

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. 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*; this includes the monitoring of basin hydrology, operations (pumping and recharge), groundwater levels, groundwater quality, and ground levels (subsidence). This 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 for analysis.

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 start of OBMP implementation. Subsequent *State of the Basin* reports (WEI, 2005; 2007; 2009) were used to:

- Demonstrate the progress made since fiscal year 2000/01, when Watermaster commenced several OBMP-spawned investigations and initiatives, encompassing groundwater levels and quality, ground levels, annual recharge assessments, recharge master planning, hydraulic control, desalter planning and engineering, and production meter installation.
- Show the current state of the Basin as of fiscal year 2009/10 with respect to groundwater levels, groundwater quality, ground levels (subsidence), recharge, and hydraulic control.

This 2010 *State of the Basin* report is an atlas-style document. It consists of detailed exhibits that characterize groundwater-level, groundwater quality, ground-level, and production data through fiscal year 2009/10. These exhibits are grouped into the following sections:

*Introduction:* This section describes the project background and objectives, a brief overview of the OBMP, and contains exhibits that show the Chino Basin Management Zones (MZ) and water service areas.

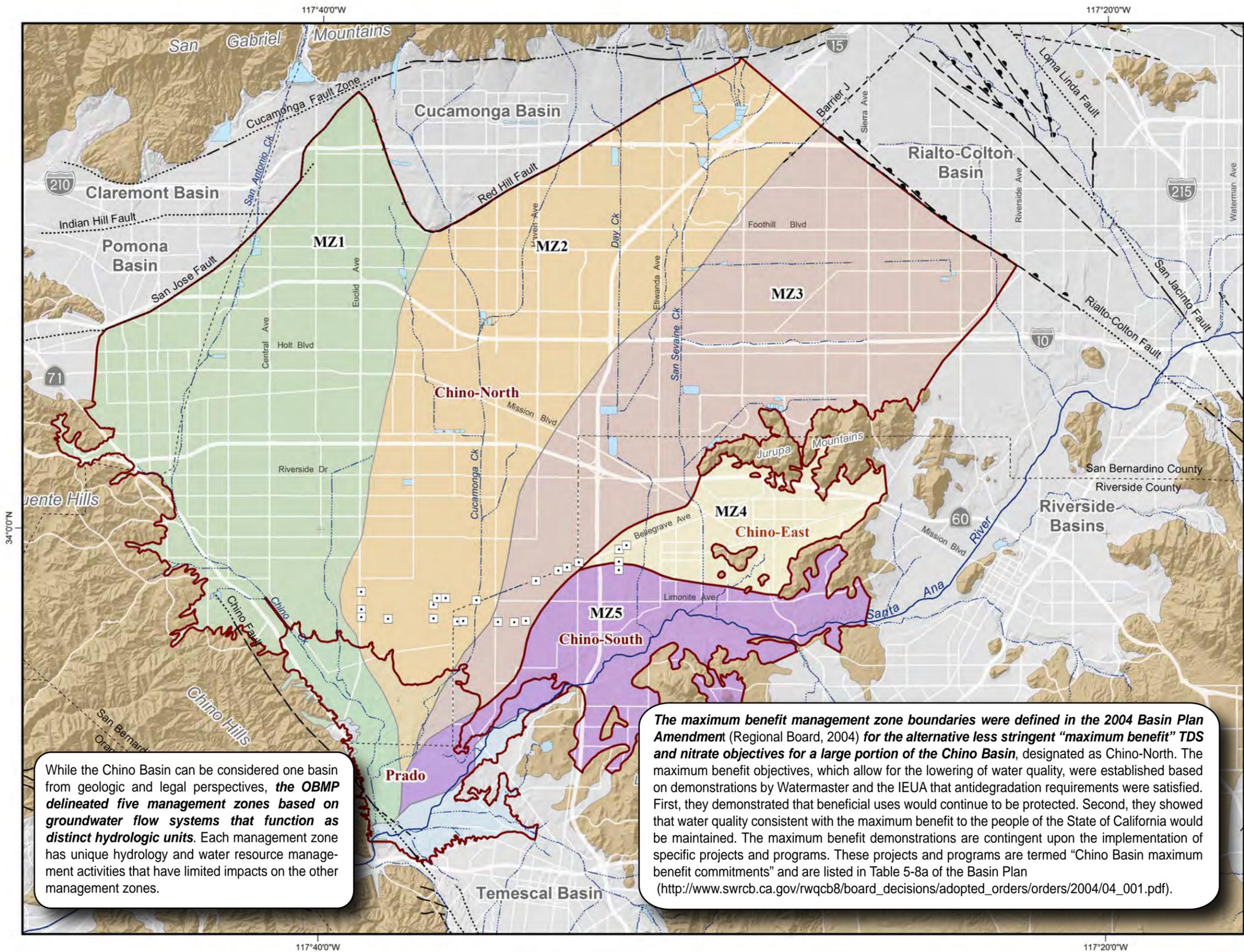
*General Hydrologic Conditions:* This section contains exhibits that characterize the broader hydrologic history of the Basin, specifically the Judgment period (1978 to the present), the Judgment base period (1965-1974), and the Peace Agreement period (2000 to the present). This information is useful for characterizing changes in Basin conditions (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 and for assessing future changes.

*Groundwater Levels:* This section contains 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 groundwater pumping. This section also includes groundwater-level elevation contour maps for spring 2000 and spring 2010 and a groundwater elevation change map for 2000 to 2010.

*Groundwater Quality:* This section contains exhibits that characterize the time history of water quality throughout the Chino Basin. Constituents investigated include total dissolved solids (TDS), nitrate, and other constituents of concern. This characterization includes time history plots of TDS and nitrate, the spatial distribution of constituent concentrations in the Basin, and the current depiction of VOC plumes and other known point source plumes in the Chino Basin as of 2010.

*Ground-Level Monitoring:* This section contains exhibits that characterize the time history of vertical ground motion data for the monitoring done in MZ1 and MZ2—where land subsidence is a concern—and includes time histories of groundwater pumping, aquifer recharge, groundwater levels, and ground motion.



**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

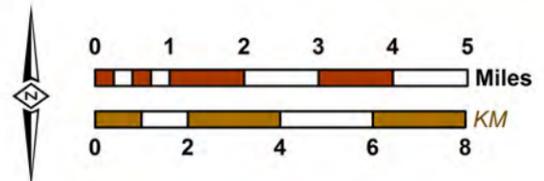


While the Chino Basin can be considered one basin from geologic and legal perspectives, **the OBMP delineated five management zones based on groundwater flow systems that function as distinct hydrologic units.** Each management zone has unique hydrology and water resource management activities that have 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](http://www.swrcb.ca.gov/rwqcb8/board_decisions/adopted_orders/orders/2004/04_001.pdf)).

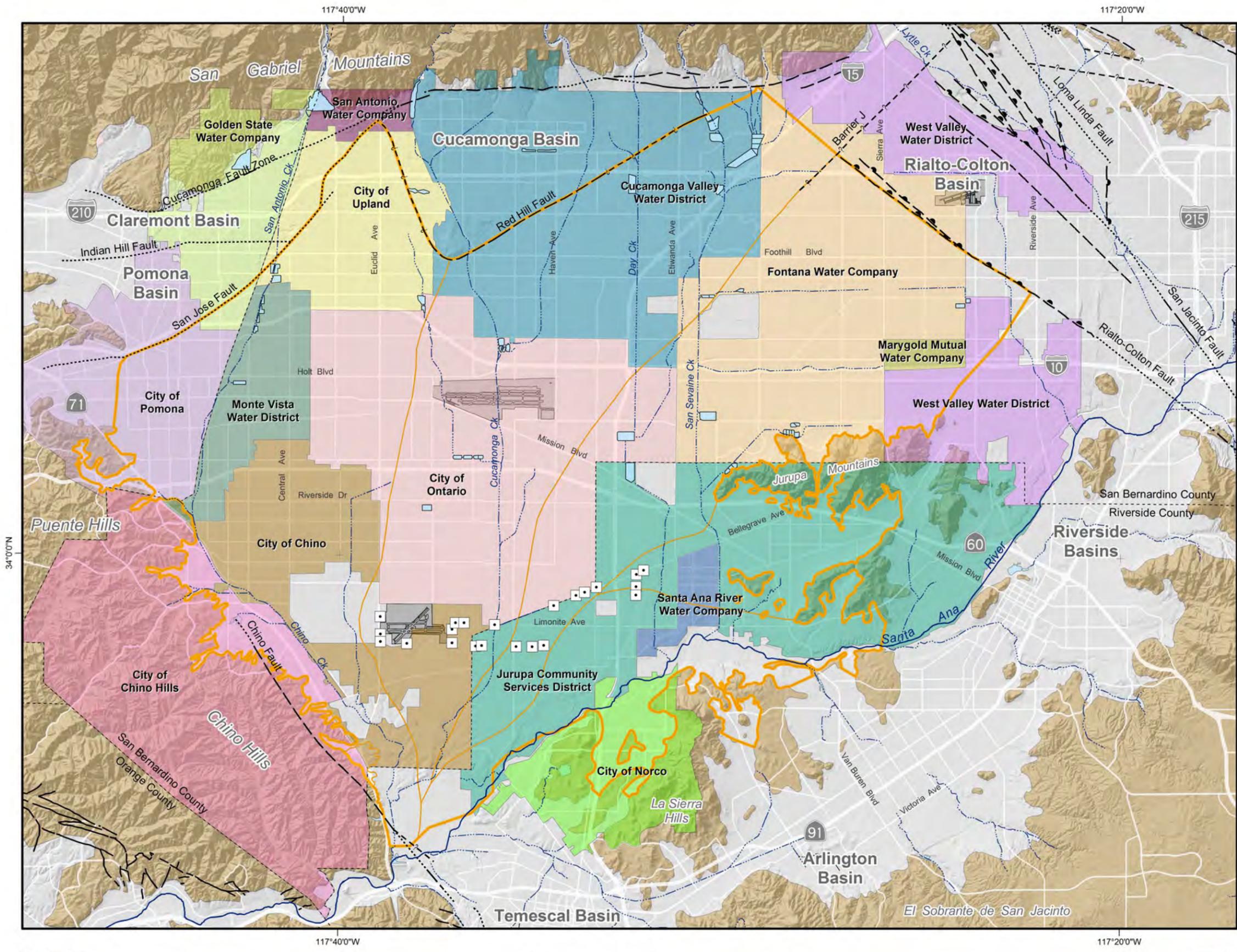
Produced by:  
**WILDERMUTH ENVIRONMENTAL INC.**  
 23692 Birtcher Drive  
 Lake Forest, CA 92630  
 949.420.3030  
[www.wildermuthenvironmental.com](http://www.wildermuthenvironmental.com)

Author: VMW  
 Date: 20110618  
 File: Exhibit\_1.mxd



**2010 State of the Basin Introduction**

**Chino Groundwater Basin**  
 OBMP and Maximum Benefit Management Zones



**OBMP Management Zones**

**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

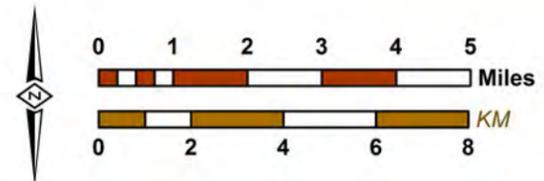
**Faults**

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



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

Author: TCR  
 Date: 20111019  
 File: Exhibit\_2



**CHINO BASIN WATERMASTER**  
 2010 State of the Basin  
 Introduction

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