



While the Chino Basin can be considered one basin from geologic and legal perspectives, the OBMP delineated five management zones based on groundwater flow systems that function as distinct hydrologic units. Each management zone has unique hydrology and water resource management activities that have limited impacts on the other management zones.

The maximum benefit management zone boundaries were defined in the 2004 Basin Plan Amendment (Regional Board, 2004) for the alternative less stringent "maximum benefit" TDS and nitrate objectives for a large portion of the Chino Basin, designated as Chino-North. The maximum benefit objectives, which allow for the lowering of water quality, were established based on demonstrations by Watermaster and the IEUA that antidegradation requirements were satisfied. First, they demonstrated that beneficial uses would continue to be protected. Second, they showed that water quality consistent with the maximum benefit to the people of the State of California would be maintained. The maximum benefit demonstrations are contingent upon the implementation of specific projects and programs. These projects and programs are termed "Chino Basin maximum benefit commitments" and are listed in Table 5-8a of the Basin Plan (http://www.swrcb.ca.gov/rwqcb8/board_decisions/adopted_orders/orders/2004/04_001.pdf).

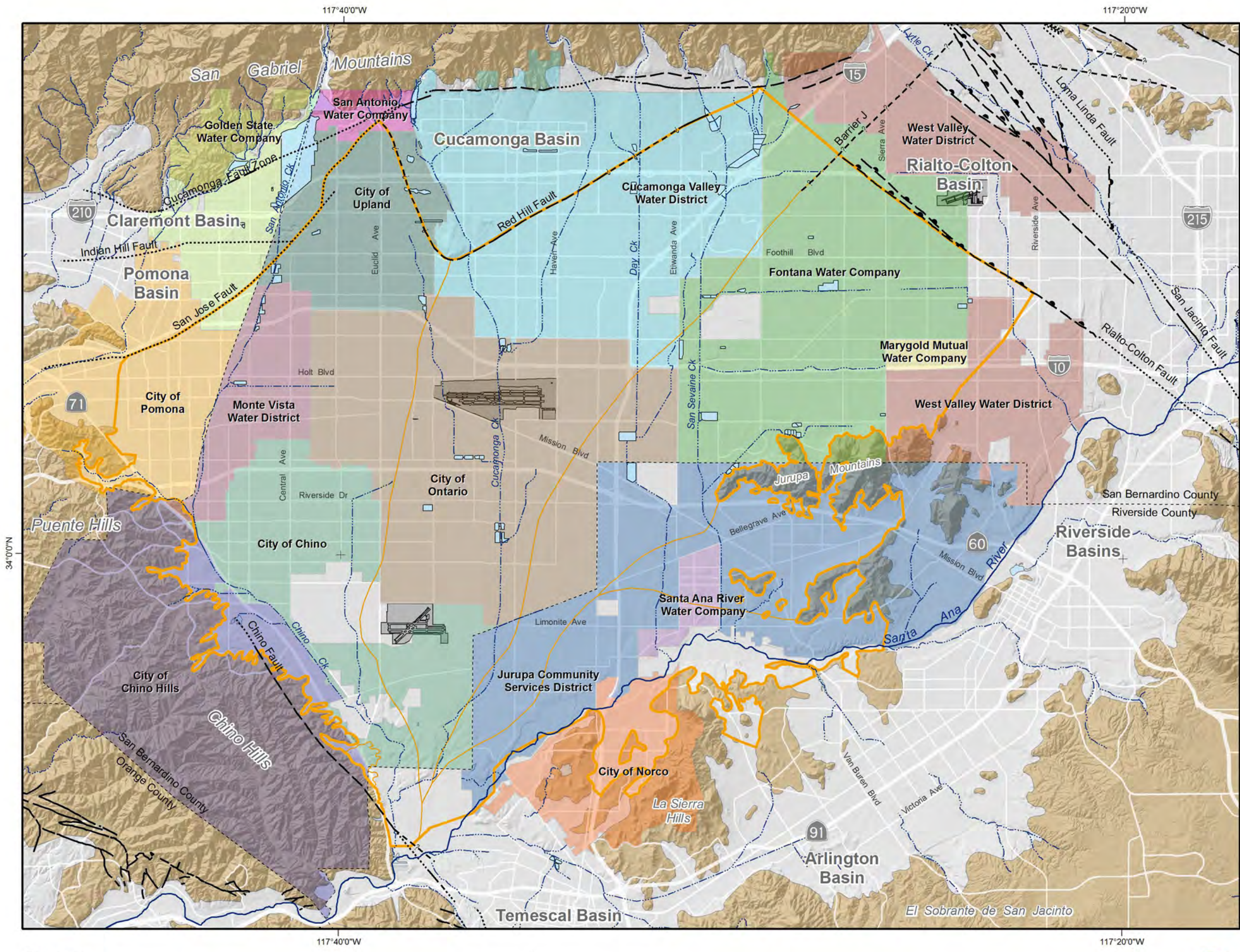
Produced by:
WILDERMUTH
 ENVIRONMENTAL INC.
 23692 Bircher Drive
 Lake Forest, CA 92630
 949.420.3030
www.wildermuthenvironmental.com

Author: VMW
 Date: 12/14/2012
 Document Name: Exhibit_1_ChinoGWbasins



2012 State of the Basin
 Introduction

Chino Groundwater Basin
 OBMP and Maximum Benefit Management Zones



OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

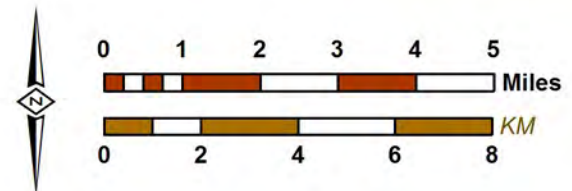
Faults

- Location Certain
- Location Approximate
- Approximate Location of Groundwater Barrier
- Location Concealed
- Location Uncertain



Produced by:
WILDERMUTH ENVIRONMENTAL INC.
 23692 Bircher Drive
 Lake Forest, CA 92630
 949.420.3030
 www.wildermuthenvironmental.com

Author: VMW
 Date: 20121008
 File: Exhibit_2



CHINO BASIN WATERMASTER
 2012 State of the Basin
 Introduction

Water Service Areas of the Major Appropriative Pool Parties of the Chino Basin Watermaster