

1.0 INTRODUCTION

The 2005 Urban Water Management Plan (UWMP) for Los Angeles County Waterworks District No. 29, Malibu (District) and the Marina del Rey Water System was prepared in accordance with the California Urban Water Management Planning Act ([Appendix A](#) includes a copy of the Act). The Act has been amended several times since its passage, with the most recent amendment in 2004. The Act requires every urban water supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AF (acre-feet) of water annually, to prepare and adopt, in accordance with prescribed requirements, an Urban Water Management Plan. Pursuant to Section 10621.a. of the Act, each urban water supplier shall update its plan at least once every five years on or before December 31, in calendar years ending in five and zero.

1.1 Formation of Waterworks District 29 and Marina del Rey Water System

The District was formed in accordance with Division 16, Sections 55000-55991 of the State Water Code. The District is governed by the Los Angeles County Board of Supervisors with the Waterworks and Sewer Maintenance Division of the County of Los Angeles Department of Public Works (DPW) providing administration, operation, and maintenance of the District's facilities and infrastructure.

1.2 Public Participation

The 2005 UWMP was adopted by the Board of Supervisors on **November 22, 2005** and submitted to the California Department of Water Resources within 30 days of the Board's adoption. A copy of the adopted Resolution is included in [Appendix B](#). A public hearing was held to include public review and comments on the 2005 UWMP. Notice of the preparation of the plan and the public hearing was made in the Malibu Times, Surfside News, and Topanga Messenger and a copy of the plan was distributed to interested parties and placed in the local libraries throughout the District.

1.3 Coordination with other County Departments

The District's staff has coordinated with the County of Los Angeles Department of Regional Planning to develop the population projections for this plan.

1.4 Interagency Coordination

The District is a retail agency within the service area of the West Basin Municipal Water District (West Basin MWD). Staff of the District coordinated with the West Basin MWD's staff to project the supply reliability and describe the various water conservation programs to ensure consistency between the District's and West Basin MWD's plans. The District also worked with the Southern California Association of Governments (SCAG) to determine the estimated population growth in the service areas. Table 1.1

indicates the level of coordination with appropriate agencies that participated in the preparation of this plan.

Table 1.1 Coordination with Appropriate Agencies

| | Participated in UWMP development | Contacted for Assistance | Received copy of the draft | Sent notice of intention to adopt |
|--|---|---------------------------------|-----------------------------------|--|
| West Basin MWD | X | X | | X |
| City of Malibu | | X | X | X |
| County of Los Angeles Department of Regional Planning | | X | | |
| Resource Conservation District of the Santa Monica Mountains | | | X | X |
| Las Virgenes Municipal Water District | | | | X |
| Malibu Times | | | | X |
| Surfside News | | | | X |
| Topanga Messenger | | | | X |
| Lloyd Taber Marina del Rey County Library | | | X | X |
| Malibu Library | | | X | X |
| Southern California Association of Governments | | X | | |

1.5 Purpose of the Urban Water Management Plan

The purpose of the Urban Water Management Plan is to plan for future water supply and demand within the District’s service areas. The District recognizes that conservation and efficient use of water are critical and has prepared this UWMP to ensure an appropriate level of reliability in its water service to meet the needs of its customers during normal, dry and multiple dry years.

1.6 Climate

The District’s service areas lie along the Pacific Coast. The climate is Mediterranean, characterized by warm, dry summers and wet, cool winters with average precipitation of 13 inches per year. The steady climate and low rainfall makes the area a popular vacation location for tourists. In Table 1.2 the average monthly temperature, rainfall and evapotranspiration rates (ETo) are displayed. The temperature and precipitation data was collected via the Western Regional Climate Center’s website at the Los Angeles WSO Airport weather station. The period of record for the temperature and precipitation

is from the year 1914 to 2005. The ETo data was obtained from the California Irrigation Management Information System (CIMIS) at the Santa Monica station for the Los Angeles Region.

Table 1.2 Temperature, Precipitation, and ETo

| | Jan | Feb | Mar | Apr | May | Jun |
|-----------------------------------|------|------|------|------|------|------|
| Average Max. Temperature (F) | 65.1 | 65.6 | 66.4 | 68.2 | 70.1 | 73.3 |
| Average Min. Temperature (F) | 47.9 | 49.1 | 50.6 | 52.8 | 55.9 | 59 |
| Average Total Precipitation (in.) | 2.9 | 3.15 | 2.08 | 0.91 | 0.21 | 0.06 |
| Average ETo | 1.79 | 2.12 | 3.3 | 4.49 | 4.73 | 5.03 |

| | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|-----------------------------------|------|------|------|------|------|------|--------|
| Average Max. Temperature (F) | 77.2 | 78.3 | 77.5 | 74.6 | 71.4 | 66.5 | 71.2 |
| Average Min. Temperature (F) | 62.3 | 63.2 | 61.9 | 58.2 | 52.9 | 48.7 | 55.2 |
| Average Total Precipitation (in.) | 0.01 | 0.06 | 0.22 | 0.43 | 1.22 | 2.21 | 13.47 |
| Average ETo | 5.4 | 5.38 | 3.94 | 3.4 | 2.42 | 2.22 | 3.69 |

[1] Data taken from the Western Regional Climate Center's website at the Los Angeles WSO Airport Station: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?calosa>.

[2] ETo data taken from the California Irrigation Management Information System (CIMIS) at the Santa Monica Station for Calendar Year 2004: <http://www.cimis.water.ca.gov/cimis/welcome.jsp>.

1.7 Other Demographic Factors

The District's water service areas include the City of Malibu and the unincorporated Topanga Canyon area. The District serves an estimated population of 24,973 people through approximately 7,760 active meters. The majority of these connections serve residential communities with some services to commercial, landscape, fire protection, and other public agencies. The District also sells water to the Marina del Rey Water System which has a population of approximately 10,000 people.

Malibu area

The Malibu water service area is a narrow strip along the coastline, with numerous canyons running northwards. As shown on the following page, it is bounded on the north by the steep and rugged Santa Monica Mountains, on the east by Topanga Canyon, on the west by Ventura County and on the south by the Pacific Ocean. The District occupies an area of about 47 square miles (30,000 acres). The District has served the Malibu area since 1973.

Due to a growing population, natural disasters, and outdated water system facilities in the District, several projects have been constructed to improve water service reliability. One of these projects was a one-mile section of three 10-inch diameter steel watermains along Pacific Coast Highway between Big Rock Drive and Tuna Canyon Road, a known landslide area. The District's 30-inch transmission watermain has had many leaks within this landslide area resulting in interruptions of water service to the District's customers on the west side of the District. The three new watermains will allow the District to continue providing water when the primary transmission watermain is out of service for leak repairs.

Marina del Rey area

The Marina del Rey Water System (Marina del Rey) is a smaller system served directly off the transmission main delivering water to the Malibu System. As shown in Figure 1-1, Marina del Rey's service area encircles the Marina del Rey Harbor, providing service to businesses, as well as apartment and condominium complexes in the Marina del Rey area through 300 service connections.

An Adequacy Study for Marina del Rey, conducted by the County of Los Angeles Department of Beaches and Harbors, found the existing water system facilities were designed and constructed in 1961/62 to accommodate low density, two-story structure land use. Subsequently, the land use has changed to high density, high rise structures, and the existing water system has not been upgraded to meet the increased demands.

Twelve million dollars of system improvements for the Marina del Rey area have been recommended to support existing and future growth. These water system improvements were broken into five phases and scheduled for construction over a 13-year period from 1997 to 2010. They include replacement of transmission mains, metering stations, upgrades, and the construction of a 3.6 million-gallon reservoir. Phases I and IA have been completed over the last five years. Phase II is scheduled to be constructed before 2010 and Phase IV has been eliminated due to changes in the system design. The remaining phases of construction will be completed as funds in the District's Accumulative Capital Outlay Fund become available.

1.8 Population

The Southern California Association of Governments (SCAG) has developed population projections by census tract and city within the County of Los Angeles. Based on these projections, the population within the census tracts containing the District is estimated to increase 5 to 12 percent every five years.

Table 1.3 below displays the population growth projections over the various regions in the District from the year 2000. Projections have been shown through 2030. This table provides two projection estimates: one is based on SCAG projections and the other is based on the observed growth in the number of new connections per year. The District's future demands are based on SCAG projections for this report.

Table 1.3 Population Projections

| Southern California Association of Governments (SCAG) Based Projections | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|
| | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| City of Malibu | 12,656 | 13,471 | 13,721 | 14,546 | 15,370 | 16,196 | 17,000 |
| Northern Topanga | 3,276 | 3,548 | 4,714 | 5,294 | 5,925 | 6,453 | 6,896 |
| Southern Topanga | 3,207 | 3,623 | 4,283 | 4,770 | 5,293 | 5,772 | 6,185 |
| Marina del Rey | 8,334 | 10,143 | 11,587 | 12,402 | 13,205 | 14,065 | 14,891 |
| Dist. 29 (Exclude Marina del Rey) | 19,139 | 20,642 | 22,718 | 24,610 | 26,588 | 28,421 | 30,081 |
| Total District 29 Population | 27,473 | 30,785 | 34,305 | 37,012 | 39,793 | 42,486 | 44,972 |
| Percent (%) Growth over 5 Year Period | 12% | 11% | 8% | 8% | 7% | 6% | 5% |
| Population Estimates Based on the anticipated number of New Connections Multiplied by Average Person Per Household (APPH) | | | | | | | |
| | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| Number of Connections | 7,331 | 7,614 | 7,842 | 8,078 | 8,320 | 8,570 | 8,827 |
| Projected Population | 24,430 | 29,918 | 31,977 | 33,430 | 34,886 | 36,421 | 37,941 |
| Percent (%) Growth over 5 Year Period | 22% | 7% | 5% | 4% | 4% | 4% | 4% |

1.9 Past Drought, Water Demand, and Conservation Information

The District experienced a drought from 1989 to 1992 and the County of Los Angeles took several efforts to reduce water usage and promote water conservation. The County of Los Angeles Board of Supervisors adopted the Phased Water Conservation Plan (PWCP) that identified nine phases to reduce water usage. The Plan established conservation targets for each phase to enable the District to meet the anticipated shortages in water supply. (See **Appendix C** for the section of the District's Rules and Regulations that established the PWCP).

In addition, the Metropolitan Water District of Southern California (MWD) requested a voluntary conservation effort by its member agencies in 1990 to reduce its water consumption by 10 percent. During the four-month duration of the request (June through September of 1990), the District reduced its monthly water consumption by 12 percent. The District's wholesaler, West Basin MWD, reported that during the four-month conservation effort, the District saved more than 273 acre-feet (AF) of water.

Additionally, on April 11, 1996, the District became a signatory to the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding Regarding Urban Water Conservation in California (MOU).