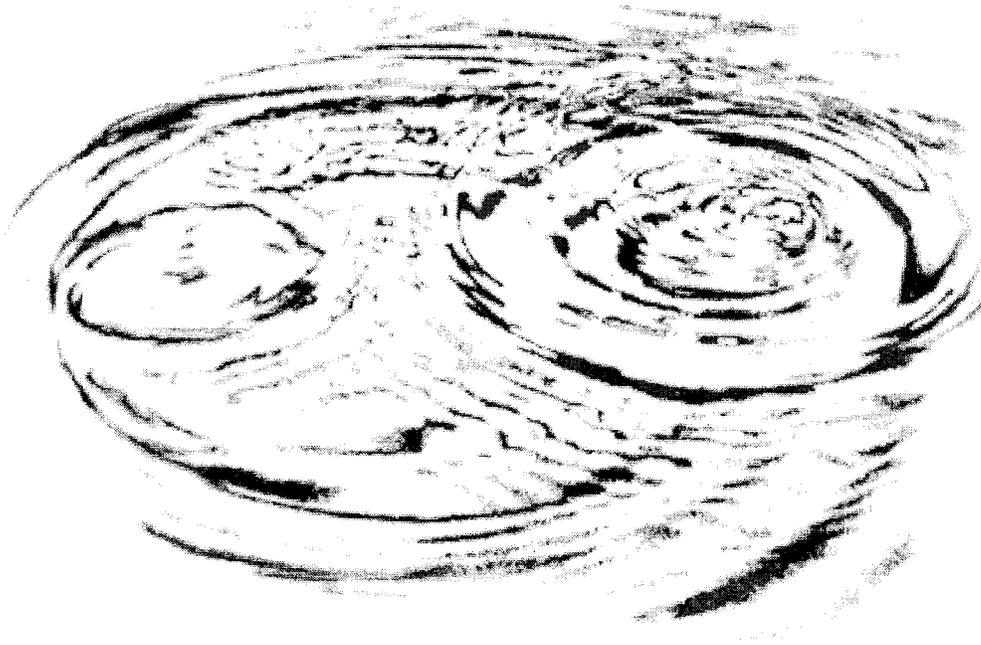


La Cañada Irrigation District

2005

Urban Water Management Plan



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Regional Urban Water Management Plan

Chapter 1

Introduction

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10620.

- (a) *Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).*
- (b) *Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.*
- (c) *An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.*
- (d) (1) *An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.*
(2) *Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.*
- (e) *The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.*
- (f) *An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

1.1 Urban Water Management Plan

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10617.

"Urban Water Supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the health and Safety Code.

This Urban Water Management Plan (UWMP) was prepared in accordance with the California Urban Water Management Planning Act (Act),* which became effective on January 1, 1985 (see Appendix A). The Act requires every “urban water supplier”, which is a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP, and to periodically review its UWMP at least once every five years and make any amendments or changes which are indicated by the review. La Cañada Irrigation District (District) recently became an urban water supplier, as defined by Water Code Section 10617; therefore the 2005 UWMP will be its first UWMP.

The District’s UWMP is intended to review the activities of the District as a retail water supplier in the Raymond Basin and from Foothill Municipal Water District and to describe the operations of the District to achieve the maximum practicable conservation and efficient use of the water resources of the area, both local and imported.

1.2 Changes to the Plan

*California Water Code Division 6
Part 2.6. Urban Water Management Planning
Section 10621.*

- (a) Each urban water supplier shall update its Plan at least once every five years on or before December 31, in years ending in five and zero.*
- (b) Every urban water supplier required to prepare a Plan pursuant to this part shall notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the Plan and considering amendments or changes to the Plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.*
- (c) The amendments to, or changes in, the Plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).*

The following are new amendments to the Act and some reorganization of the water code sections:

- 1) Senate Bill 610, Land and Water Use Planning Bill
- 2) Assembly Bill 901, Water Quality Information

* Water Code Sections 10610 through 10656.

- 3) Senate Bill 672, Minimize Need to Import Water
- 4) Senate Bill 1348, Consider Demand Management Measures Implementation When Evaluating Eligibility
- 5) Senate Bill 1384, Wholesale Agency Water Supply Information
- 6) Senate Bill 1518, Recycled Water
- 7) Assembly Bill 105, Deposit Plan's in State Library
- 8) Senate Bill 318, Desalination

1.3 Water Management Tools

This Plan describes the management tools and options used by the District to maximize resources. The District is bound by the Raymond Basin Judgment, which is discussed in detail in Chapter 3, and is limited with groundwater supply. However, the District implements Demand Management Measures, which are policies or programs implemented by urban water suppliers that result in more efficient use or conservation of water, as discussed in Chapter 5. In addition, the District has looked at the option of recycled water to minimize imported water use, which is discussed in Chapter 8.

1.4 Coordination

The District produces water from the Raymond Basin and purchases imported water from Foothill Municipal Water District (FMWD). FMWD is a wholesale water agency that obtains untreated imported water from the Metropolitan Water District of Southern California (MWD). The District has reviewed the UWMP prepared by FMWD and the Regional UWMP (RUWMP) prepared by MWD and has incorporated those Plans as reference in this UWMP. The District has provided FMWD with water use projections and existing/planned sources of water as required by Section 10631(k) of the California Water Code, as shown in Appendix B. In addition, the District has notified all cities within the District's service area that the District will be reviewing the UWMP and the District encouraged all cities to participate as required by Section 10621, as shown in Appendix B. The District has not received any comments from cities within its service area.

1.5 Public Participation and Plan Adoption

The District made the Draft UWMP available for public review and published a notice of the public hearing in the public library and in the District's main office. Public notification of the hearing is required pursuant to Section 10642 of the California Water Code. The District adopted its Draft UWMP on December 13, 2005, as its 2005 UWMP. Within 30 days of adoption of the UWMP by the District, a copy of the UWMP will be filed with the State of California, Department of Water Resources (DWR), the California State Library and the City of La Cañada Flintridge. A copy of the District's adopted resolution is in Appendix C.

Chapter 2

Description of Service Area

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10631.

A Plan shall be adopted in accordance with this chapter and shall do the following:

(a) Describe the service area of the supplier; including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

2.1 Background [Section 10631 (a)]

The District owns and operates a water distribution system serving much of the City of La Cañada Flintridge and unincorporated portions of Los Angeles County. The District's main office is located at 1443 Foothill Boulevard in the City of La Cañada Flintridge, California. The District operates under the Public Water System (PWS) Identification Number CA1910054.

The District was formed in 1924 by local property owners and was soon approved as a special district by the State of California under Division 11 of the California Water Code.

In the late 1940s through the 1950s, the District experienced rapid growth, tripling the number of customers. By the early 1950s, the local water supplies became inadequate to serve the area. As a result, in 1955, the District began purchasing supplemental water from FMWD. Today, the District receives most of its water supply from FMWD, who purchases all of its water from MWD. The District has no control over the quantity or quality of the water purchased from FMWD.

The District's distribution system includes about 2,900 service connections serving a population of approximately 9,000 people. Following is a breakdown of the District's service connections by customer type.

1. Residential – 2,812 service connections
2. Commercial – 71 service connections
3. Irrigation – 16 service connections

2.2 Description of Area [Section 10631 (a)]

The District is located in the central part of Los Angeles County. It is bounded on the north by the Angeles National Forest, the south by the San Rafael Hills, and the west by the Verdugo Mountains.

The climate in the City of La Cañada Flintridge is moderate. The average temperature ranges from 55.8 degrees Fahrenheit (°F) in January/December to 76.3 °F in August, as shown on Table 1. The average daily low temperature is 42.9 °F and the average daily high temperature is 90.3 °F. The average rainfall in the City of La Cañada Flintridge ranges from 5.7 inches in February to 0.1 inches in July, as shown on Table 1.

About 10 percent of the District's water supply is from the groundwater pumped from the Raymond Basin, which is located in the northwest part of the San Gabriel Valley, in eastern Los Angeles County. The boundaries of the Raymond Basin are the San Gabriel Mountains on the north, the San Rafael Hills on the southwest, and the Raymond fault on the southeast. The average precipitation within Raymond Basin ranges from about 19 inches in the valley to 25 inches in the upland areas. The average precipitation over the entire Raymond Basin is about 21 inches.

2.3 Current and Projected Population [Section 10631 (a)]

Currently, the District has an estimated population of about 9,000 people. The following tabulation presents a comparison of the current and projected population within the District from 2005 to 2025.

Year	Population	Percent Increase	Source
2005	9,000	--	District
2010	9,065	0.7	District
2015	9,130	0.7	District
2020	9,160	0.3	District
2025	9,185	0.3	District

Since the area within the District is effectively built-out, new development and growth will include only the redevelopment of underutilized parcels and the renovation of existing structures.

Chapter 3

Sources of Supply

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10631.

- (b) *Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the Plan:*
1. *A copy of any groundwater management Plan adopted by the urban water supplier, including Plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.*
 2. *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court of the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as over drafted or has projected that the basin will become over drafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.*
 3. *A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
 4. *A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.*
- (c) *Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*
1. *An average water year.*
 2. *A single dry water year.*
 3. *Multiple dry water years.*
- (d) *Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

3.1 Existing and Planned Sources of Water Supply [Section 10631 (b)]

About 90 percent of the District's water supply is imported water from FMWD, 5 percent is from groundwater from the Raymond Basin and the remaining 5 percent is water from Pickens Canyon. A quantification of all sources of water available to the District is

provided in Table 2. A detailed description of the three sources of water supply is described in the following sections.

3.1.1 Foothill Municipal Water District

The main source of water supply is treated imported water from FMWD, accounting for a total of 90 percent of the District's entire demand. The District has two connections to FMWD, as shown on Plate 1. The service connection at Castle Road has a maximum capacity of about 1,600 gallons per minute (gpm) and the service connection at Hampton Road has a maximum capacity of about 1,500 gpm.

Table 2 shows a quantification of the District's historical and projected imported water supplies. Annual imported water purchased from FMWD has remained relatively constant during calendar years 2000 to 2004.

FMWD is a member agency of MWD and obtains all of its imported water supplies from MWD. MWD's water supply availability is described below.

3.1.1.1 Metropolitan Water District of Southern California

MWD owns and operates the Colorado River Aqueduct which conveys water from Lake Havasu on the Colorado River to water transmission pipelines and to Lake Matthews for storage. MWD's right to divert 1,212,000 acre-feet per year of Colorado River Water has been reduced substantially since the Central Arizona Project became fully operable. MWD's Colorado River water right includes a fourth and fifth priority under the 1931 Seven Party Agreement relating to California's share in the Colorado River water supply. The fourth priority is in the amount of 550,000 acre-feet and the fifth priority is in the amount of 662,000 acre-feet. MWD is subject to reductions in the 550,000 acre-feet due to requirements of PPR (Present Perfected Rights and federal claims). In 1964 a United States Supreme Court decree (Arizona v. California) limited California to 4.4 million acre-feet per year from the Colorado River when the total supply available to the Lower Basin is 7.5 million acre-feet. This amount will satisfy only the first four priorities of the 1931 Agreement. California will also have a right to one-half of

any surplus water, as determined by the Secretary of the Interior, and, therefore, in years of surplus MWD may receive certain quantities of declared surplus water.

MWD contracts with the State of California for the delivery of northern California water through the California Aqueduct (State Water Project). The State Water Project may not be able to fulfill all of its contractual water delivery requirements in the future. In order for the State Water Project to deliver all of the water contracted for, additional water supplies must be developed. Water diverted at the Sacramento-San Joaquin Delta by the State Water Project must be water that is surplus to the needs of the areas of origin. As local use of water in northern California increases, the supply to the State Water Project may be reduced. Also, water quality requirements in the Sacramento-San Joaquin Delta affect the quantity of water available to the State Water Project. The State Water Project annual deliveries average about 2.5 million acre-feet per year. The State Water Project's total contractual commitment is about 4.2 million acre-feet per year.

In December 1994, State Water Project contractors reached an agreement that will provide opportunities to improve their water supply reliability. That agreement is referred to as the Monterey Agreement and is the basis for an amendment to MWD's water supply contract with the State of California. Under the 1994 Monterey Agreement, MWD was given operational control of 218,940 acre-feet of water from the reservoirs at the southern terminals of the California Aqueduct. The Monterey Agreement covers a number of issues, and includes the ability for State Water Project contractors to improve their water management through greater and more flexible use by the contractors of existing State Water Project storage and water conveyance facilities, and through the opportunity for urban contractors to purchase agricultural water entitlements.

FMWD is dependent upon MWD for future imported water supplies and a summary of available water supplies for the next 20 years, in five-year increments, is included in MWD's draft 2005 RUWMP, which is incorporated by reference.

3.1.2 The Raymond Groundwater Basin

3.1.2.1 Description of Groundwater Basin [Section 10631(b) (2)]

The District owns two wells which pump from the Raymond Basin. However, groundwater from the Raymond Basin accounts for only a total of about 5 percent of the District's entire demand.

The Raymond Basin is located in Los Angeles County about 10 miles north-easterly of downtown Los Angeles. Raymond Basin is a wedge in the northwesterly portion of the San Gabriel Valley and is bounded on the north by the San Gabriel Mountains, on the west by the San Rafael Hills and is separated from the Main San Gabriel Basin on the southeast by the Raymond Fault. The Raymond Basin is divided into an eastern unit, which is the Santa Anita sub-area, and the Western unit which is the Pasadena sub-area and the Monk Hill Basin. The location of the Raymond Basin and the sub-areas are shown on Plate 2. The surface area of Raymond Basin is about 40.9 square miles. Average precipitation in the Basin is about 19 inches in the valley to 25 inches in the upland areas. The average precipitation over the entire Raymond Basin is about 21 inches. The principal streams in the Raymond Basin are the Arroyo Seco, Eaton Wash and Santa Anita Wash. The Arroyo Seco drains to the Los Angeles River, while Eaton Wash and Santa Anita Wash drain to the Rio Hondo, a distributary of the San Gabriel River.

The Raymond Basin has been adjudicated. In addition, the Department of Water Resources Bulletin 118 does **not** identify the Raymond Basin as being in overdraft.

3.1.2.2 District Groundwater Wells

The District owns two wells located in the City of La Cañada Flintridge in the southeast section of the District, as shown on Plate 1. Well No. 1 was drilled at a depth of 499 feet and has a maximum pumping capacity of 500 gpm. Well No. 6 was drilled at a depth of 550 feet and has a maximum pumping capacity of 750 gpm. Table 2 shows the District's historical and projected groundwater production.

3.1.2.3 Location, Amount and Sufficiency Groundwater [Section 10631 (b) (3) (4)]

The District produces water from the Monk Hill Basin, which is used as large underground storage reservoirs and is shown in Plate 2. FMWD recharges the sub-basin with imported water supplies by injection. During the wet years, the sub-basin can provide storage of surplus surface water (local and imported). During the dry years or during emergency imported water outages, water supplies can be withdrawn. According to the Raymond Basin Judgment, the District can produce up to 100 acre-feet each year from the Raymond Basin. Table 2 shows the historic, current and projected groundwater production from 2000 through 2025.

As shown in hydrographs in Appendix D (taken from the 2003-04 Raymond Basin Annual Report) water levels, in the Monk Hill Basin and Pasadena Sub-area have been relatively constant, although water levels in the Santa Anita fluctuate more substantially. The locations of the District's wells are shown on Plate 1, and produce water from the Monk Hill Basin. In addition historic production of groundwater is shown on Table 2. As indicated on Figures 4 and 12 in Appendix D (taken from the 2003-04 Raymond Basin Annual Report) rainfall in the area was below normal resulting in decreased water levels. However, as shown on Table 2, groundwater production remained constant and the District was able to produce its full water right. In addition, treated imported water from FMWD was available.

The Raymond Basin has been adjudicated and is managed, which will be discussed in details in the following section. Water levels in the Monk Hill Basin have been relatively constant in the past. Raymond Basin is a well managed groundwater basin and should have sufficient groundwater supply over the next 20 years under single and multiple droughts.

3.1.3 Pickens Canyon

The District also has two infiltration tunnels constructed in Pickens Canyon, which provides water to satisfy about 5 percent of the District's annual demand. The District owns 80 acres in Pickens Canyon and has rights to the water. The infiltration tunnels at Pickens Canyon have a combined maximum capacity of about 300 gpm. This water source gravity flows into a 0.21 million gallon receiving reservoir which feeds into the District's Los Amigos Reservoirs. This source of supply is variable based on hydrologic conditions, but is not relied on to provide a significant amount of supply. Table 2 shows the District's historical and projected water from Pickens Canyon.

3.2 Groundwater Management [Section 10631 (b) (1) (2)]

Management of the water resources of the Raymond Basin is based on the Raymond Basin Judgment, as shown in Appendix E. The District is a defendant in the Raymond Basin Judgment and as such has participation.

3.2.1 Raymond Basin Judgment

In 1937 The City of Pasadena filed suit to adjudicate water rights of the Raymond Basin.¹ DWR was retained to prepare a Report of Referee which described the geology and hydrogeology of the Raymond Basin and identified the safe yield of the active Raymond Basin as 21,900 acre-feet. Parties to the Judgment were allowed to exceed its water right by no more than 10 percent. (That exceedance is deducted from the following year's water right.) The water rights are fixed each year and do not vary. Water demands in excess of a party's water right must be met by purchasing imported water. MWD is the regional urban water supplier for the area and provides water to its member agencies in the Raymond Basin which consist of FMWD, the City of Pasadena and the City of San Marino. MWD has prepared a draft 2005 RUWMP addressing the availability of imported water supplies, and is incorporated by reference.

¹ City of Pasadena vs. city of Alhambra, et al, Los Angeles County Case No. Pasadena C-1323, Judgment entered December 23, 1944, modified April 29, 1955.

The City of Pasadena requested the safe yield of Raymond Basin be re-determined during 1950. Subsequently, the Court issued a Modification of Judgment on April 29, 1955 increasing the safe yield of Raymond Basin to 30,622 acre-feet. This is referred to as the “Decreed Right of 1955” and water rights for all parties are shown in Appendix E.

The Raymond Basin Judgment allows parties to carryover up to 10 percent of their “Decreed Right” but can not produce water in excess of the “Decreed Right” by more than 10 percent in any year. The Raymond Basin Judgment is administered by the Raymond Basin Management Board.

The Decreed Right of 1955 provides the District with a Decreed Right of 100 acre-feet from the Monk Hill sub-area, as shown in Appendix E.

3.3 Reliability of Water Supply to Climate [Section 10631 (c)]

The District is almost entirely dependent on imported water from FMWD to meet its customers’ water demands. A summary of available water supplies during 1) average water year, 2) single dry water year, and 3) multiple dry water year for the next 20 years, in five-year increments, are shown in MWD’s draft 2005 RUWMP on the Supply Capability and Projected Demand Tables included as Appendix K of this UWMP. Based on MWD’s draft 2005 RUWMP, MWD will be able to continue to meet its water demands under an average water year, a single dry water year and multiple dry water years. MWD experienced an average water year in 1998, a single dry year in 1977 and a multiple dry year sequence in 1990 through 1992. In addition, the District experienced a multiple dry year sequence in 2002 through 2004. According to Table 2, the District had available water supplies during those years.

3.4 Exchanges and Transfers [Section 10631 (d)]

3.4.1 Long Term

The District is involved with the Long Term Storage Program in the Raymond Basin. The Long Term Storage Program allows the District to store a maximum of 2,300 acre feet of water in the Monk Hill Sub-area and at anytime, deduct from their account whenever the District over produces their Decreed Right or add to their account to store more water in the basin when the District under produces. A copy of the "Raymond Basin Groundwater Storage Policies Western Unit" is attached in Appendix F. As of June 2004, the District has 705.7 acre-feet in its Long Term Storage Account.

3.4.2 Short Term

The Monk Hill Sub-basin is recharged with imported water by injection from FMWD. This provides storage of surplus surface water to the District. The water supplies then can be withdrawn in dry years or during emergency outages of the imported water system.

Chapter 4

Water Use

*California Water Code Division 6
Part 2.6. Urban Water Management Planning
Section 10631.*

- (e) (1) *Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors including, but not necessarily limited to, all of the following uses:*
- (A) *Single-family residential.*
 - (B) *Multifamily.*
 - (C) *Commercial.*
 - (D) *Industrial.*
 - (E) *Institutional and governmental.*
 - (F) *Landscape.*
 - (G) *Sales to other agencies.*
 - (H) *Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.*
 - (I) *Agricultural*
- (2) *The water use projections shall be in the same five-year increments described in subdivision (a).*

4.1 Past and Current Water Use [Section 10631 (e) (1)]

The District maintains records of its water sales consisting of purchases of imported water from FMWD and groundwater production. Water is purchased from three types of customers, which are residential, commercial and irrigation. The District has a total of approximately 2,900 service connections. Following is a breakdown of the District's service connections by customer type.

- 2. Residential – 2,812 service connections
- 3. Commercial – 71 service connections
- 4. Irrigation – 16 service connections

Past and current water use by customer type is presented on Table 3 and discussed in the following sections.

4.1.1 Residential Sector

The residential sector is made up of single family residential units and multi-family residential units. Within the residential sector, the District supplies potable water to approximately 2,800 service connections, most of which are single family residential units. Table 3 indicates water use for single family and multi-family residential units has remained relatively constant over the past five years. In 2004, approximately 92 percent of the total water usage was from single family residential units and approximately 0.7 percent of the total water usage was from multi-family residential units. The 2004 water use for single family residential is about 2,747 acre feet and for multi-family residential is about 21 acre feet.

4.1.2 Commercial Sector

Within the commercial sector, the District supplies potable water to approximately 71 service connections. The commercial sector consists mostly of small shops, professional services, small grocery stores and restaurants. There are no large scale commercial developments within the District. Table 3 indicates the water use for commercial units have remained relatively constant over the past five years. In 2004, approximately 3 percent of the total water usage was from commercial units. The 2004 water use for commercial is about 75 acre feet.

4.1.3 Irrigation Sector

Within the irrigation sector, the District supplies potable water to approximately 16 service connections. The top water user within the irrigation sector is the California Department of Transportation (Caltrans). Other irrigation users include parks, nurseries, and recreational facilities. Table 3 indicates the water use for irrigation units have remained relatively constant over the past five years. In 2004, approximately 5 percent of the total water usage was from irrigation units. The 2004 water use for irrigation is about 143 acre feet.

4.2 Projected Water Use [Section 10631 (e) (2)]

Chapter 2 indicates the District's future population within the District is effectively built-out. Therefore, projected water use is estimated to remain relatively constant for each customer type. Projected water use by customer type is presented on Table 3.

There are no additional projected or current water uses for the District.

Chapter 5

Current Conservation Measures

*California Water Code Division 6
Part 2.6. Urban Water Management Planning
Section 10631.*

- (f) *Provide a description of the supplier's water demand management measures. This description shall include all of the following:*
1. *A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:*
 - (A) *Water survey programs for single-family residential and multi-family residential customers.*
 - (B) *Residential plumbing retrofit.*
 - (C) *System water audits, leak detection, and repair.*
 - (D) *Metering with commodity rebates for all new connections and retrofit of existing connections.*
 - (E) *Large landscape conservation programs and incentives.*
 - (F) *High-efficiency washing machine rebate programs.*
 - (G) *Public information programs.*
 - (H) *School education programs.*
 - (I) *Conservation programs for commercial, industrial and institutional accounts.*
 - (J) *Wholesale agency programs.*
 - (K) *Conservation pricing.*
 - (L) *Water conservation coordinator.*
 - (M) *Water waste prohibition.*
 - (N) *Residential ultra-low-flush toilet replacement programs.*
 2. *A schedule of implementation for all water demand management measures proposed or described in the Plan.*
 3. *A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the Plan.*
 4. *An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.*
- (g) *An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or a combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:*
1. *Take into account economic and non-economic factors, including environmental, social, health, customer impact, and technological factors.*
 2. *Include a cost-benefit analysis, identifying total benefits and total costs.*
 3. *Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.*

4. *Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.*

5.1 Demand Management Measures and Implementation [Section 10631 (f), (g)]

The District is not a signatory to the Memorandum of Understanding regarding Urban Water Conservation in California and is therefore not a member of the California Urban Water Conservation Council (CUWCC). As required by the Act the District will address each of the 14 Water Demand Management Measures (DMM) [Section 10631 (f)] in the sections below. The District implements **all** of the DMMs directly or through FMWD, which is a member of the CUWCC. Therefore, there are no future projects to implement DMMs scheduled.

DMM 1 – Water Survey Programs for Single Family Residential and Multi-Family Residential Customers [Section 10631 (f)(1)(A)]

The District reviews customer's water bills to make sure there isn't any abnormally high water consumption use, i.e. due to leaks or the sprinkler being left on. If the District finds that a customer has a high water consumption use in their water bill, the District performs a water survey at the customer's home. The District asks questions concerning the high water consumption use and educates the customer on how to find leaks, read meters and conserve water. The District finds this method to be cost efficient and has been implementing since 1999.

DMM 2 – Residential Plumbing Retrofit [Section 10631 (f)(1)(B)]

In 1999, FMWD and its member agencies, including the District, implemented an agreement with MWD for participation in a residential ultra-low-flush toilet retrofit. This conservation program is designed to assist member agencies in conserving water supplies. FMWD works with the local planning department of the City of La Cañada

Flintridge to assure enforcement of the ultra low-flush toilet installation requirements for new construction, and supports the prohibition of sale of toilets using more than 1.6 gallons per flush. In addition, FMWD participates in the distribution of showerheads, aerators, and toilet tank leak detection tablets at all times.

DMM 3 – System Water Audits, Leak Detection and Repair [Section 10631 (f)(1)(C)]

If the District notices any abnormally high water use due to leaks, District staff will go out to detect the leak and make any necessary repairs. In addition, the District is a member agency of FMWD and 90 percent of the District's demand comes from two FMWD interconnections. FMWD is a member of the CUWCC and implements a system water audits, leak detection and repair program. FMWD conducts water audits and leak detection and makes repairs to its system, as described in its 2000 UWMP. FMWD monitors/audits water loss in its distribution system on a daily basis and conducts daily analysis of water produced versus water delivered to provide a daily audit of losses. More information can be found in FMWD's 2000 UWMP.

DMM 4 – Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections [Section 10631 (f)(1)(D)]

The District meters all water sales to its customers. The commodity rates are based on a five tiered rate structure that rewards conservation with lower rates. The District's commodity rates include a fixed service charge and the five tiered rate structure for water use, as shown in Appendix G. The District began implementing this program in April 1999 and finds this program to be efficient in conserving water.

DMM 5 – Large Landscape Conservation Programs and Incentives [Section 10631 (f)(1)(E)]

The District has very little landscape/irrigation customers. Although the District does not directly implement this program, the District is a member agency of FMWD. FMWD

is a member of the CUWCC and implements this program. According to FMWD's 2000 UWMP, FMWD and its distributing agencies sponsor attendance at landscape water use classes and seminars. FMWD has sponsored the Circuit Rider Landscape Water Conservation Program, working with local city planning departments and county planning departments. This project provided assistance to cities and county areas implementing local ordinances adopted in compliance with the State of California's Water Conservation Landscaping Act. Quarterly and annual reports are submitted to FMWD and MWD by the landscape architect in charge of the project for FMWD. More information can be found in FMWD's 2000 UWMP.

DMM 6 – High-efficiency Washing Machine Rebate Programs [Section 10631 (f)(1)(F)]

The District participates in MWD's high efficiency washing machine rebate program. This rebate program is designed to aid homeowners in purchasing high-efficient washing machines. Once the washing machine is purchased, the customer sends the District a completed application for the rebate plus a copy of the sales slip. Instead of mailing the customer the rebate, the District gives their customer a \$100 credit to their water bill. The District began implementing this program in April 1999.

DMM 7 – Public Information Programs [Section 10631 (f)(1)(G)]

The District is part of a water conservation alert system with Crescenta Valley Water District, Valley Water Company and FMWD. The District sends out conservation notices to customers through the mail and in the newspaper to alert its customers of the status of their water supply. In addition, the District posts color-coded flags and signs at the District's main office, Sheriff's Station, local library and at the local fire station during the summer asking customers to start conserving water. The District has created a voluntary water conservation alert system whereby the colors of green, yellow, and red will indicate supply status and the requested customer response as shown below.

Green = Normal Water Conservation Alert

Follow voluntary water conservation guidelines

Minimize indoor water use

Yellow = High Water Conservation Alert

Odd/even watering days

Minimize indoor water use

Red = Critical Water Conservation Alert

Curtail outdoor water use to a max of 2 days a week

Minimize indoor water use

The guidelines of this program are attached in Appendix H. The District began implementing this program in the summer of 2004.

DMM 8 – School Education Programs [Section 10631 (f)(1)(H)]

Although the District does not implement this program, the District is a member agency of FMWD. FMWD is a member of the CUWCC and implements this program. According to FMWD's 2000 UWMP, FMWD maintains liaison with local school districts in an effort to continually provide speakers and/or literature for utilization in local curriculum. In 1994, FMWD sponsored the Water Hunt Program as part of the curriculum in six elementary schools within FMWD. FMWD will continue to implement this program whenever possible. More information can be found in FMWD's 2000 UWMP.

DMM 9 – Conservation Programs for Commercial, Industrial and Institutional Accounts [Section 10631 (f)(1)(I)]

The District has only very light commercial and no industrial water use within its boundaries. Local schools and churches within the District's boundaries would qualify as institutional accounts. In 1999, FMWD and its distributing member agencies implemented an agreement with MWD for participation in a commercial, industrial, institutional (CII) retrofit incentive project. This conservation program is designed to

assist member agencies in conserving water supplies. Through FMWD, MWD refunds \$60 per ultra-low-flush toilet installed. Various other CII fixtures are also eligible for funding, which can be found on MWD's website.

DMM 10 – Wholesale Agency Programs

The District is a retailer and not a wholesale agency. Therefore, this program does not apply to the District.

DMM 11 – Conservation Pricing [Section 10631 (f)(1)(K)]

As previously discussed, the District has a five tiered rate structure that rewards conservation with lower rates. From the breakdown below, the District's tiered rate structure shows that the less water customers use, the more money they save.

1 to 100 units at \$2.15

101 to 150 units at \$2.36

151 to 200 units at \$2.60

201 to 250 units at \$2.90

Greater than 250 units at \$3.22

The District began implementing this rate structure in April 1999.

DMM 12 – Water Conservation Coordinator [Section 10631 (f)(1)(L)]

Although the District does not directly have a water conservation coordinator, the District is a member agency of FMWD. FMWD has designated its administrative assistance to the general manager as FMWD's water conservation coordinator. The water conservation coordinator coordinates and oversees conservation programs, particularly with MWD and DMM implementation. According to FMWD's 2000 UWMP, FMWD will continue to implement this program. More information can be found in FMWD's 2000 UWMP.

DMM 13 – Water Waste Prohibition [Section 10631 (f)(1)(M)]

Although the District does not directly implement this program, the District is a member agency of FMWD. FMWD is a member of the CUWCC and implements this program. According to FMWD's 2000 UWMP, FMWD shall support measures prohibiting gutter flooding, single pass cooling systems in new connections, nonrecirculating systems in all new conveyer car wash and commercial laundry systems, and nonrecycling decorative water fountains. FMWD shall support efforts to develop state law regarding exchange-type water softeners. According to FMWD's 2000 UWMP, FMWD will continue to implement this program. More information can be found in FMWD's 2000 UWMP.

DMM 14 – Residential Ultra Low-Flush Toilet Replacement Program [Section 10631 (f)(1)(N)]

The District participates in MWD's Residential Ultra Low-Flush Toilet Rebate Program. This rebate program is designed to aid homeowners in replacing toilets manufactured before 1992 with new, water efficient 1.6 gallon-per-flush toilets. Once the toilet is purchased, the customer sends the District a completed application for the rebate plus a copy of the sales slip. Instead of mailing the customer a rebate, the District gives their customer a \$60 credit to their water bill. The District began implementing this program in April 1999.

Chapter 6

Water Supply Opportunities

*California Water Code Division 6
Part 2.6. Urban Water Management Planning
Section 10631.*

- (h) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water uses as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of water supply available to the urban water supplier in average, single dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.*
- (i) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.*

6.1 Future Water Supply Projects and Programs [Section 10631 (h)]

The Foothill Area Groundwater Storage Project involves FMWD and the Monk Hill sub-basin retail water agencies, which is planned to be completed within two years. In 2003, the state allocated MWD \$45 million from Prop. 13 to help develop groundwater storage projects in Southern California. Under the authorized agreement, FMWD received \$1.7 million from Prop. 13. This project will allow MWD, in cooperation with FMWD, to store up to 9,000 acre-feet of water in the Monk Hill sub-basin during wet periods and withdraw 3,000 acre-feet per year only during dry years, droughts and emergencies. As of December 31, 2004, the current storage supplied by MWD is about 2,000 acre feet. The project called for drilling of a well, which can both inject and extract water, construction of a facility to remove pollutants, and a pump station upgrade. When completed, this will help increase local storage in the Monk Hill sub-basin and the District may be able to utilize the Monk Hill sub-basin for storage and production during peak demands, periods of drought and other emergencies.

6.2 Desalinated Water [Section 10631 (i)]

As previously discussed, groundwater makes up 10 percent of the District's demand. Currently, the District does not use desalination for the groundwater. The groundwater from the Raymond Basin is adjudicated and therefore, there is limited amount of groundwater that can be pumped from the Raymond Basin. In addition, the quality of the water delivered to customers complies with the California Department of Health Services standards and therefore the groundwater does not need desalination.

Imported water from FMWD makes up 90 percent of the District's demand. Based on MWD's draft 2005 RUWMP, MWD and its member agencies view seawater desalination as a future source of water supply. Recent and continuous breakthroughs in membrane technology have helped reduce desalination costs, warranting consideration among alternative resource options outlined in MWD's Integrated Resources Plan (IRP). The IRP Update includes a target of 750,000 acre feet per year of local water production by 2025 that could include up to 150,000 acre feet per year of seawater desalination. MWD continues to work with its member agencies to develop a research agenda for specific projects. More information on MWD's desalination program can be found in MWD's draft 2005 RUWMP, which is incorporated by reference.

Chapter 7

Urban Water Shortage Contingency Analysis

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10632.

The Plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

- (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.*
- (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.*
- (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.*
- (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.*
- (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.*
- (f) Penalties or charges for excessive use, where applicable.*
- (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.*
- (h) A draft water shortage contingency resolution or ordinance.*
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.*

7.1 Stages of Action [Section 10632 (a)]

In April 1999, MWD's Board of Directors adopted the Water Surplus and Drought Management Plan (WSDM Plan). This plan will provide policy guidance for management of regional water supplies to achieve the reliability goals of Southern California's Integrated Resources Plan. Through effective management of its water supply, MWD fully expects to be 100 percent reliable in meeting all non-discounted non-interruptible demands throughout the next ten years.

About 90 percent of the District's water supply comes from imported water from FMWD. Therefore, MWD's shortage actions by shortage stage are being made available for FMWD's distributing agencies' information. A summary from MWD's draft 2005 RUWMP of shortage actions is discussed briefly in the following section.

7.1.1 MWD's Stages of Action

MWD has seven shortage stages as described in detail in MWD's draft 2005 RUWMP, which is shown in Appendix K. MWD will declare a shortage whenever water supply conditions require resource management activities included in Shortage Stages 1-4. MWD will declare a Severe Shortage if supply conditions require undertaking actions in Shortage Stages 5-6. MWD will declare an Extreme Shortage if Shortage Stage 7 actions are required. The overriding goal is to never reach Shortage Stage 7, an Extreme Shortage. More information about MWD's seven shortage stages can be found in MWD's 2005 draft RUWMP, which is incorporated by reference. Given present resources, MWD fully expects to achieve this goal over the next ten years.

7.2 Three Year Minimum Water Supply [Section 10632 (b)]

The District's three-year sequence drought years were 2002, 2003 and 2004. During those years, the District had enough water supplies to meet their demands, as shown on Tables 2 and 3. Since the District did not experience problems providing water to meet their demands, the District will be able to provide water in the next three-year drought. Based on the 2002, 2003, and 2004 drought years, it is estimated that the minimum water supply available during each of the next three water years is about 3,100 acre-feet.

7.3 Preparation for Catastrophic Water Supply [Section 10632 (c)]

In October 2004, the District has prepared an Emergency Response and System Chlorination Plan, as shown in Appendix I. The District's Emergency Response and System Chlorination Plan describes the actions the District will take during a catastrophic interruption of water supplies including, a regional power outage, an

earthquake, a facility breach, water contamination threat, Supervisory Control and Data Acquisition (SCADA) system failure, ruptured reservoirs, major water main breaks, and emergency chlorination.

All District staff has had Emergency Response Plan training and is aware of their duties and responsibilities in the event of an emergency. The office and field staff reviews the Emergency Response Plan annually or more frequently, as necessary. Field training sessions are held annually with all outside personnel participating. This session provides a hands-on exercise to demonstrate the entire system operation and steps that would be required to be taken in the various types of emergencies that can occur. The District also participates each year in area-wide emergency training drills, directed by the City of La Cañada Flintridge. These drills generally involve all local water agencies, fire, sheriff, other utilities, local hospitals, schools and the Red Cross.

In 2004, FMWD has also prepared an Emergency Preparedness and Disaster Response Plan, which also describes actions to take during an emergency. FMWD's Emergency Preparedness and Disaster Response Plan ensures the most effective use of all FMWD resources for the benefit and protection of facilities and employees in addition to the preservation of a reliable water supply for FMWD and its distributing agencies.

7.4 Prohibitions and Penalties [Section 10632 (d), (f)]

The District does not have any mandatory prohibitions against specific water use practices during water shortages. However, the District does penalize customers for excessive water use during water shortages. In order to prevent excessive water use during a drought, the District analyzed 5 to 10 years of water usages and determined a maximum exceedance in water use for each billing period. If a customer has exceeded the maximum water use, the District would double the water cost and charge that cost to the customer for only the amount of water that exceeded the maximum water use.

7.5 Consumption Reduction Methods [Section 10632 (e)]

As discussed in Chapter 5, the District is part of a water conservation alert system with Crescenta Valley Water District, Valley Water Company and FMWD. The program informs customers of the status of the water supply and asks customers to start conserving water. The District has created a voluntary water conservation alert system whereby the colors of green, yellow, and red will indicate supply status and the requested customer response as discussed in Section 5.1.

7.6 Revenue and Expenditure Impacts [Section 10632 (g)]

If the District experiences a water shortage or emergency situation, there may be a reduction of revenue from water sales. However, 90 percent of the District's demand is imported water from FMWD therefore there will be a reduction in water purchases from FMWD, which will offset the loss of revenue. In addition, the District's fixed service charge is enough to cover the general operating expenses. During a water shortage or emergency situation, the District will be able to operate its water system and will be able to overcome the revenue and expenditure impacts.

7.7 Water Shortage Contingency Ordinance/Resolution [Section 10632 (h)]

The District has drafted a water shortage contingency ordinance as shown in Appendix J.

7.8 Reduction Measuring Mechanism [Section 10632 (i)]

The District monitors water consumption on a regular basis. The District will be able to determine reductions in water use by comparing last year's water consumption with this year's water consumption. The District will take into consideration factors that may affect consumption, such as rain, in order to determine if the reductions were only due to the District's water saving efforts and goals.

Chapter 8

Recycled Water

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10633.

The Plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the Plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*
- (b) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*
- (c) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.*
- (d) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15 and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*
- (e) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.*
- (f) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.*

8.1 Recycled Water Feasibility Study [Sections 10633 (a) through (f)]

Currently, the District does not own or operate any wastewater treatment facilities. In addition, the District does not use recycle water in its service area. However, in April 2004, the District, in association with Crescenta Valley Water District, Valley Water Company, and FMWD acquired the services of Bookman-Edmonston, a division of GEI Consultants Inc., to investigate the feasibility of providing recycled water to various users within the service areas of the District, Crescenta Valley Water District, and Valley Water Company.

According to the Recycled Water Feasibility Study (Study), which is incorporated by reference, the proposed recycled water source is the City of Glendale. Their recycled system has up to 1,200 acre feet per year of supply available for additional users. The closest connection points to the Glendale system are along the 16-inch Verdugo Canyon Pipeline in the vicinity of La Crescenta Avenue and Verdugo Road.

Based on the water market and design criteria, the Study has evaluated two possible recycled water systems, which are potential uses of recycled water: the Caltrans Market Alternative and the Expanded Market Alternative.

The Caltrans Market Alternative allows evaluation of a system that would deliver approximately half of the total water market, but to only one customer. The capital cost of the Caltrans Market Alternative is about \$4.6 million and the estimated deliveries are estimated at 156 acre-feet per year. Using a 40-year capital recovery period and a five percent interest rate the cost would be \$2,585 per acre foot.

The Expanded Market Alternative starts with the Caltrans Market Alternative and extends that system to serve additional potential customers. The capital cost of the Expanded Market Alternative is about \$5.4 million and the estimated deliveries are at most 310 acre-feet per year. Using a 40-year capital recovery period and a five percent interest rate the cost would be \$1,771 per acre foot.

The Study has concluded that the retail price for water within the study area varies from approximately \$750 per acre foot to \$1,000 per acre foot. Therefore, recycled water at \$1,771 per acre foot to \$2,585 per acre foot is not an affordable option.

The Study shows that it is not feasible for the District to use recycled water in its service area. The District does not use recycled water, therefore, projected water use is not available.

Chapter 9

Water Quality

*California Water Code Division 6
Part 2.6. Urban Water Management Planning
Section 10634.*

The Plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

9.1 Foothill Municipal Water District

Imported water from FMWD makes up 90 percent of the District's demand and in turn FMWD obtains all of its imported water supplies from MWD. MWD's draft 2005 RUWMP discusses the quality of its water source, its approaches to ensuring acceptable water quality, the impacts on water management strategies and the impacts on supply reliability, which is incorporated by reference.

9.2 Raymond Groundwater Basin

A review on the historical groundwater quality from District Wells No. 1 and 6 shows that the groundwater is of good quality. In addition, the District blends groundwater from Wells No. 1 and 6 with imported water from FMWD at its reservoir prior to entry into the distribution system. Therefore, the District expects no quality problems over the next 10 years. However, in an unlikely event one of the District's wells is impacted, one of the District's wells represent about 5 percent of the District's water supply and the District could make up the loss with additional imported water from FMWD.

Chapter 10

Water Supply Reliability

California Water Code Division 6

Part 2.6. Urban Water Management Planning

Section 10635.

- (a) *Every urban water supplier shall include, as part of its Urban Water Management Plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry year water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.*

10.1 Assessment of the Reliability of Water Supply

Imported water from FMWD makes up 90 percent of the District's demand and in turn FMWD obtains all of its imported water supplies from MWD. A summary of available water supplies during 1) average water year, 2) single dry water year, and 3) multiple dry water year for the next 20 years, in five-year increments, are included in MWD's draft 2005 RUWMP, which is provided in Appendix K. Based on MWD's draft 2005 RUWMP, MWD will be able to continue to meet its water demands under an average water year, a single dry water year and multiple dry water years. More details can be found in MWD's draft 2005 RUWMP. In addition, the District was able to supply water to its customers in drought conditions during 2002 through 2004, as shown on Tables 2 and 3. The tables show that the District's available water supply was always enough to meet demands. Therefore, the District will be able to supply imported and ground water to its customers during an average water year, a single dry water year and multiple dry water years. In addition, the District has compared the total water supply sources with the total projected water use over the next 20 years and has found that the existing water supply will be able to meet the District's demands over the next 20 years.

**Table 1
Climate**

	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Average Rainfall (in.)	4.8	5.7	5.1	1.5	0.6	0.2	0.1	0.2	0.5	0.8	1.8	2.7	24.0
Average Temperature (°F)	55.8	57.8	59.2	62.9	66.1	70.9	75.4	76.3	74.3	68.6	60.6	55.8	65.3

Source: Data from www.city-data.com under City of La Canada Flintridge

Table 2
Current and Planned Water Supplies - AF/Y

Water Supply Sources	2000	2001	2002	2003	2004	2005	2010	2015	2020	2025
Water Purchased from:										
Foothill Municipal Water District	2741	2668	2904	2863	2992	2675	2815	2845	2875	2945
Groundwater from:										
Wells	203	140	139	117	155	150	150	150	150	150
Tunnels	107	84	67	61	55	75	75	75	75	75
TOTAL	3,051	2,892	3,110	3,041	3,202	2,900	3,040	3,070	3,100	3,170

Table 3
Past, Current and Projected Water Deliveries - AFY

Water Supply Sources	2000	2001	2002	2003	2004	2005	2010	2015	2020	2025
Water Use Sectors										
Single family	2641	2536	2656	2587	2747	2576	2704	2769	2852	2920
Multi-family	20	19	20	20	21	20	20	21	22	23
Commercial	72	69	72	70	75	71	73	75	77	79
Irrigation	138	132	138	135	143	134	132	135	139	143
TOTAL	2,871	2,756	2,886	2,812	2,986	2,801	2,929	3,000	3,090	3,165