CITY COUNCIL
CITY OF LEMOORE

URBAN WATER MANAGEMENT PLAN 2010 – Revised

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LIST OF ACRONYMS

AAWF	average annual water flow
AF	acre feet
AFY	acre-feet per year
Act	Urban Water Management Planning Act
BMPs	Best Management Practices
City	City of Lemoore
Contingency Plan	Urban Water Shortage Contingency Plan
County	Kings County
CUWCC	California Urban Water Conservation Council
DHS	California Department of Health Services
DMMs	Demand Management Measures
DWR	California Department of Water Resources
EDU	Equivalent Dwelling Unit
EPA	U.S. Environmental Protection Agency
ETo	Evapotranspiration-based
°F	Degrees Fahrenheit
GMP	Groundwater Management Program
gpcd	gallons per capita per day
gpd	gallons per day
gpm	gallons per minute
GWR	Groundwater Rule
KCWEC	Kings County Water Education Committee
KCWD	Kings County Water District
KRCD	Kings River Conservation District
LID	Laguna Irrigation District
MCL	Maximum Contaminant Limit
MDD	Maximum Day Demand
MG	million gallons
MGD	million gallons per day
MOU	Memorandum of Understanding
Plan	Urban Water Management Plan
RCP	reinforced concrete pipe
RWQCB	Regional Water Quality Control Board
taf	thousand acre-feet
UGB	Urban Growth Boundary
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Plan Act
ULFT	Ultra Low Flush Toilet
WWTF	Waste Water Treatment Facility

Appendices

Appendix A – State Code - Urban Water Management Planning Act
Appendix B – UWMP Checklist
Appendix C – Abbreviations
Appendix D – Public Notice
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Appendix F – Adopted Resolution
Appendix G – UWMP Distribution Plan
Appendix H – Agreement, City of Lemoore and Laguna Irrigation District
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CHAPTER ONE

INTRODUCTION

CHAPTER ONE – INTRODUCTION

This is the City of Lemoore's 2010 Urban Water Management Plan as required by the Urban Water Management Planning Act (Act). It was prepared in cooperation with City Staff to address the requirements stipulated in California Water Code Division 6, Part 2.6, Sections 10610 through 10657. Italicized text quoting specific requirements of the Act appear preceding sections relevant to the quoted portion of the act as an aid to the reader. A copy of the Act is in Appendix A. The Department of Water Resources (DWR) has created a checklist of items based on the Act that each Plan must address. The complete checklist is provided in Appendix B. Abbreviations used in the plan are in Appendix C.

1.1 Plan Organization

This Plan is organized into the following chapters:

- Chapter One provides an overview of the City's water supply system and the Urban Water Management Act requirements;
- Chapter Two provides a description of the service area, climate, water supply facilities, projected population, and service area demographics;
- Chapter Three describes the City's water demands and water supply resources;
- Chapter Four provides historical (baseline) water use and both interim and targeted water demands;
- Chapter Five addresses reliability planning and groundwater quality;
- Chapter Six provides a water supply and water demand comparison;
- Chapter Seven addresses water conservation and demand management measures;
- Chapter Eight is a water shortage contingency plan;
- Chapter Nine addresses water recycling; and
- Appendices A through L provide relevant supporting documents.

1.2 The Urban Water Management Planning Act

LAW

Water Code Section 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2 This Legislature finds and declares…:

…This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4 The Legislature finds and declares that it is the policy of the state as flows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

The California Water Code, Division 6, Section 10610 et seq requires all urban water suppliers within the state to prepare Urban Water Management Plans (UWMPs) and update them every five years. Such plans satisfy the requirements of the Urban Water Management Planning act (UWMPA) of 1983, including amendments that have been made to the act (see Appendix A). This report constitutes the City of Lemoore 2010 UWMP.

The Code requires that a UWMP must include historic, current and future supplies and demands for water; address conservation measures, and describe potential supply deficiencies during drought conditions and the ability to mitigate these conditions; compare total projected water use and supply sources over 20 years in 5-year increments, for a single dry water year and for multiple dry water years; and provisions for recycled water use, demand management measures, and a water shortage contingency plan. A copy of the governing Code sections is included in Appendix A hereto; pertinent excerpts therefrom precede and are included in the Chapters in this Plan.

In addition to some changes in the Act since the last UWMP was submitted in 2006, Governor Schwarzenegger established the 20x2020 Plan. This Plan determines that for California to continue to have enough water to support its growing population, the State needs to reduce the amount of water each person uses per day (per capita daily consumption, which is measured in gallons per capita per day). This reduction of 20 percent per capita use by the year 2020 is supported by legislation passed in November 2009, SB x 7_7 (Steinberg) Water Conservation. As a result, new changes have amended and repealed some sections of the Water Code and affect the reporting requirements under the act and other government codes.

1.3 Previous City Urban Water Management Plans/The City Water Supply System

The City adopted Urban Water Management Plans in 1998 and 2000, an Amended Plan in 2004, and in 2006 for 2005.

The initial 2000 Plan included a general description of the City's current water system and a brief overview of the history of the system. An updated excerpt of that description and overview is included here to provide perspective for the detailed, Code-required, data and analysis in succeeding Chapters of this Plan.

The heart of the modern City of Lemoore domestic water system was constructed in 1972, when several shallow supply wells within the City were taken out of service in lieu of three new wells constructed in an 80-acre well field located six miles north of Lemoore, adjacent to the Kings River. Where the water produced by the older wells was characterized by taste, odor, and a prominent green-brown color, the water from the well field is absent many of these negative aesthetic qualities although it is periodically non-compliant with arsenic standards. After litigations by an irrigation district, the City has been legally prohibited from expansion of this well field supply.

Along with the new wells, an 18-inch transmission main was constructed to a new water distribution plant located in the central city at G Street west of Lemoore Avenue. This distribution plant included a 1-million gallon storage tank, five distribution pumps, and an electronic control and telemetry system. Additional ground-level storage has since been added to the system in three additional tanks, for a total current storage capacity of 4.4 million gallons.

In 1977, federal Drought Relief funds allowed construction of a fourth well at the well field, and a second 1-million gallon storage tank. These improvements added greatly to the ability of the system to support a growing urban population, and provided a greater degree of protection against an operational problem at the well field or a problem with the transmission main.

In the late 1980's, the telemetry and control systems were completely replaced through a series of projects. In addition, the capacities of the individual wells at the well field were increased, and in-city distribution-pumping capacity was increased by replacement and addition of distribution pumps.

In 1995, the City constructed a deep well within the City limits (Well No. 10).

In 1996, two of the original wells at the river were removed from service. One of them was replaced during Spring, 1997.

In 2000, two additional wells were constructed within the City limits, Wells No. 11 and 12, in the northeast and southwest quadrants of the community, respectively. An additional 1 million gallon storage tank was constructed near the westerly terminus of the water system (at the site of Well No. 7 which was added to the system in 2005).

All of the main domestic water supply system water is chlorinated via hypochlorite systems. These injection systems are located near the junction point of the three individual well discharge lines at the well field, near the point of service for Olam, and on the discharge lines for Wells No. 7, 10, 11 and 12. This is done mostly for disinfection and aesthetic reasons. The water that is pumped has been of acceptable quality to meet state current primary drinking water standards with the exception of marginally non-compliant arsenic levels from some wells. A mitigation system for arsenic non-compliance is under construction in 2010, to be completed in 2012. It

consists of additional wells with compliant arsenic levels, a cross-town distribution pipeline and automated well usage/storage controls to assure total system arsenic compliance via blending.

All of the City's wells have been constructed by reverse rotary methods. Well No. 2 has perforations both above and below the "E" Clay, but is sealed above the "A" Clay. Wells No. 3 and 5 take water from beneath the "A" Clay but above the "E" Clay. Wells No. 4, 6, 7, 8, 9, 10, 11 and 12 take water exclusively from beneath the "E" Clay.

In addition to the main domestic water supply system, the City operates a separate water system which supplies water to a major Olam tomato processing plant in (SK/Olam) south Lemoore (Wells No. 8 and 9). This plant principally operates between July 1 and September 25 annually, consuming 200 to 500 million gallons of water per year. Each well pumps into surge tanks and then to the plant. This water system normally operates completely apart from the main system, although connections exist which allow the City to interconnect the two systems in an emergency such as a major fire demand or other abnormally high system demand. (In addition to this separate supply, the plant uses water from the municipal water system, particularly during the high-demand, 3 to 4 month, processing season.)

This water is treated on site after it is used in the tomato process, and is then discharged to a nearby farm where it is used as irrigation water and, in lesser part, to the City's wastewater reclamation facility.

1.4 Public Participation, Plan Adoption

LAW

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published…After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

In accordance with the UWMP Act, the City held a public hearing regarding the 2010 UWMP for Council consideration. Fourteen days prior to Council consideration, a notice of the public hearing was published in the local newspaper to notify interested parties that the Draft 2010 UWMP is available at various City facilities for review. A copy of the public notice is located in Appendix D.

After Council and public comments were addressed, the Council adopted a Draft UWMP for submittal to the Department of Water Resources (DWR) for Review. A copy of the proposed resolution adopting the Draft UWMP is located in Appendix E. After the submittal to the DWR, the City submitted a copy of the UWMP to the California State Library and to local pertinent agencies. The UWMP distribution plan is located in Appendix G.

After submittal to DWR and corrections are made in accord with the recommendations of that review, the City will make the Final Draft UWMP available for public review at the City Hall for 30 days as required by §10645.

The resulting Final UWMP will then be adopted by Council resolution (Appendix E).

The City will utilize the conceptual timeline that is located in Appendix G as a guide for UWMP implementation.

1.5 UWMP Amendments

LAW

10641(c). The amendments to, or change in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

Any amendments or changes to the final UWMP will be incorporated into a revised UWMP and made available from the City Hall upon request.

1.6 Agency Coordination

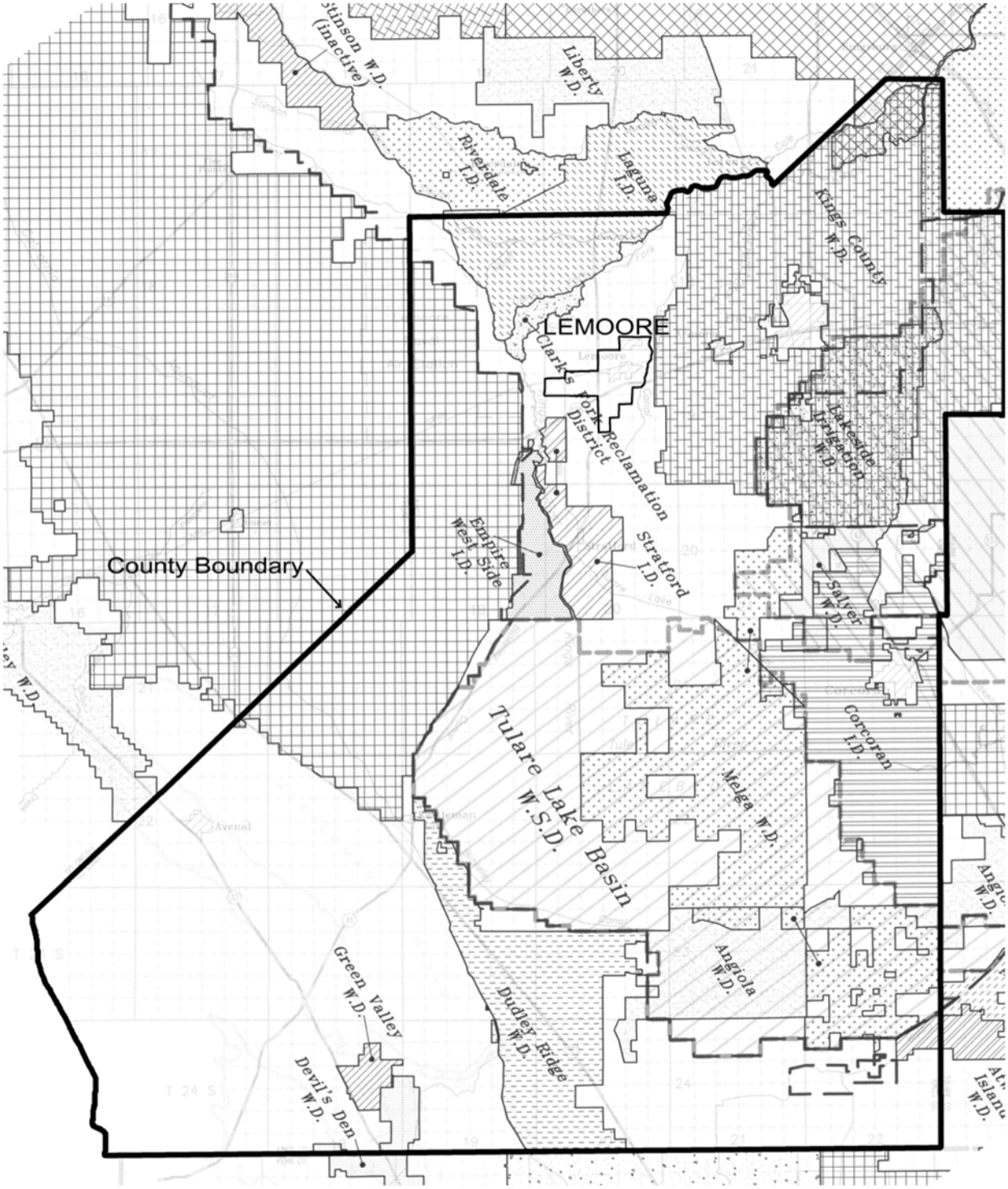
LAW

10620 (d) (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.

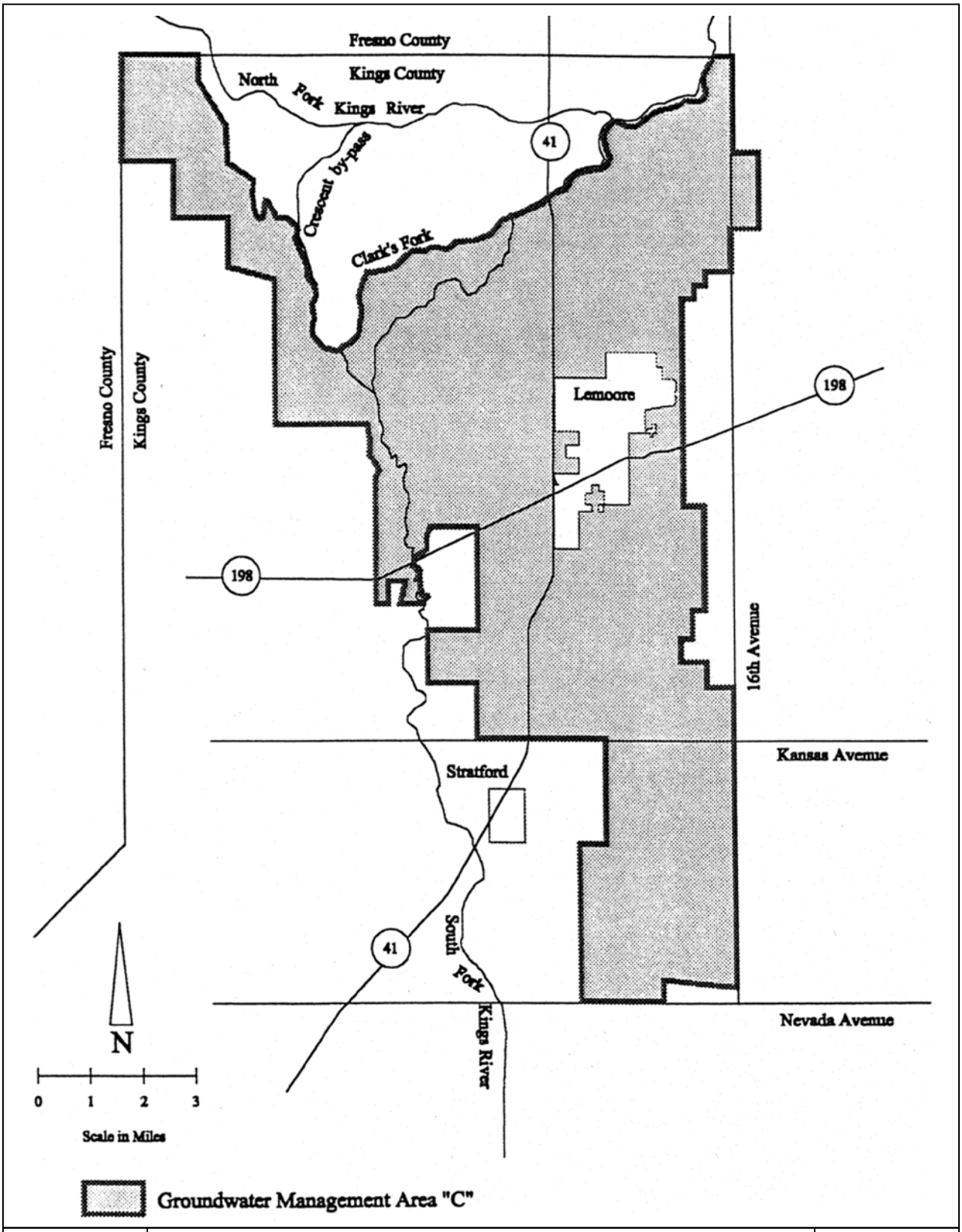
The City of Lemoore 2010 UWMP is intended to address those aspects of the Act which are under the control of the City, specifically water supply and water use. While preparing the 2010 UWMP, the City coordinated its efforts with relevant local agencies to ensure that the data and issues are presented accurately.

The City's consultants contacted the Department of Water Resources (DWR) to discuss the requirements of the UWMP and obtain a checklist and other guidelines.

The City has furnished copies of a draft Plan to and requested comments by Kings River Conservation District, Kings County Water District and Laguna Irrigation District, as entities providing water management in the northwest portion of Kings County. Although the City is not included within District boundaries (see Figures 1-1 and 1-2 on the following pages) they are adjacent to or near the City and their activities affect the groundwater basin from which the City draws its water supply. A copy of the draft Plan was also furnished to, and comments requested from the Lemoore Canal and Irrigation Company which serves an area north of the City. The City has met the 60 day local agency notification requirement of §10621(b).



Quad Knopf	WATER DISTRICT BOUNDARIES KINGS COUNTY	Figure 1 - 1



Quad Knopf	KINGS RIVER CONSERVATION DISTRICT AREA "C"	Figure 1 - 2

CHAPTER TWO

SERVICE AREA

CHAPTER TWO – SERVICE AREA

LAW

10631. A plan shall be adopted in accordance with this chapter and shall do all of 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.

The City's existing water facilities, and the recent history of their development, are described in Section 1.3 of Chapter One of this Plan.

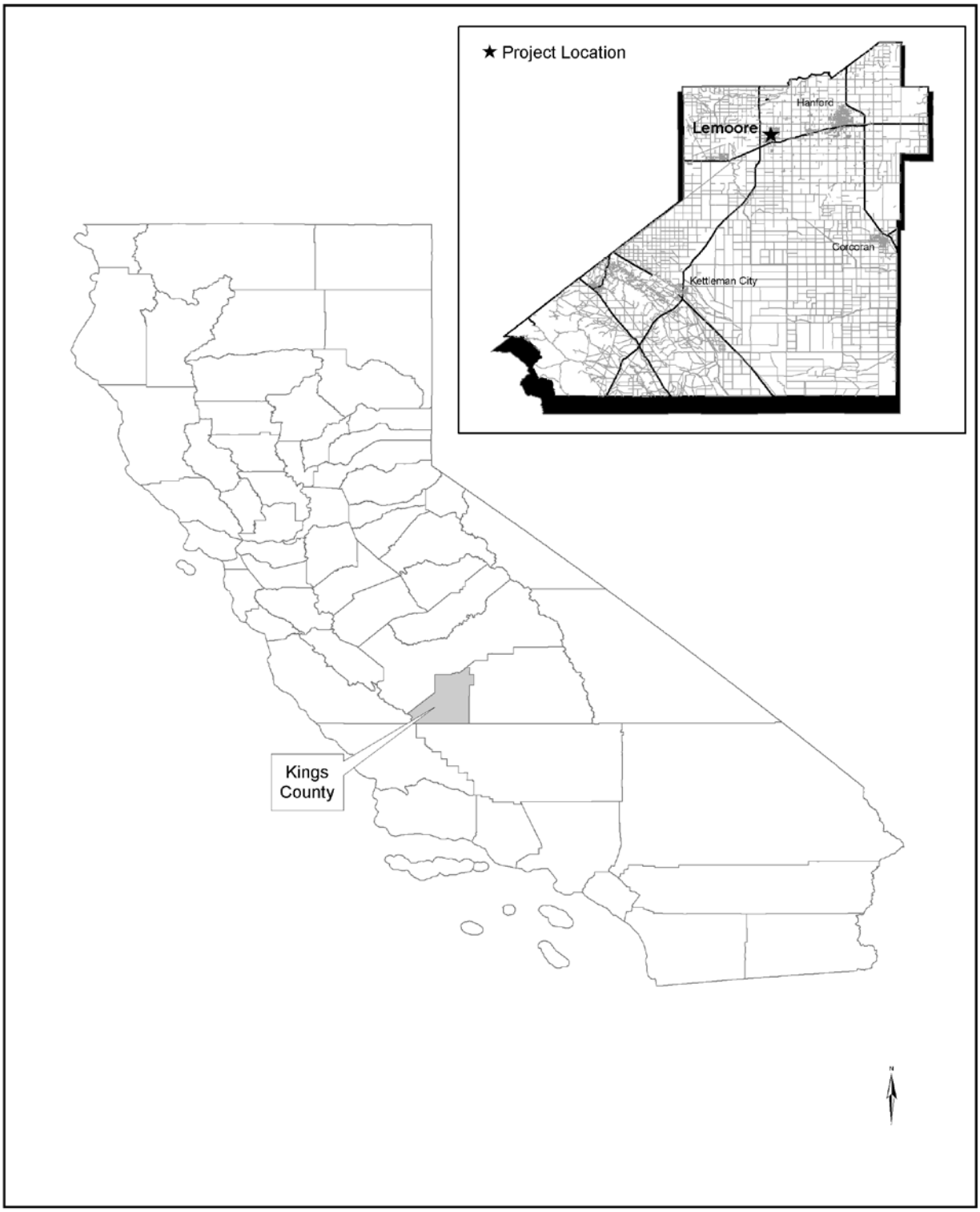
2.1 Location

The City of Lemoore is located in Kings County approximately 200 miles north of Los Angeles and 210 miles south of San Francisco. The City is situated at the intersection of State Highway 198, which connects coastal Highway 101 with Sequoia National Park, and State Highway 41 connecting Pacific Coast Highway 1 with Yosemite National Park (see Figure 2-1).

2.2 Climate

The climate of the Lemoore area is characteristic of that of the Southern San Joaquin Valley. The summer climate is hot and dry, while winters are cool and periodically humid. Mean daily maximum temperatures range from a low of approximately 57 degrees F in December and January to a high of about 99 degrees F in July. Rainfall is concentrated during the six months from November to April. December and January typically experience heavy fog, mostly nocturnal, caused when moist cool air is trapped in the valley by high pressure systems. In extreme cases, this fog may last continuously for two or three weeks. Its depth is usually less than 3,000 feet.

The Valley area is subject to characteristic seasonal air flows. During the summer, air currents from the Pacific Ocean enter the Valley through the San Francisco Bay and Delta region and are forced down the valley. These air movements are primarily to the southeast at velocities of six to ten miles per hour. During the winter, cold air flowing off the surrounding mountains results in currents toward the northwest and velocities ranging from zero to five miles per hour. These airflows result in extensive horizontal mixing of air masses in the Valley. However, vertical dispersion is constrained by temperature inversions, an increase in air temperature in a stable atmospheric layer, which may occur throughout the year.



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REGIONAL LOCATION

Figure 2 - 1

Climatic data pertinent to system operation and design are summarized as follows [Checklist #9, §10631(a)]:

Table 2.2-1
Climate

	Jan	Feb	Mar	Apr	May	June	
Standard Monthly Average ETo*	0.92	1.94	3.19	4.62	6.04	7.34	
Average Rainfall (inches)	1.66	1.60	1.76	0.63	0.26	0.08	
Average Temperature (Fahrenheit)	44.7	50.2	55.0	60.6	68.3	75.0	
	July	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Annual**
Standard Monthly Average ETo*	8.23	7.18	4.94	3.24	1.67	1.08	50.39
Average Rainfall (inches)	0.01	0.01	0.25	0.44	0.82	1.06	8.58
Average Temperature (Fahrenheit)	79.6	78.4	73.3	64.5	52.4	44.1	62.2

*Evaporation/transpiration, inches

2.3 Land Use

The City of Lemoore is surrounded by agricultural development, with smaller parcels north and east of the community and large holdings west and south. A major economic factor in the community's economy is Lemoore Naval Air Station located west of the Kings River and of the City.

The 2030 Land Use Element of the Lemoore General Plan shows a current area of approximately 7.08 square miles or 4,533 acres inside the City limits (see Figure 2-2). The 2030 General Plan assumes a City growth to 8,270 acres.

Fifty percent, 2,297 acres, of the current City land area is designated for residential use, with industrial as the next largest category at 896 acres representing 20 percent of the land area (see Table 2.3-1).

2.4 Current and Projected Population

Recognized as a community in 1873 the town was initially called Latache. In 1893 the small settlement was renamed Lemoore, and by the turn of the century, Lemoore reached a population of just less than 1,000 residents. Incorporated in July of 1900, the City prospered as a small agricultural service center.

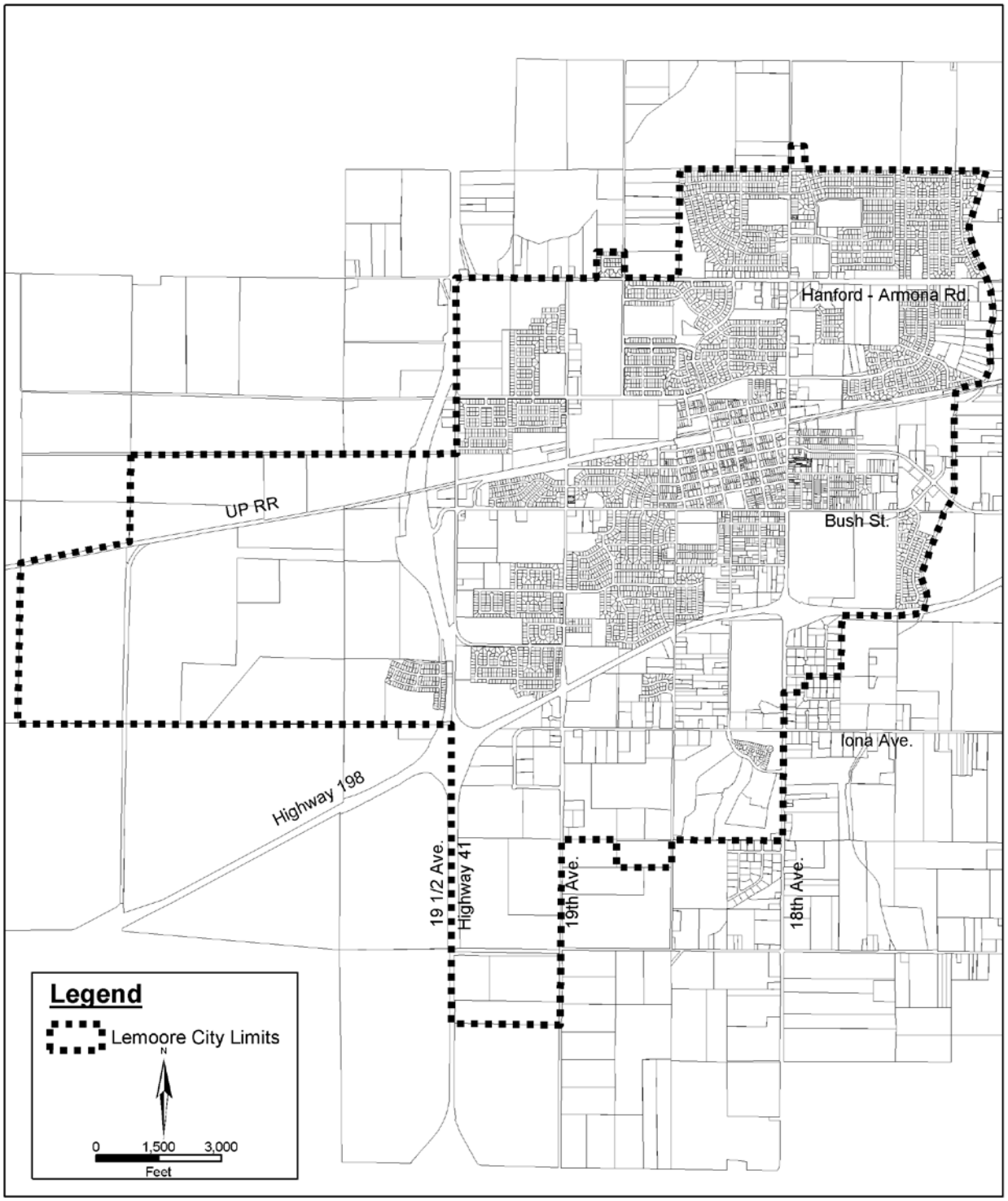
Lemoore has experienced increases in population in every decade since 1970. Between 1970 and 1980 the population increased 109 percent reflecting the expansion of the Lemoore Naval Air Station and industrial development in northern Kings County.

The City's 2030 General Plan projected a 3.1% population growth rate of the expanded City to the year 2030.

Table 2.3-1
Lemoore General Plan Land Use Acreage at Plan Buildout (2030+)

Land Use	Total GP Land Use in Planning Area	Buildout by Land Use in Planning Area
Residential		
Agriculture/Rural Residential	2,113	26%
Very Low Density Residential	213	3%
Low Density Residential	515	6%
Low-Medium Density Residential	1,111	13%
Medium Density Residential	200	2%
High Density Residential	74	1%
Mixed Use	0	0%
Mixed Use	165	2%
Mixed Use	118	1%
Neighborhood Commercial	48	1%
Commercial/Office/Industrial	1,361	16%
Commercial	170	2%
Professional Office	78	1%
Industrial	715	9%
Business, Technology and Industrial Reserve*	398	5%
Other	4,630	56%
Parks/Recreation	208	3%
Community Facilities	218	3%
Agriculture	3,352	41%
Greenway/Basin	198	2%
Wetlands	655	8%
Total	8,270	100%

Source: City of Lemoore, Dyett & Bhatia, 2007, General Plan



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LEMOORE CITY LIMITS AND SERVICE AREA

Figure 2 - 2

Actual population in 2010, according to the U.S. Census, was 24,351. Table 2.4-1 and Figure 2-3 show a population project based on the General Plan's estimated 3.1% annual increase and on the actual 2010 population after adjusting for anticipated slow growth from 2010 to 2015 (1% from 2010 to 2102, 2% from 2012 to 2015). These projections will be used as a basis for this Plan's analysis. (Continued expansion of Lemoore Naval Air Station, as a principal employer near the community is assumed.) [Checklist #'s 10 and 11, §10631(a)]

Table 2.4-1
Population Projections, 2005-2025

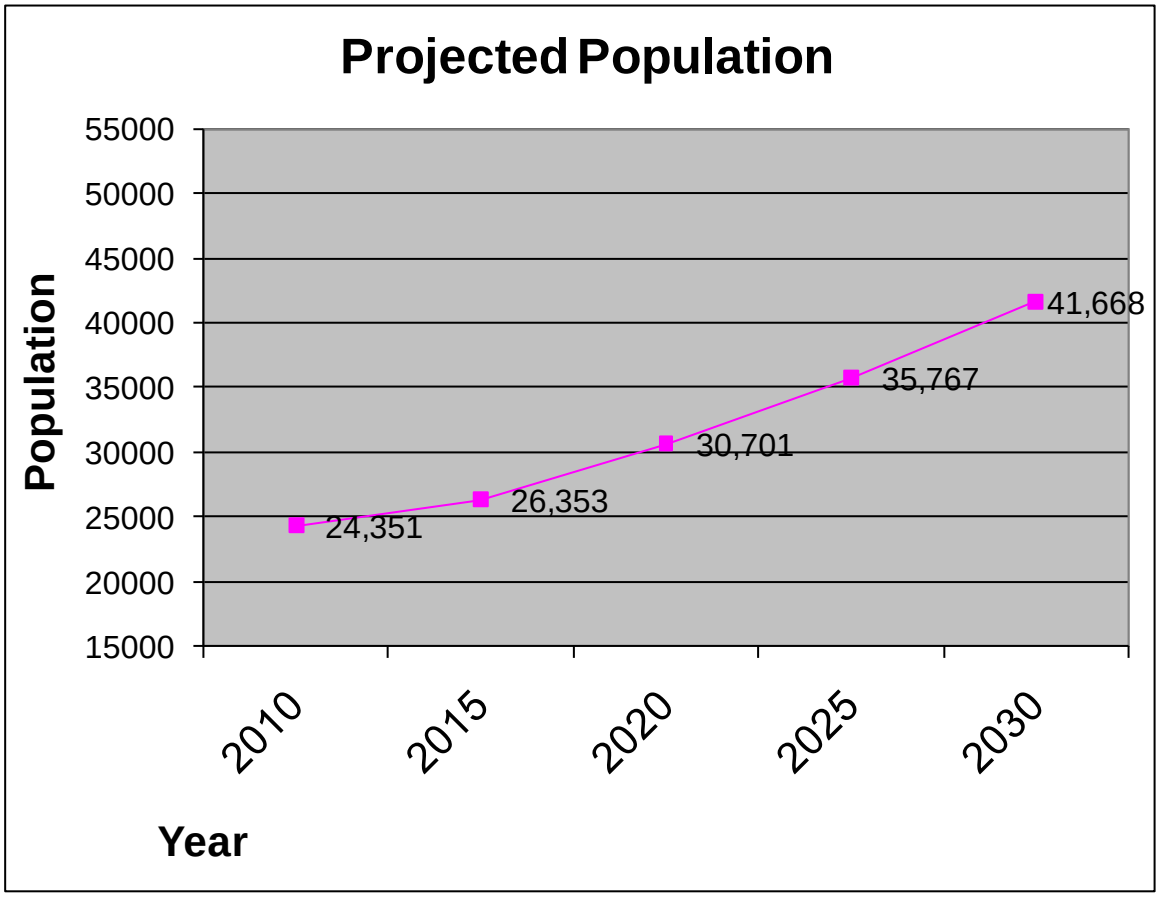
Years	Population
2010	24,351
2015	26,353
2020	30,701
2025	35,767
2030	41,668

2.5 Demographics

There are no unique or pertinent community demographic characteristics which will influence future population growth or water usage.

2.6 Service Area Boundaries

The City of Lemoore's water system serves only the incorporated area of the City (see Figure 2-2). The City sells no water to any other agencies nor to any water users outside the City's corporate limits.



Note: Assumes 3.1%/year population growth after 2012.

Quad Knopf	POPULATION PROJECTIONS, 2010-2025	Figure 2 - 3

CHAPTER THREE

WATER SUPPLY (GROUNDWATER)

CHAPTER THREE – WATER SUPPLY (GROUNDWATER)

LAW

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)…Provide:

(1) A copy of any groundwater management plan adopted by the urban water supplier.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater…information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted…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.

(4) A detailed description and analysis of the amount and location of groundwater that is protected to be pumped by the urban water supplier.

3.1 Groundwater Management Plans

The City of Lemoore has not adopted a City groundwater management plan. A plan for the area of the groundwater subbasin in which the City is located has been adopted by the Kings River Conservation District (KRCD). A copy of that plan is on file with the City Clerk, Lemoore City Hall. A plan has also been adopted by the Kings County Water District (KCWD).

3.1.1 KINGS RIVER CONSERVATION DISTRICT PLAN

KRCD was formed in 1951 under the County Water District Act to provide a legal entity for water management in the Lower Kings Basin. KRCD has prepared the Groundwater Management Plan Update (GWMP), which provides an understanding of KRCD groundwater management role in the Basin. It also documents the existing activities of KRCD and formalizes other proposed programs in a plan that will be used in implementing a monitoring and management program for conjunctive use, replenishment and preservation of groundwater of the basin. The following are excerpts from the GMP.

The overall goal of the GWMP adopted by the District is:

To document the local approach to stopping overdraft, sustaining the local economy, and ensuring a sustainable groundwater system through development of specific projects and facilities to capture unallocated floodwater for groundwater storage and conjunctive use, whenever and wherever such water is available consistent with existing agreements, rights, and entitlements.

The objectives were crafted to reflect the community's values and priorities for meeting the GWMP goal.

1. Identify and build near-term groundwater recharge projects within each Water Management Area to capture flood flows; begin to stabilize the basin; and demonstrate project feasibility, benefits, and cost effectiveness;

2. Establish rational and attainable Best Management Objectives, both regionally and for specific Water Management Areas, to measure and track progress;

3. Formulate long-term regional strategies to take advantage of groundwater storage space in the Lower Kings Basin;

4. Maintain local control of the groundwater basin by developing agreements and institutional arrangements that promote the responsible management of groundwater resources by overlying cities, water districts, agencies, companies, and landowners;

5. Continue to track progress, and coordinate, GWMP implementation;

6. Research and define financing strategies and program oversight to implement the GWMP projects and programs;

7. Implement monitoring programs that increase the understanding of Lower Kings Basin operations, track progress toward meeting goals, and evaluate and forecast conditions; and

8. Prevent degradation of groundwater quality.

3.1.2 KINGS COUNTY WATER DISTRICT PLAN

Kings County Water District (KCWD) was formed in 1954 under the County Water District Act (District Act) to provide a legal entity for water management in the Northeast portion of Kings County. KCWD has prepared a Groundwater Management Program (GMP), which provides an understanding of KCWD groundwater management role within the County. It also documents the existing activities of KCWD and formalizes other proposed programs in a plan that will be used in implementing a monitoring and management program for conjunctive use, replenishment, and preservation of groundwater of the basin. The following are excerpts from the GMP.

Since its creation, KCWD has worked to minimize subsidence and protect the groundwater resources of the County under the direction of the District Act. KCWDS objectives related to groundwater management are to recharge the groundwater basins, conserve water, increase water supply, and to prevent waste or diminution of KCWD's water supply.

KCWD has effectively managed the groundwater basins to fulfill the objectives of the District Act and its mission. The goal of these groundwater management efforts have been, and continues to be, to ensure that groundwater resources are sustained and protected.

The GMP formally documents KCWD's groundwater management goals and describes programs in place that are designed to meet those goals. The following programs are documented in the plan:

- Conjunctive use of surface water and groundwater has been practiced within the KCWD since its formation in 1954. Through the purchase of slough channels and other appropriate sites for the recharge basins, and by the purchase and importation of available surplus water and flood release water, the KCWD has reduced the decline of groundwater levels within the District.

- Since 1963, the KCWD has engaged in a cooperative program with the State Department of Water Resources for the monitoring and sampling of groundwater in the District. Water level measurements are annually obtained from approximately 200 wells in both the spring and the fall. The data obtained in the spring (normally the last of January) reflects the "seasonal high" water table, as the measurements are made prior to pumping for pre-irrigation. The fall measurements (normally obtained in the first part of October) are taken after the season of crop irrigation pumping.

- The cooperative program between DWR and the KCWD has been expanded to include monitoring of groundwater quality. Water samples from selected wells were collected in those years and delivered to the DWR and private laboratories for analysis.

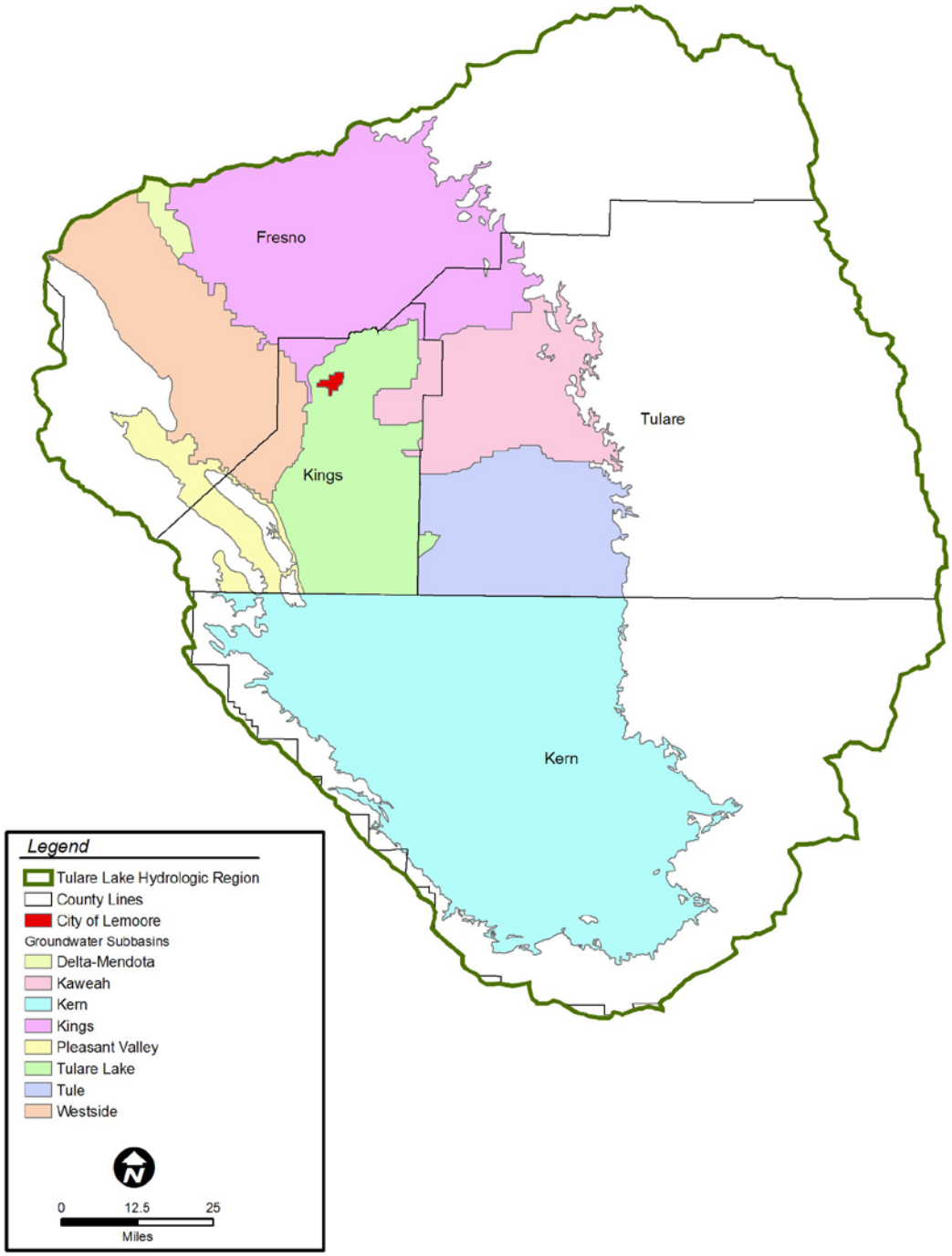
3.2 The Groundwater Subbasin

The groundwater subbasin underlying the City is the Tulare Lake Basin, which is part of the Tulare Lake Hydrologic Region (Figure 3-1). This region contains multiple interconnected subbasins that transmit, filter, and store water: the Kings, Kern, Kaweah, Tulare Lake, Tule, Westside, and Pleasant Valley subbasins. The City of Lemoore is immediately adjacent to the south boundary of the Kings subbasin.

The Tulare Lake Basin is not an adjudicated groundwater basin, as defined by the California Water Plan Update, Bulletin 160-98, Figure 3-28 on page 3-54 and Table 3-16 page 3-55.

The California Water Plan Update, Bulleting 160-98, page 3-50, Table 3-15, lists the 1995 overdraft for the Tulare Lake Hydrologic Region at 820 thousand acre feet (taf). As shown in Table 3-15, groundwater overdraft was expected to decline to 670 taf during 2020. However, the overdraft from 1998 to 2005 average 1,392 taf, during a period of approximately normal average precipitation (California Water Plan, Tulare Lake, 2009 Update).

During drought periods, water levels in the subbasin may decline. However, during wet periods, they recover, thus making area overdraft or perennial yield models less reliable than desired, particularly in subbasin boundary areas.



Quad Knopf

SUBBASINS, TULARE LAKE HYDROLOGIC REGION

Figure 3 - 1

The Tulare Lake Subbasin is bounded on the south by the Kings-Kern county line, on the west by the California Aqueduct, by the easterly boundary of Westside Groundwater Subbasin, and by the Tertiary marine sediments of the Kettleman Hills. It is bounded on the north by the southern boundary of the Kings Groundwater Subbasin, and on the east by the westerly boundaries of the Kaweah and Tule Groundwater Subbasins. The southern half of the Tulare Lake Subbasin consists of lands in the former Tulare Lakebed in Kings County.

According to DWR, estimations of the total storage capacity of the Tulare Lake Subbasin and the amount of water storage as of 1995 were calculated using an estimated specific yield of 8.5 percent and water levels collected by DWR and cooperators. According to these calculations, the total storage capacity of the Tulare Lake Subbasin is estimated to be 17,100,000 acre feet to a depth of 300 feet and 82,500,000 acre feet to the base of fresh groundwater.

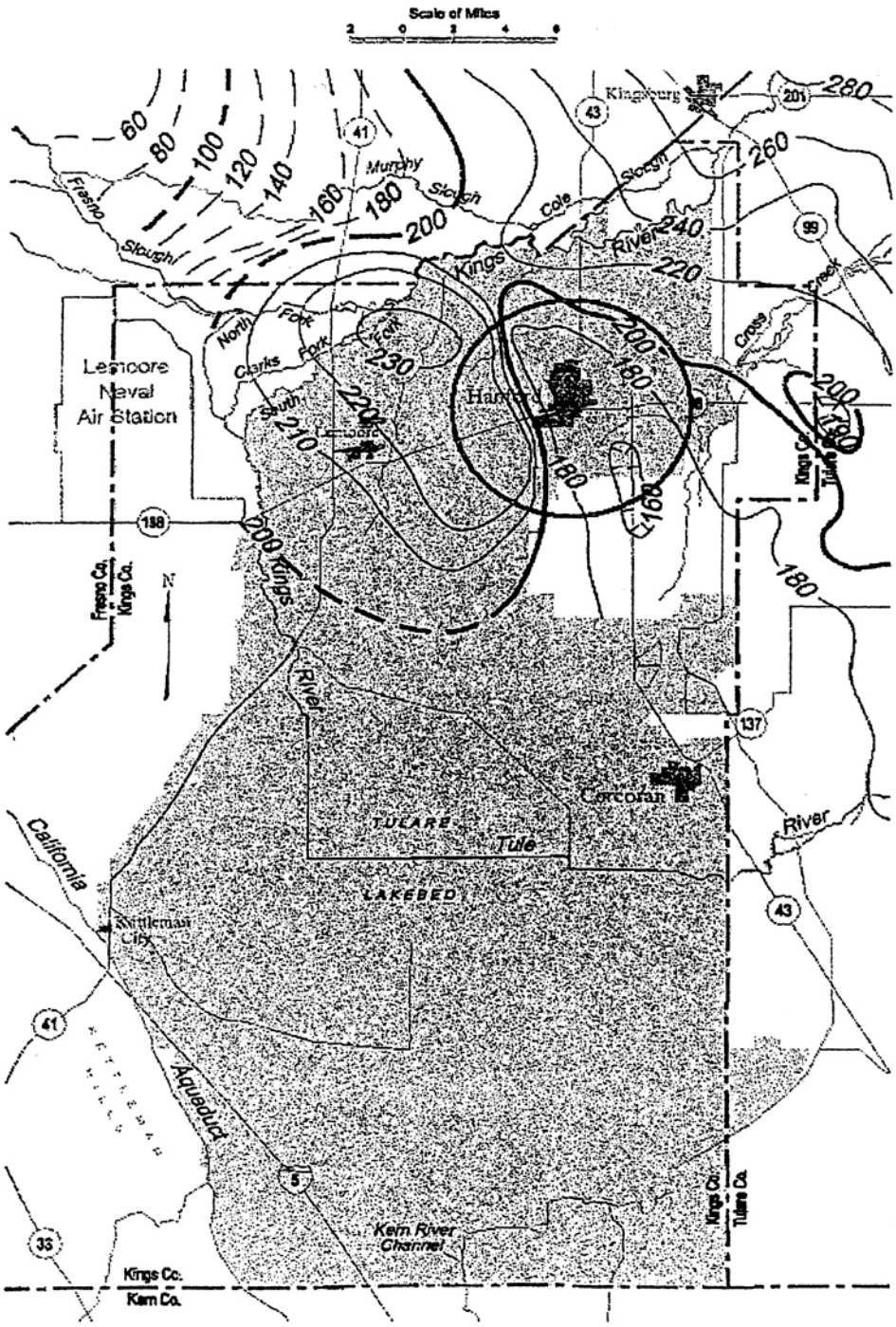
Information obtained from DWR indicates that, on average, the Tulare Lake Subbasin water levels declined nearly 17 feet from 1970 to 2000. The period from 1970 through 1978, showed moderate declines with many fluctuations, totaling about 12 feet. The ten-year period from 1978 to 1988 saw more fluctuations and a general increase of about 24 feet, bringing water levels up to 12 feet above the 1970 water levels. 1988 through 1993 showed steep declines, bottoming out in 1993 at 23 feet below the 1970 level. From 1999 to 2000, water levels dropped another 7 feet, bringing the water levels to about 17 feet below the 1970 water levels. Fluctuations in water levels have been most exaggerated in the lakebed area of the subbasin. This area has the steepest decrease in water levels as well as some of the strongest increases in water levels.

Groundwater generally flows southwest, toward the Tulare Lakebed. Based on current and historical groundwater elevation maps, horizontal groundwater barriers do not appear to exist in the subbasin. Water-level maps obtained from DWR for Spring 1989 and Spring 2001 (Figures 3-2 and 3-3) indicate a very minor decline in groundwater elevations in the portion of the subbasin underlying the City. (Additional water-level maps are provided in Appendix H.)

Nevertheless, the relative stability in the lower portion of the Tule Lake Subbasin is depicted in these Figures. It is further illustrated in the Kings River Conservation District Lower Kings Basin Groundwater Management Plan Update. Figure 3-4, from the Plan, depicts groundwater trends for the area. The Plan summarizes (p. 3-8) the projections for this (the Lemoore) area of the Subbasin: "Water levels in Area C are relatively stable and expected to remain within their operating zone in the future".

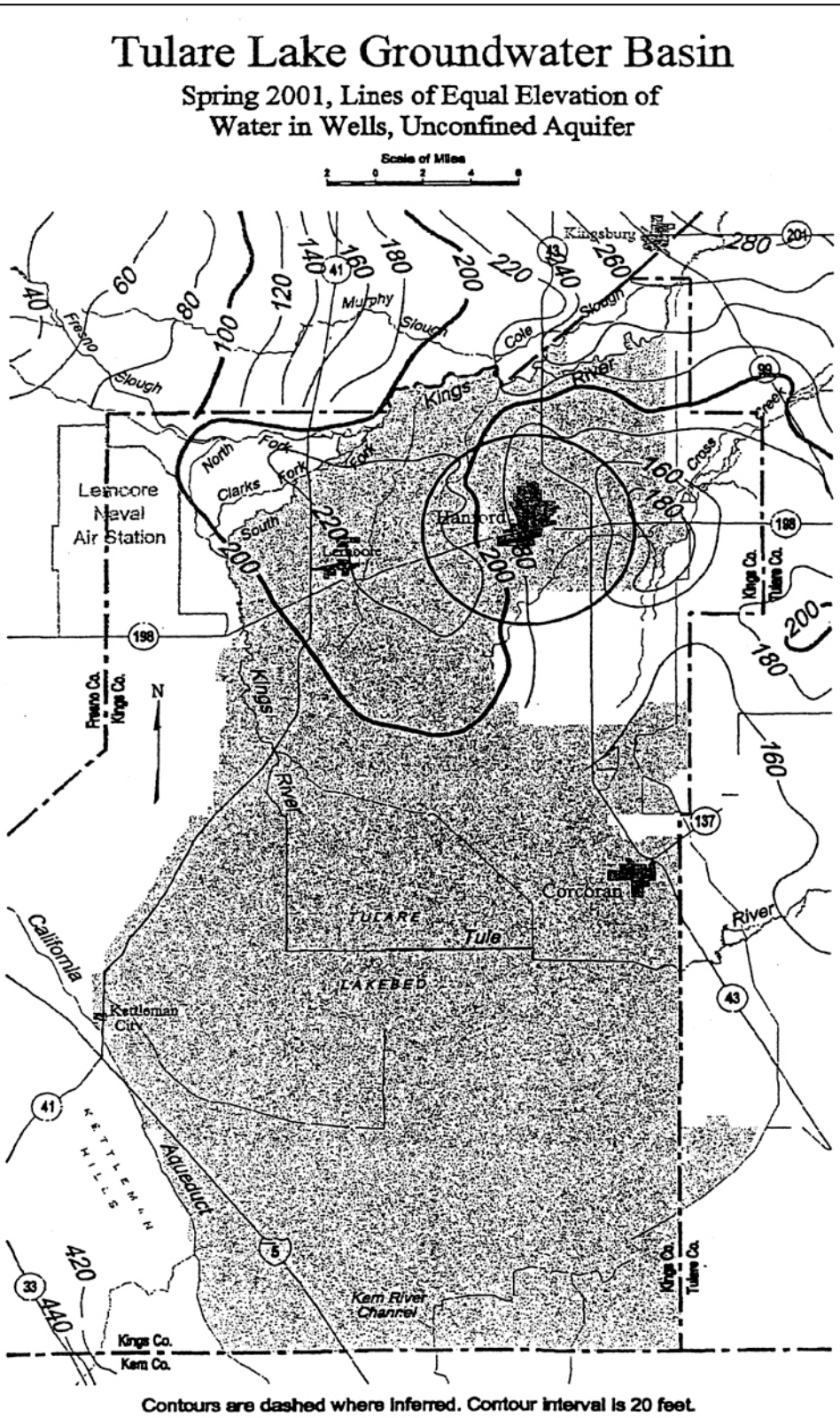
3.3 The City Water Supply

The City municipal (and industrial) water systems currently utilize local groundwater as their sole source of supply. The City systems extract water from underground aquifers via ten active groundwater wells within, and in a well field five miles north of the City (Figure 3-5). The pumping capacities of, the City wells are shown on Table 3.1-1. Water is conveyed from the wells to the consumers via a distribution system with pipe sizes between 4 and 14 inches in diameter. The City maintains four ground-level storage reservoirs within the municipal distribution system, with a total capacity of 4,400,000 gallons. Table 3.3-1 summarizes existing wells, their capacity, and their emergency capacity characteristics.



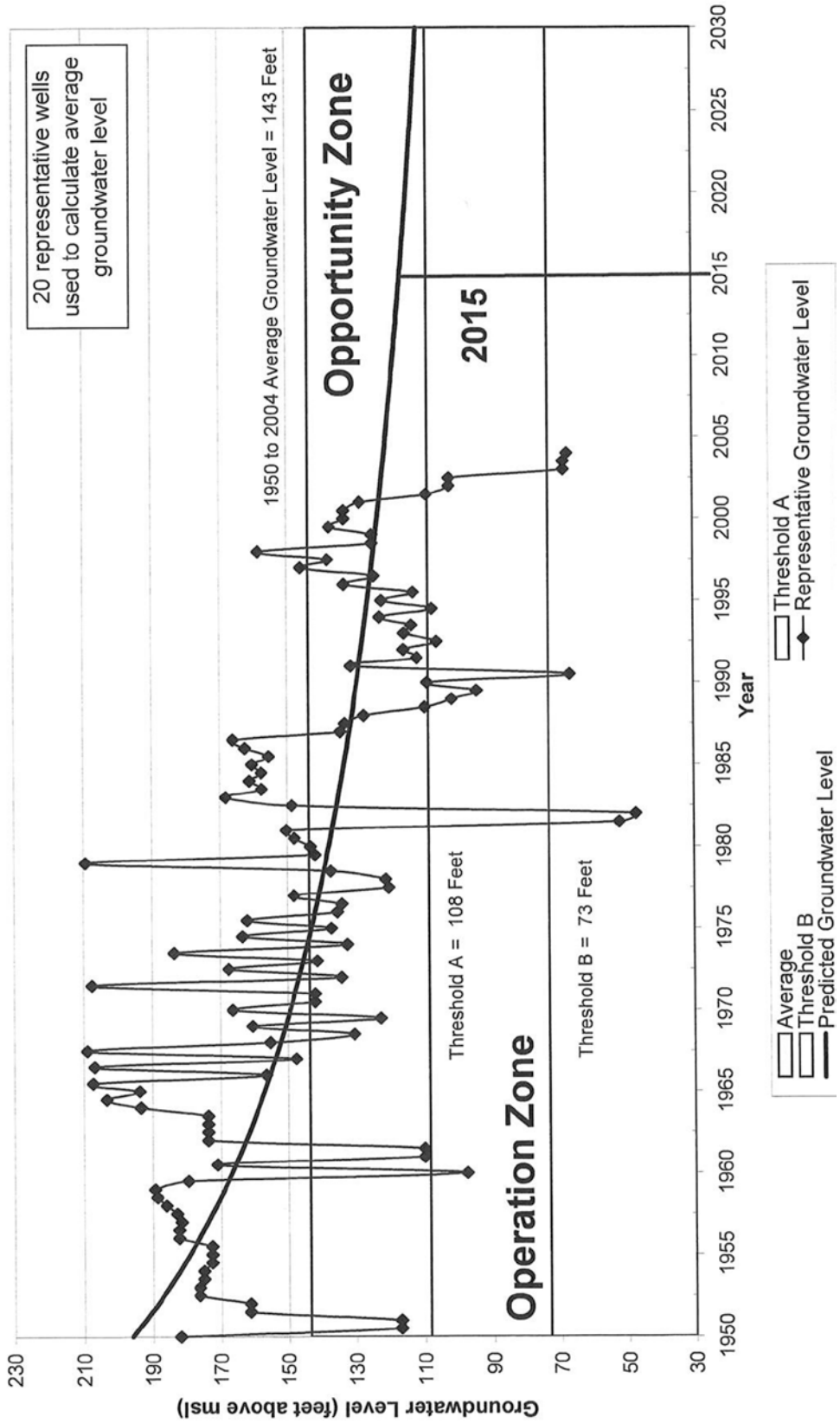
Source: Department of Water Resources

Quad Knopf	GROUNDWATER ELEVATION CONTOURS IN SPRING 1989	Figure 3 - 2



Source: Department of Water Resources

Quad Knopf	GROUNDWATER ELEVATION CONTOURS IN SPRING 2001	Figure 3 - 3



Quad Knopf

LOWER KINGS BASIN GWMP UPDATE
GROUNDWATER TRENDS FOR AREA C

Figure
3 - 4

3.3.1 THE RESOURCE AND ITS USAGE

While several strata of groundwater can be found beneath both the City's wellfield and the City itself, only certain of the strata have proven to be useful for domestic water supply. These strata are below the "A" Clay and below the "E" Clay. The "A" Clay is at a depth below the ground surface of approximately 70 feet at the wellfield and approximately 400 feet within the City. The "E" Clay is at a depth below the ground surface of approximately 500 feet at the City's wellfield and approximately 800 feet within the City. The aquifers below the "A" Clay have been described in hydrogeological reports as "semi-confined," and the aquifer below the "E" Clay has been described as "confined". These aquifers are fed by percolating surface water along the east side of the San Joaquin Valley, west of the Sierra Nevada watershed. That water then migrates south and west under much of the San Joaquin Valley, forming a groundwater pool over 2 million acres in area.

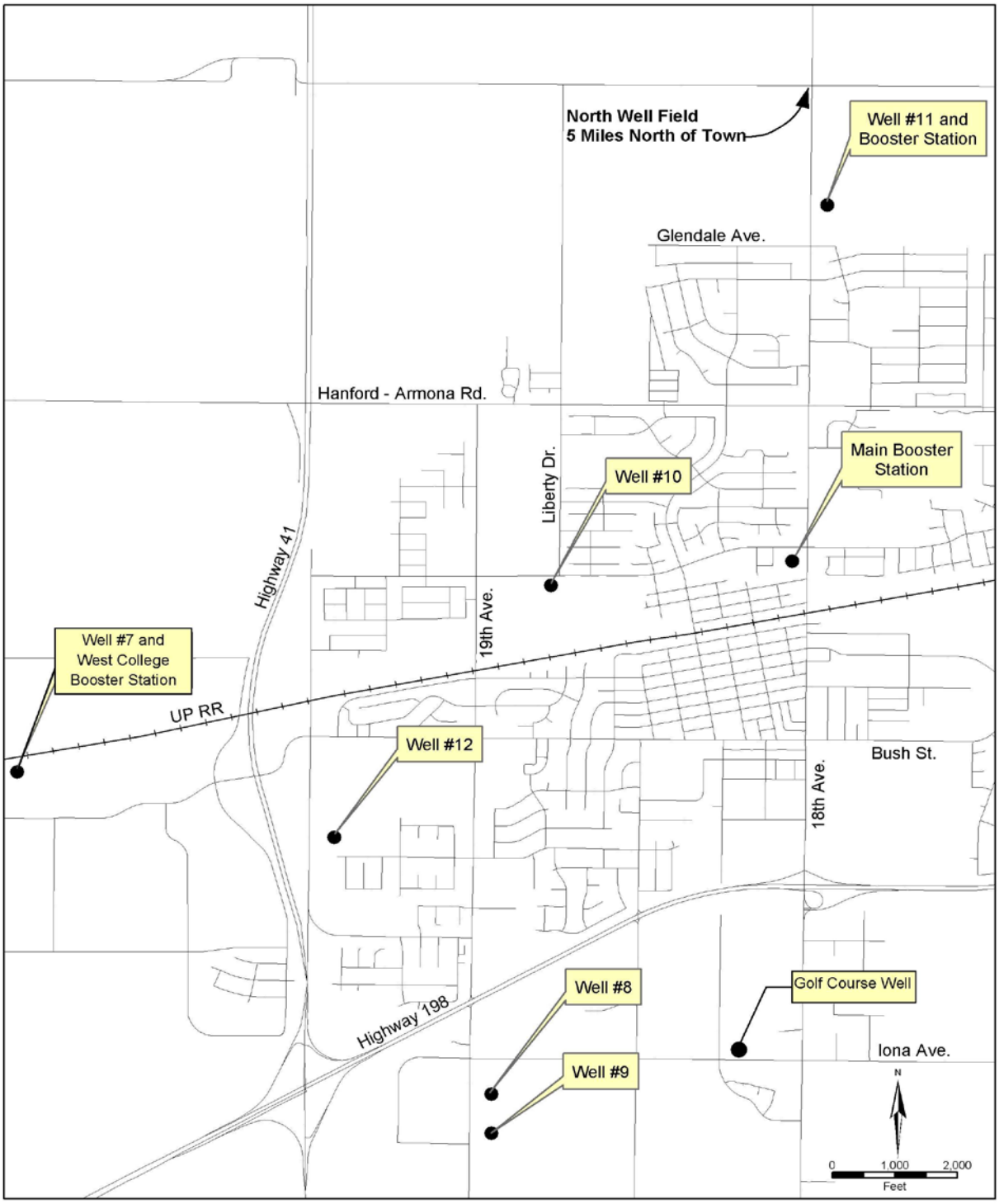
The overall health of the local groundwater resource, from which the City pumps its water, has shown some consistent trends since the late 1950's. Data from the City wells at the well field used to evaluate the effect of the City's wells on the basin show that there has been a consistent decline of 0.5 feet per year in groundwater levels in the semi-confined aquifer (below the "A" Clay) and no decline in levels in the confined aquifer below the ("E" Clay). The City removes approximately 0.19 percent from the groundwater basin. There has been no significant change in the historic trends of the local subbasin after construction of the City's wells; the City's continued use of such wells apparently does not lead to a decline of the portion of the groundwater basin below the "E" Clay.

The litigation brought by the nearby Laguna Irrigation District (L.I.D.) regarding the possibility of the City increasing the capacity of its well field by construction of a parallel water main in 1992 prompted several studies to be undertaken related to existing and future groundwater conditions in and near the City. A study completed by Provost & Pritchard on behalf of the irrigation district concluded that the groundwater basin within the L.I.D. boundaries was being overdrafted by 500 acre feet per year, approximately one percent of the total groundwater inflow of 50,000 acre feet per year. This was with the then configuration of four wells at the well field.

Both the Provost & Pritchard study and a study conducted by Geometric Consultants, Inc. (on behalf of the City, related to the litigation) concluded that groundwater elevations closely correspond to weather conditions. When there are years of drought, the groundwater levels lower due to lack of percolation of rainfall and increased groundwater pumping to meet agricultural water demands. Correspondingly, when there is more rainfall and Sierra snowpack, groundwater levels rise as more surface water is available, lessening the reliance on groundwater, and the rainfall is able to percolate into the basin.

Since the conclusion of that litigation with its attendant, corroborating, studies the City has drilled, and will drill, all its water supply wells within the City unless it is necessary to replace existing out-of-City wells.

The City’s wells are described in Table 3.3-1. Their locations are depicted on Figure 3-5.



Quad Knopf

WELL LOCATIONS

Figure
3 - 5

Table 3.3-1
Municipal and Industrial Water System Wells

Well No.	Status	H.P.	Well Capacity (GPM)	Well Capacity (MGD)	2010 Emergency Capacity Generator Diesel (GPM)	2010 Emergency Capacity Generator Diesel (MG)
Well 2	Active	250	2100	3.024	0	0
Well 4	Active	250	2200	3.168	2200[1]	3.168[1]
Well 5	Active	250	2100	3.024	0	0
Well 6	Active	150	1150	1.656	1150[2]	1.656[2]
Well 7	Active	250	900	1.296	900[2]	1.296[2]
Well 10	Active	300	2200	3.168	0	0
Well 11	Active	200	1000	1.441	0	0
Well 12	Active	200	1200	1.728	1200[2]	1.728[2]
	Subtotals		12850	18.505	5450	7.848
Well 8[3]	Active	150	1000	1.441	0	0
Well 9[3]	Active	150	1200	1.728	0	0
	Totals		15050	21.674	5450	7.848

[1]Diesel
[2]Generator (3 on hand)
[3]Industrial supply only; not part of domestic water systems

The ten wells have a total supply capacity of 21,674,000 gallons per day (MGD) or 15,050 gallons per minute (gpm). The non-industrial firm capacity, which is defined as the total non-industrial well capacity (all wells other than Wells 8 and 9) less one of the largest wells out of service, is approximately 15,335,000 MGD. The City's water systems have no current interconnections to any other water system.

Table 3.3-2
Total Water Pumped to Customers, 2006-2010

	Domestic Distribution System	Industrial Wells 8 and 9	Total Pumped
2006	2,301,018,000	175,690,000	2,476,708,000 gal 7,599.6 ac/ft/yr
2007	2,411,456,800	191,470,000	2,602,926,800 gal 7,986.9 ac/ft/yr
2008	2,442,161,000	187,953,000	2,630,114,000 gal 8,070.3 ac/ft/yr
2009	2,390,323,000	134,475,000	2,524,798,000 gal 7,747.2 ac/ft/yr
2010	2,296,037,000	143,201,000	2,439,238,000 gal 7,484.6 ac/ft/yr

The City's major industrial water user, a cheese plant (Leprino Foods) with two facilities, is supplied from the municipal water system. That supply, plus the domestic water system demand by SK/Olam supplementing its supply from industrial water system Wells 8 and 9, is summarized in Table 3.3-3.

3.3.2 RECHARGE

Recharge sources protecting the City's groundwater supply include:

- Groundwater recharge in the Subbasin is primarily from stream recharge and, ultimately from deep percolation of applied irrigation water.

- The Kings River Water Conservation District's Water Management Plan and its recharge facilities for the area.

- The Laguna Irrigation District operates six recharge basins in the Subbasin.

- The Lemoore Canal and Irrigation Company, although not a "District" or public agency, owns, maintains and operates surface water canals near and within the City of Lemoore. The activities of this Company affect groundwater levels and usage in the Lemoore area; the City of Lemoore discharges stormwater to the Company's canals for transport to a wetlands facility and to agricultural areas.

- An agreement between the City and Laguna Irrigation District governs joint recharge activities. It sets up a jointly held fund, to be used to purchase recharge water, which each party agrees to fund at the rate of $62,500 annually, to a maximum fund amount of $500,000.

  The agreement is broadly drawn with regard to how recharge is to be accomplished, allowing land application in the Laguna Irrigation District, in the Kings River channel itself, in the District canal system, or at other mutually acceptable locations (see Appendix H).

- The Kings County Water District (KCWD) manages surface water supply in the area east of and upgradient of the City. The water utilized by the KCWD comes from a variety of sources. A major portion is obtained from the Kings River through ownership of shares of stock in the Peoples Ditch Company and the Last Chance Water Ditch Company. Water is also obtained from the Kaweah River through shares of Lakeside Ditch Company stock. Conjunctive use of surface water and groundwater has been practiced within the KCWD since its formation in 1954, through the purchase of slough channels and other sites for use as surface water recharge basins and by the importation of available surface water and flood release water.

- The City of Lemoore utilizes storm drain basins within the City, totaling approximately 100 acres, providing surface water runoff percolation. The City additionally, initiated the creation of a wildlife conservation area (wetlands) of approximately 700 acres west of the City which provides percolation accommodating about 70% of the City's storm drainage runoff. These facilities recharge groundwater in the Lemoore area and to the southwest.

- The City's wastewater treatment facility discharges 650 million gallons per year to an unlined canal transporting this recharge to a downstream agricultural area. The City's largest industry discharges approximately 1,020 million gallons of effluent to the same canal. The

second largest industry's discharge of 200 to 500 million gallons per year is discharged directly to irrigated agriculture.

3.3.3 MUNICIPAL WATER SYSTEM CAPACITIES

In accord with industry standard practices and the California Department of Health Services (DHS) criteria for "Adequate Source Capacity" regarding water supply, the source should be sized to serve the Maximum Day Demand (MDD). On the day of maximum demand, it is desirable to maintain a water supply rate equal to the MDD rate. Water required for peak hour demands or for fireflows would come from storage.

Standby production capacity is required for system reliability. Under normal operating conditions, it is possible that one or even two of the City's wells can be out of service during MDD conditions due to equipment malfunction, for servicing, or for water quality concerns. The DHS criteria recommends calculating the system capacity with the largest well being out of service. To mitigate the potential impact of lost production capabilities, the City should thus have wells with a capacity of 3.17 mgd (2,200 gallons per minute) in surplus of MDD demand.

The City's current (2010) MDD is approximately 12 mgd. Supply availability with one of the two largest wells out of service is 15.335 mgd. The City has recently increased water supply and storage facilities to assure such adequate redundancy for standby production and source reliability. The two industrial wells (#8 and #9) provide nearly 3.0 mgd of additional reserve production capacity during the period from October through June and about 1 million gallons per day of such capacity during the period of probable maximum day demand (July through September) although the water quality has secondary compliance (taste and odor) problems.

3.4 The Industrial Water System

It is pertinent to note here that Wells 8 and 9 (see Figure 3-5) are not normally connected to the City’s municipal water system, although such connection can be effected in a major fire flow emergency. They serve only a tomato processing industry (Olam). The water quality is not suitable (taste, odor, color) for residential and institutional usage. They are, in reality, “private”, single purpose wells. Their total production of shallower-aquifer, essentially non-potable/non-compliant water, averages 166,557,000 gallons annually (see Table 3.3-2), of which an estimated 95% is process water. (Non-process water usage is calculated as 1,500 employees @ 25 gpcd x 120 days + 400 employees @ 25 gpcd x 240 days, a total of 6,900,000 gallons per year.)

Additionally, the relationship of the City’s municipal water system to its industrial water supplies is illustrated in Table 3.3-3.

Table 3.3-3
Total Annual Industrial Water Usage from Domestic Municipal Water System

	Leprino East, (MG)	Leprino West (MG)	SK/Olam* (MG)	Total (MG)
2006	192,473,000	323,230,205	272,919,768 (SK)	788,622,973
2007	212,124,000	328,935,130	324,570,040 (SK)	865,629,130
2008	194,798,000	341,590,235	193,319,000 (Olam)	729,707,235
2009	220,163,000	430,723,000	75,757,106 (Olam)	726,643,106
2010	235,301,000	455,080,000	119,181,608 (Olam)	809,562,610
Average	210,800,000	375,800,000	177,000,000	784,400,000

*Usage in excess of Well 8 and Well 9 supply.

Non-process water for the two Leprino cheese facilities is calculated as [300 employees @ 25 gpcd x 365 days + 1,000 employees @ 25 gpcd x 365 days, 2,737,500 + 9,125,000], 11,862,500 gallons per year. This usage is approximately 1.8% of the total Leprino flow, making Leprino's 2010 average process water demand approximately 678,000,000 gallons per year.

No reduction from the SK/Olam industrial figures in Table 3.3-3 is needed to establish non-process flow; such non-process flows are accounted for in the Well 8 and Well 9 flow calculations.

3.5 The Municipal Golf Course Irrigation System

Another, totally separate, supply system serves the Municipal Golf Course. The course is irrigated in part with surface water provided by the, private Lemoore Canal and Irrigation Company from its Kings River diversion. The City owns ten shares of the Company's stock and is entitled to a quantity determined annually (up to 356 acre feet per year, dependent upon the Company's total diversion rights for that year).

The purchased quantities from 2006 through 2010 were:

Table 3.3-4
Surface Water Utilized on the City of Lemoore Municipal Golf Course
2006-2010

	Total, a/f Share Entitlement	Additional, a/f Purchased	Total, a/f	Total, Million Gallons
2006	115.0	243.1	358.1	116,695,000
2007	75.9	73.9	149.8	48,816,000
2008	64.4	102.9	167.3	54,518,000
2009	48.3	98.3	146.6	47,773,000
2010	98.9	273.1	372.0	121,114,000
			Total	**389,026,000**
			Average	**77,805,000**

Absent any Company-provided projections, but assuming continued Kings River diversions similar to those for the 2005-2010 period of record, an average-year surface water supply

available to the golf course of 77,805,000 gallons per year may be assumed. If, in multiple dry years no surface water diversion was available all golf course irrigation would necessarily be supplied by groundwater.

Available surface water is supplemental from a well located on the course which is utilized only for the golf course (not for general City domestic water supply). It is not operated or maintained by the City's Water Diversion or by the City Public Works Department. There are no records available as to the amount of golf course irrigation water supplied from this well during the 2005-2010 period (or any other period).

It is estimated that the 120 acre golf course requires approximately 3 acre feet of water per acre per year, a total of 360 acre feet per year, 117,314,000 gallons. The average estimated annual groundwater usage is therefore (117,341,000 – 77,805,000, 39,536,000 gallons.

Although full compliance with the projection and reporting requirements of Water-Code Division 6, Part 2.6 and Section 1063J(K) therein is not feasible, it may be noted that:

a) The City has no intention of using this restricted surface water supply, nor any means of treating it, for municipal purposes.

b) The amount of this water supply source has averaged less than 5% of the City water system's maximum annual production during 2006-2010.

c) The groundwater utilized by the golf course, which is probably of a quality not usable in the municipal water system and is not connected thereto, is less than 2% of the maximum municipal water system usage during the 2006-2010 period.

3.6 Projected Groundwater Usage

The City's supply source, the Tulare Lake Subbasin is more than adequate to meet the City's long-term water supply needs. The City will continue to rely exclusively on groundwater wells with a combined capacity, with its largest well out of service, to meet Maximum Day Demand (MDD), as well as to provide sufficient ground-level storage and well backup power to serve the community during power outages and natural disasters. There are no currently planned future water supply programs other than the continued development of the City's groundwater supply. (There is no need for, and there are no opportunities for, development and usage of brackish water desalination projects.)

The quantitative scope of necessary future water supply needs will be based upon demand, considering State law-required per capita water goals, projected population increases, continued water usage at the same level by Olam and Agusa (tomato processing plants) and increased usage by Leprino Foods, a cheese plant.

Quantitative supply requirements, based on demand, are provided in Chapter Four of this UWMP.

(To include any of the non-municipal water system water usage, surface or groundwater (Sections 3.4 and 3.6, industrial and golf course systems), in the City's existing and projected water demands would distort the analysis of the UWMP and obfuscate its usage as a planning document designed to project City water demand, water supply, water storage and water treatment needs. This data is, however, informative.

CHAPTER FOUR

WATER DEMAND AND WATER SUPPLY

CHAPTER FOUR – WATER DEMAND AND WATER SUPPLY

LAW

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

10631 (b) (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 records.

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 government; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; and (I) Agricultural.

(2) The water use projections shall be in the same 5-year increments to 20 years or as far as data is available.

4.1 Water Demand

4.1.1 HISTORIC WATER USAGE

Eliminating industrial process water demand[1], historic water usage, and corresponding per capita usage, in the Lemoore water system are illustrated in Table 4.1-1.

[1] Annual industrial non-process water demand by Leprino has been estimated as 11,862,500 gallons per year and by Olam as 6,900,000 gallons per year (see pages 3-13 and 3-14)

Table 4.1-1
Baseline per Capita Water Use (gallons)

Year	(A) Annual Total Groundwater	(B) Annual Process Water Deduction	(C) = (A) – (B) Annual Gross Water	(D) Population	(E) = (C*)/(D) Gallons per Capita per Day (GPCD)
2001	1,776,477,000	277,997,000	1,498,480,000	20,021	205
2002	2,033,484,000	680,892,000	1,352,592,000	20,487	181
2003	2,411,481,000	669,975,000	1,741,506,000	20,714	230
2004	2,401,659,000	763,321,000	1,638,336,000	21,340	210
2005	2,475,101,000	911,866,000	1,563,235,000	21,893	196
2006	2,476,708,000	945,551,000	1,531,157,000	22,607	186
2007	2,602,927,000	1,024,630,000	1,584,297,000	23,331	186
2008	2,630,114,000	885,662,000	1,744,452,000	23,520	203
2009	2,524,798,000	848,356,000	1,676,442,000	23,839	192
2010	2,498,968,000	939,378,000	1,559,590,000	24,351	175

*Converting annual gross water to gallons per day

- 10 Year Average Baseline (2001 – 2010) 196 GPCD
- 5 Year Average Baseline (2006 -2010) 188 GPCD

4.1.2 WATER SERVICES CONNECTIONS

The City of Lemoore requires metering of all public, domestic, commercial and industrial water connections. Table 4.1-2 summarizes the City's water service connections as of December 2010.

Data regarding the distribution of water use among domestic, commercial and small industrial water connections has been estimated for this report by the City staff. There are only two major industrial facilities with significant water use: Leprino Foods, a year-round cheese production facility and Olam, a seasonal tomato processing facility.

Table 4.1-2
Water Service Connections

Single family	5,924
Multi-family	220
Commercial	157*
Industrial	10
Institutional/government	12
Irrigation	47
Total Active Connections	6,370

*It should be noted that 67 non-meter billed commercial services are for small downtown establishments. Their water usage is so minimal that the cost of conversion to metered services has been deemed infeasibly costly. However, the City will comply with the Urban Water Management Planning Act, Water Code Section 525, which requires water meters and billings based thereon for all service connections by 2025.

4.1.3 STATE WATER CONSERVATION PER CAPITA

LAW

10608.20 (B) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

10608.12 (b) "Base daily per capita water use" means any of the following:

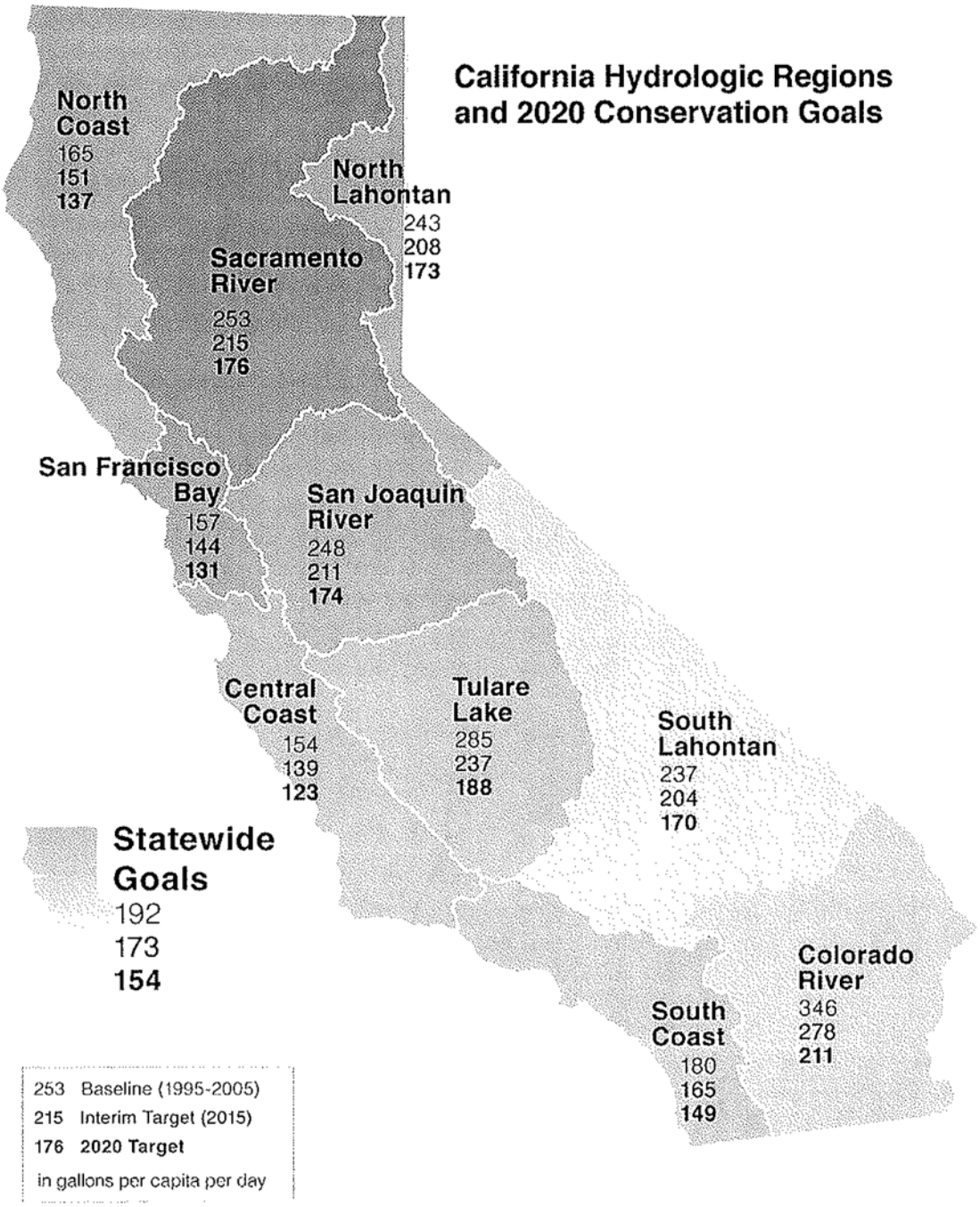
(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

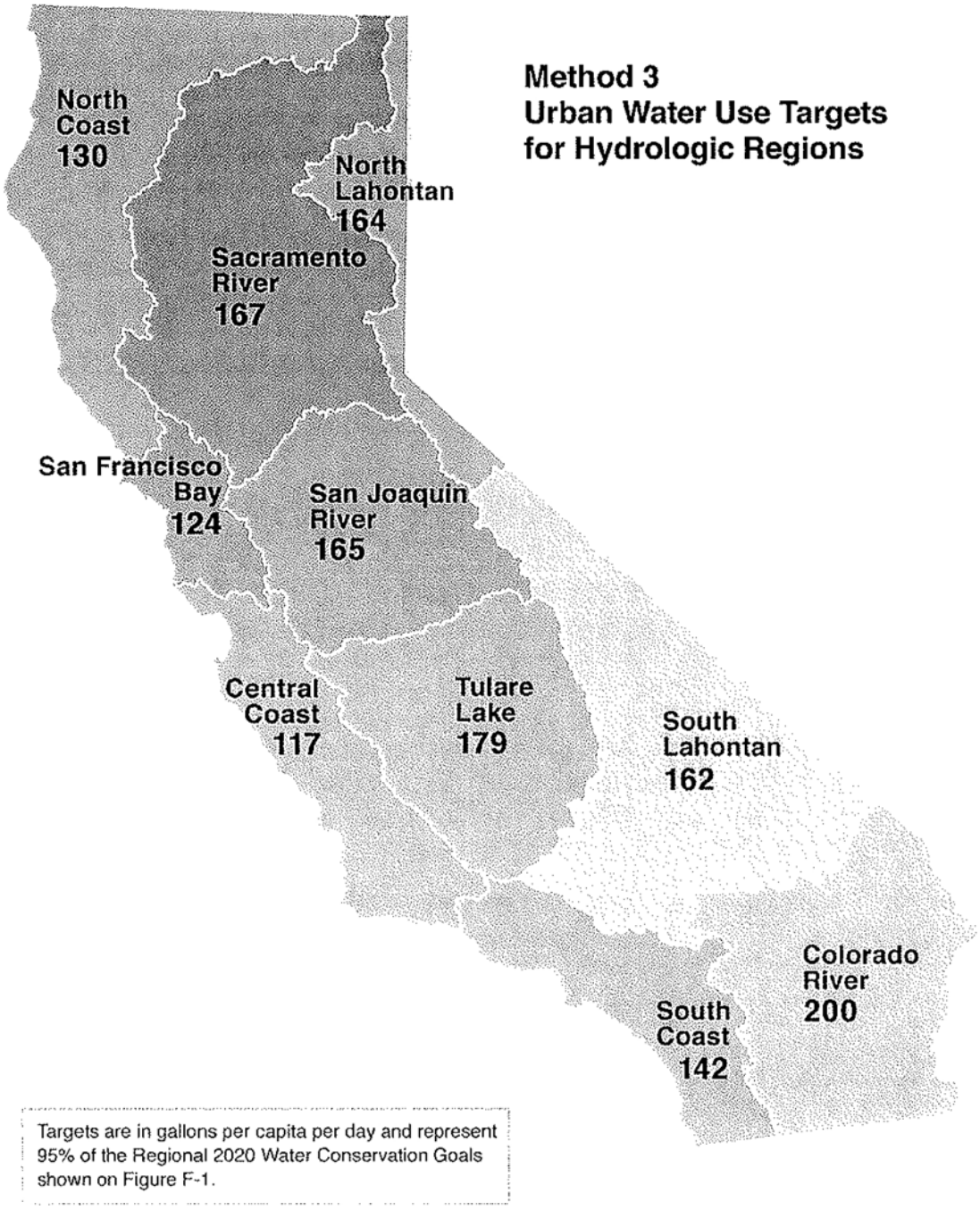
4.1.4 INTERIM URBAN WATER USE TARGET

10608.12 (j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

Figure 4-1, on the following page, shows the state's water conservation per capita water usage goals. Lemoore is located in the Tulare Lake Hydrologic Region. Figure 4-2 shows the urban water use target for 2020 (95% of the goal), 179 gallons per capita per day. The City's 2015 target, the midpoint between the City's 10 year baseline (196) and the 2020 target (179) is 185 gallons per capita per day.



Quad Knopf	CALIFORNIA HYDROLOGIC REGIONS AND 2020 WATER CONSERVATION GOALS	Figure 4 - 1



Quad Knopf	METHOD 3 URBAN WATER USE TARGETS FOR HYDROLOGIC REGIONS	Figure 4 - 2

4.1.5 PROJECTED WATER DEMAND

Lemoore's projected water demand has two components - industrial process and "domestic" (residential, commercial, institutional, and non-process industrial).

The total industrial process water demand to be supplied by the basic municipal system during the study period (2011-2030) is expected to increase to 1,600 million gallons per year by 2015 as a result of continuing expansion by Lemoore's largest industrial employer, Leprino Foods.

The calculated total "domestic" water demand from 2011 through 2030 is based on growth at 1% per year through 2012, 2% per year from 2012 to 2015, and on the City's General Plan-predicted growth of 3.1% per year after 2015; on decreases from existing per capita use to the State required target during the period from 2015 to 2020, and on state-required per capita use from 2020 through 2030, as illustrated in Table 4.1-3.

Table 4.1-3
Projected "Domestic" Water Use

Year	Population	Per Capita Usage	Usage(1)
2010	24,351	190	1,688,700,000
2015	26,353	190(2)	1,827,500,000
2020	30,701	179(3)	2,005,850,000
2025	35,767	179	2,336,837,000
2030	41,668	179	2,722,379,000

(1.) Gallons per year, actual
(2.) Five-year average (2005-2010) gallons per capita per day (gpcd), Lemoore usage
(3.) State required gpd target

The total projected water demands for the City are depicted in Table 4.1-4.

Table 4.1-4
Projected Total Water Demands(4)

Year	Annual "Domestic" Demand	Annual Industrial Process Water Demand	Total Annual Demand	Average Day Demand
2015	1,688,700,000	1,600,000,000	3,289,000,000	9,010,000
2020	1,827,500,000	1,600,000,000	3,427,000,000	9,389,000
2025	2,336,837,000	1,600,000,000	4,136,837,000	11,331,000
2030	2,722,379,000	1,600,000,000	4,522,379,000	12,390,000

(4.) Gallons per year

4.1.6 MAXIMUM DAY DEMAND

Maximum Day Demand ratios have been calculated on the basis of total flow requirements.

Table 4.1-5
Maximum Day Demand Ratios[1]

(A) Year	(B) Average Day Demand (gal.)	(C) Maximum Day Demand (gal.)[2]	(D) Increment Ratio (C/A)
2006	6,304,000	11,325,000	1.80
2007	6,606,000	11,996,000	1.82
2008	6,690,000	10,422,000	1.56
2009	6,549,000	10,548,000	1.61
2010	6,290,000	10,235,000	1.63
		Average	1.69

(1.) Not including golf course usage or Well 8 and 9 pumpage
(2.) From well meter records

Future maximum day demand ratio to average day demand will be slightly less as the industrial demand increases, slightly more as residential demand increases. A ratio of 1.8 will conservatively be used in calculating water supply (well capacity) needs because of the critical nature of, and increasing demand for, the industrial water supply.

4.2 Water Supply

4.2.1 PROJECTED WELL CAPACITY NEEDS

Table 4.2-1 shows the required Average Day water demands in years 2015, 2020, 2025 and 2030. The corresponding Maximum Day supply needs are depicted in Table 4.2-2.

Table 4.2-1
Required Maximum Day Water Supply Needed

Year	Average Day Demand (gal.)	Maximum Day Ratio	Maximum Day Demand (gal.)
2015	9,010,000	1.8	16,210,000
2020	9,389,000	1.8	16,900,000
2025	11,331,300	1.8	20,396,000
2030	12,390,000	1.8	22,302,000

4.2.2 EXISTING WELL CAPACITY

The existing (2010) City wells have a total capacity of 18,505,000 gallons per day.

Each new in-City well provides about 1,000 gallons per minute of capacity, 1,440,000 gallons per day. Required additional wells to meet Maximum Day Demands from 2015 to 2030 will thus be:

Table 4.2-2
Additional Well Needs

Year	Required Well Capacity[1] (gal/day)	Existing Well Capacity (2010)[1] (gal/day)	Number of Additional Wells[2] Needed
2015	16,210,000		1
2020	16,900,000	15,335,000	2
2025	20,396,000		3.5
2030	22,302,000		4.8

(1.) With largest existing well at 2,200 gpm (3,168,000 gpd) out of service
(2.) Wells with 1,000 gpm capacity 1,440,000 gpd

For comparison purposes, the total volumes of groundwater pumped by the City from years 2006 through 2010 were:

Table 4.2-3
Total Volume of Groundwater Pumped (gallons)

Year	Total Volume	Industrial Wells #8 and #9	Total Domestic System Volume	Metered
2006	2,476,708,000	175,690,000	2,301,018,000	Yes
2007	2,602,926,000	191,470,000	2,411,456,000	Yes
2008	2,630,114,000	187,953,000	2,442,161,000	Yes
2009	2,524,798,000	134,475,000	2,390,323,000	Yes
2010	2,438,968,000	142,931,000	2,296,031,000	Yes

4.3 Low-Income Housing Water Demand

Kings County and four cities within the County, Avenal, Corcoran, Hanford, and Lemoore, had chosen to collectively prepare a joint countywide 2007-2014 Housing Element, which was released in June 2010. This collective approach captured the regional planning aspect of SB375 and a cost savings for the participants from sharing resources. Multiple sources of information including data from the 2000 decennial Census, housing condition surveys, California DOF, and the California Employment Development Department (EDD) were used to prepare that document. A copy of the collective Housing Element is on file at the City Hall.

The State of California income thresholds identifies low-income as 51% to 80% of the area median income. According to the joint housing element, 1,232 households in Lemoore fall into the low-income category or lower. According to 2010 California Census data, the average number of people per housing unit in Lemoore is 3.14. This value of 3.14 people per household was used with the projected use targets to project the water demand for all low-income housing in the community. The results are presented in Table 4.3-1. [Checklist #34, §10631.1(a)]

Table 4.3-1
Projected Low-Income Water Demand

Year	Low-Income Population[2]	Per Capita Daily Usage (gallons)	Total Annual Usage (gallons)
2015	4,184	199	303,390,000
2020	4,875	179	318,769,000
2025	5,680	179	371,103,000
2030	6,617	179	432,322,000

4.4 Expansion Projects

LAW

10910.(a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act X …shall comply with this part.

10912. For the purpose of this part, the following terms have the following meanings:

(a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing or processing plan, or industrial park planned to house more 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The City has no knowledge regarding any proposed projects of the sizes or water demands defined in the law. It is unlikely that such projects will be proposed or built within the 2030

[2] Calculated as current (2010) percentage of total population x projected population (Table 4.1-3)
Existing (2010) total population = 1,332 x 3.14/24,351 = 15.88%

planning horizon. If so proposed, project compliance with Sections 10910 through 10914 will be required.

4.5 Water Shortage Expectations

In general, demands during droughts increase to compensate for the lack of rainfall that was benefiting landscape irrigation. The water use projections in Table 4.3-1 assume any potential increase will be offset by the increased and more stringent water conservation measures that will be activated by the City during such droughts.

4.6 Other Water Uses

The City has no, and does not anticipate having any, water uses other than those described herein (saline barriers, groundwater recharge, conjunctive use, etc.).

CHAPTER FIVE

RELIABILITY PLANNING

CHAPTER FIVE – RELIABILITY PLANNING

LAW

10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

10631 (c) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable.

10631 (c) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality or climatic factors, describe plans to replace that source with alternative sources or water demand management measures, to the extent practicable.

10631 (c) Provide data for each of the following: (1) An average water year, (2) A single dry water year, (3) Multiple dry water years.

10632 (a). The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplied:

(a)(2) 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.

(a)(3) 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.

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.

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 water 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 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.

5.1 Water Supply Reliability

Two aspects of supply reliability are considered for both near-term needs (present to 2015) and long term needs (2030). The first relates to emergency reliability needs and is primarily a

function of the availability and adequacy of supply facilities. The second aspect is climate-related, and involves the availability of water during mild or severe drought periods.

5.1.1 STANDBY PRODUCTION

As described in the previous chapter, standby production capacity is required for system reliability. Under normal operating conditions, it is possible that one of the City's wells can be out of service during maximum day demand conditions due to equipment malfunction, for servicing, or for water quality concerns.

The California Department of Health Services (DHS) criteria recommends counting the capacity of the largest well as out of service. To mitigate the potential impact of lost production capabilities, the City should thus have a well or wells with a capacity of 3.17 million gallons per day (MGD) in surplus of the maximum day demand requirements.

The City's projected MDD is approximately 10.3 mgd and City staff indicates the current, 2010, supply availability is 15.3 MGD. The City will in 2011 and 2012 add two wells and before 2015, another (see Table 4.2-2) to meet maximum day demands.

5.1.2 CLIMATE-RELATED RELIABILITY CONCERNS

Not all hydrologic dry years lead to water supply shortages and groundwater overdraft. The annual quantity of groundwater available to the City will not vary significantly in relation to wet or dry years. During extended drought periods, groundwater levels generally decline, and will require more aggressive demand management practices. The reliability of the City's water supply, however, remains constant despite seasonal or climatic changes.

In terms, therefore, of water supply reliability, the City's system reliability is such that alternative sources consideration is not necessary, and adopted water shortage contingency planning has not thus far been required to be implemented (but see Chapter Eight of this Plan). Water conservation demand regulations are, however, incorporated in a City ordinance (Appendix J) and discussed in Chapter Seven of this report.

The City of Lemoore has never suffered any shortage in groundwater production even in driest or multiple-dry years. The extent and nature of the deep aquifer groundwater supply is such that a shortage is extremely unlikely. Any shortage that might be experienced would be due to failure to plan for increased demand due to population and industrial growth, or from catastrophic well or equipment failure. Any droughts in the past have not required the City to modify well depths or designs and have not been detrimental to the City's water supply. It is emphasized here that the reliability of Lemoore's groundwater supply is not drought-dependent, thus negating the need for dry year calculations.

5.2 Groundwater Quality Reliability Concerns

LAW

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 management strategies and supply reliability.

5.2.1 LOCAL GROUNDWATER QUALITY

The United States Environmental Protection Agency (EPA) has implemented and is currently considering implementing several new or revised drinking water standards. The State Department of Health Services provides regulations to protect against bacteria and viruses in drinking water from groundwater sources. It specifies when corrective action (including disinfection) is required to further protect consumers serviced by groundwater systems from bacteria and viruses. The City currently disinfects its supply water, although its groundwater has long been considered free of sanitary contamination. Such disinfection (with hypochlorite) has the corollary effect of mitigation of sulfur-related color and odor. The City is faced with two water quality conditions that are the result of the natural deposition that formed the valley fill, arsenic and hydrogen sulfide. Each successive layer of material deposited on the valley floor carried with it a portion of the minerals that are present in the surrounding mountains and these became a part of the geology of the Valley.

Many of these minerals contribute to the quality of the soils and to the quality of the groundwater. Most of the minerals are in concentrations that do not affect the suitability of the water for domestic use. Arsenic however, is concentrated in water-bearing strata in the Lemoore area in sufficient quantity that water for domestic consumption must often be treated, blended or otherwise modified in order to meet new and more restrictive water quality standards.

Plants in deltaic and lacustrine environments in the ancient San Joaquin Valley utilized the mineral-rich water and bioaccumulated arsenic in plant tissue. Over time, the accumulation of dead vegetative material in which the arsenic had bioaccumulated formed interbedded layers within the finer grained deposits.

These fine-grained deposits (usually silts and clays) became enriched in arsenic and were eventually buried. Chemical analyses of well samples reported maximum soluble arsenic concentrations of 16 to 25 µg (in wells located in the well field north of the community) and lesser maximum amounts, 3 to 11 µg/l, in wells drilled within the community.

The majority of the City's municipal wells are completed in aquifers that have a moderately reducing chemical environment which enables the presence of arsenic, iron oxides and sulfate-reducing bacteria. The bacteria utilize subsurface organic matter, and cause the release of hydrogen sulfide gas, H_2S, creating a mild "rotten egg" odor. In addition it is possible that the mixing of H_2S and soluble iron form ferrous monosulfide, which can create a slightly "iced tea" colored water.

Water from the three active wells in the well field north of the community, although higher in arsenic, does not have color or excessive sulfide problems. Wells drilled in the community have lower arsenic levels but must be carefully developed (in terms of which aquifer levels are utilized) to avoid or minimize color and sulfide taste or odor problems.

5.2.2 ARSENIC/TRIHALOMETHANE (TTHM)

The United States Environmental Protection Agency (EPA) has established a Maximum Contaminate Level of 10 µg/L for arsenic. This MCL was effective February 22, 2002 and the State Department of Health Services (DHS) set a compliance date of January 23, 2006. To meet for the new arsenic standard, the City designed and is constructing with funding assistance from the State Department of Health Services, a pipeline interconnection system between wells and storage tanks to permit blending which provides arsenic-compliant water service to all users. The system is to be automatically controlled, on a flow/demand basis, to assure such compliance.

Although not out of compliance, "borderline" but not non-compliant TTHM results in one area of the City's distribution system have warranted consideration of seeking grant funding to analyze the potential problem and to assure continuing water quality standards compliance.

No treatment in addition to hypochlorite is anticipated at this time to be necessary to meet primary drinking water standards for existing or future in-community wells. It may, however, be necessary to modify the existing wellfield chlorination point to reduce detention of disinfected water to avoid potential trihalomethane criteria violations.

It is, again, emphasized here that the quality of Lemoore's groundwater supply is, and has been, consistent, thus negating the need for five-year period water quality assessments. Only unpredictable regulatory changes in required water quality require quality-related actions.

5.3 Catastrophic Interruption Concerns

Such concerns have been identified by the Water Code Section 1063(c) as involving regional power outages, earthquakes or other disasters.

The availability of Diesel power on one of the system's largest wells, of portable emergency generation availability for three of the in-town wells, and of backup power for 3.5 million gallons of the system's 4.4 million gallon storage capacity mitigates the potential impact of such catastrophic emergencies. The City is planning additional emergency generator hookup capabilities for additional in-town wells and storage reservoir pumps.

CHAPTER SIX

SUPPLY AND DEMAND COMPARISON

CHAPTER SIX – SUPPLY AND DEMAND COMPARISON

LAW

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 water 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 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 the state, regional, or local agency population projections within the service area of the urban water supplier.

6.1 Supply and Demand Comparison

Comparisons of projected supplies and demands are shown in Tables 4.1-2, 4.1-3, 4.1-4, and 4.2-1. The City currently has, and will with the timely addition of new wells have, the water supply capabilities to meet MDD and to provide standby production capabilities (see Table 4.2-2).

Table 4.2-2 indicates 22,300,000 million gallon maximum demand day in year 2030 compared with a required supply capability for that same year of the same amount. The projected demands for 2030, as well as the projected demands for five-year increments until 2030, are the same for normal water years, single dry water years, and multiple dry water years except that domestic use demand control measures could, although not required in dry years to protect the supply resource, reduce demand by some arbitrary amount, in addition to the State-required target per capita per day reductions which are included in this Plan's water demand calculations (see Chapters Seven and Eight).

CHAPTER SEVEN

WATER DEMAND MANAGEMENT MEASURES

CHAPTER SEVEN – WATER DEMAND MANAGEMENT MEASURES

LAW

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 rates 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 prohibitions.

(n) Residential ultra-low-flush toilet replacement programs.

In 1991, a Memorandum of Understanding (MOU) regarding Urban Water Conservation in California formed the California Urban Water Conservation Council (CUWCC). The City is not currently a signatory of the MOU and is therefore not a member of CUWCC.

However, the City realizes the importance of Best Management Practices (BMPs) to ensure a reliable future water supply. The City is committed to implementing water conservation and water recycling programs to maximize sustainability in meeting future water needs for its customers.

The California Department of Water Resources (DWR) has termed such Best Management Practices (BMPs) as Demand Management Measures (DMMs). Accordingly, this chapter will refer to them as Demand Management Measures (DMMs).

Section 4.1.2 of this Plan has referred to the State's region-pertinent water conservation goals (Figure 4-1), targets (Figure 4-2) and target compliance calculation methodologies. Methodology 3 was utilized in the selection of 2015 and 2020 targets in the Plan.

The City will undertake and implement Demand Management Measures as required to assure full compliance in 2015 and 2020 with the State-required maximum per capita usage targets.

7.1 DMM 1 - Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers

This program consists of offering water audits to residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements.

The City will, in 2015, initiate a program offering such audits. The City will target the top one percent of single-family residential users. A similar program for multi-family residential users will be developed for 2017 implementation. Water bills will be reviewed pre and post audit to evaluate program effectiveness.

7.2 DMM 2 - Residential Plumbing Retrofit

This program consists of installing physical devices to reduce the amount of water used or to limit the amount of water, which can be served to the customer. In accordance with State Law, low flow fixtures have been required on all new construction since 1978. In addition, State legislation enacted in 1990 required all new buildings after January 1, 1992 to install Ultra-Low Flush Toilets (ULFT). The City's Water Waste Ordinance (see subsection 7.13 of this Chapter) will provide that in 2013 residential remodeling must be accompanied by low-water use fixture retrofitting. State law now requires plumbing retrofit with any building permit-controlled remodeling.

Several studies suggest that savings resulting from miscellaneous interior retrofit fixtures can range between 25 and 65 gpd per housing unit. The studies also suggest that installation of retrofit fixtures in older single-family homes tends to produce more savings, while newer multi-family homes tend to produce fewer savings per housing unit.

Since 1986, the City has participated in an informal booth at the Kings District Fair. Water saver kits have been distributed that contain low-flow plumbing fixtures, toilet dam, dye tablets, and

water-saving tips. The City is a member of the Kings County Water Education Committee (KCWEC). Representatives of the KCWEC go to public schools and make presentations on water safety and water conservation. Information is published in the local newspaper reminding people to conserve water. Book covers that provide water conservation and water safety information are purchased and distributed to local schools.

7.3 DMM 3 - System Water Audits, Leak Detection and Repair

As a result of leak detection, and of engineering analyses, the City spends $50,000 per year replacing outdated, undersized, and leaking water mains in the distribution system. The City's capital improvement program provides funding for major water main replacement. (A water audit is a process of accounting for water use throughout a water system in order to quantify unaccounted-for water. Unaccounted-for water is the difference between metered production and metered usage on a system wide basis). Water losses due to pipe leakage are considered, however to be minimal; the majority of the City's water system is less than thirty-five years old. The high (4 to 6 feet) perched water table under the City permits essentially immediate cognizance of pipe leakage through surface indications; a formal leak protection program is not required.

The City will, in 2016, initiate a program for comparison of metered well production and metered usage, utilizing that program as guidance for system analysis and any needed repairs or replacement. Comparisons of succeeding-year figures will permit evaluation of program effectiveness.

7.4 DMM 4 - Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections

This DMM requires water meters for all new construction and billing by volume of use, as well as establishing a program for retrofitting any existing unmetered connections.

Ninety-nine percent of all City connections are metered, with unmetered facilities principally consisting of downtown, low-usage, commercial service connections. These connections are 67 in number. With respect to such connections, however, the City will comply with the Urban Water Management Planning Act, Water Code Section 325, which requires water meters and billings based thereon for all service connections by 2025.

There are no seasonal rates; the present rate structure is an increasing rate 0.95 structure. For single family residences, the first 700 cubic feet of water costs $13.20, the next 2,100 cubic feet is $0.90 per 100 cubic feet, the next 2,800, $0.95 per 100 cubic feet, and all usage thereafter $1.00 per 100 cubic feet. Comparable charges are made for other users (see Appendix K). Water meters are read every month, and consumers are billed monthly.

7.5 DMM 5 - Large Landscape Conservation Programs and Incentives

This DMM calls for agencies to commence assigning reference evapotranspiration-based (Eto) water budgets to accounts with dedicated irrigation meters and provide water-use audits to accounts with mixed-use meters.

The City in December 2009 adopted a Water Efficient Landscape Ordinance in accordance with Assembly Bill 325: The Water Conservation in Landscaping Act. This ordinance limits the amount of turf in landscaping, requires plant groupings according to water needs, and provides some flexibility to the landscape designer while promoting landscape efficiency. The Parks Superintendent reviews all commercial landscaping plans for compliance prior to permits being issued. The City assists with setting irrigation controller clocks for water efficiency landscape watering.

To ensure that the intent of such regulations is carried out, the applicant for a building permit is required to submit landscape plans for review to the City.

After the approved landscape is installed, it is the responsibility of the Public Works Department to inspect the project to confirm that the landscaping for the project was installed in accordance with the approved plans. The landscape designer must certify that the project is in compliance with these regulations by signing and submitting a completed certificate of compliance. The Director of Public Works, or his designated representative, can authorize the deferral of landscape completion for good and valid reasons, subject to the posting of appropriate security with the City.

The City will, prior to submittal of a 2015 Urban Water Management Plan, devise and implement a program for provision of free irrigation system inspections for large landscapes such as schools and of training for water use efficiencies for irrigation managers for such landscapes.

7.6 DMM 6 - High-Efficiency Washing Machine Rebate Program

A $35 rebate (So. California Gas) or a $50 rebate (PG&E), is available to customers who purchase a high-efficiency washing machine. An efficient washing machine can reportedly save the user up to $650 in energy and water costs over the life of the machine. To qualify, the unit must be installed with a water-heating source using natural gas distributed by Southern California Gas Company or electricity distributed by Pacific Gas and Electric Company.

7.7 DMM 7 - Public Information Programs

This program consists of distributing information to the public through a variety of methods including brochures, radio and television, school presentations and videos, and web sites.

The City participates in the KCWEC. Members of the committee make public presentations at local schools throughout the County and participate in the water awareness week campaign. Water-saving reminders are published in local newspapers.

The City also, through KCWEC, has an informational booth at the Kings District Fair. The City's relatively low per capita water use is evidence of the success of these programs coupled with the near-total metering of City water services.

7.8 DMM 8 - School Education Program

This DMM requires water suppliers to implement a school education program that includes providing educational materials and instructional assistance.

The KCWEC sponsors a poster contest for all schools in Kings County, provides book covers with water safety and conservation tips, and makes presentations pertaining to water safety and conservation, all in accord with state education framework requirements. The City will, beginning in 2008, supplement KCWEC presentations with City staff. Follow-up questionnaires to teachers will assist in evaluation of program effectiveness.

7.9 DMM 9 - Conservation Programs for Commercial, Industrial, and Institutional Accounts

Commercial, industrial and institutional accounts are currently metered and charged in accordance with the quantity of water used on an increasing rate basis for increased water usage. The City periodically undertakes usage analysis of its major industrial accounts (Leprino and Olam). Metered usage comparisons provide an evaluation of program effectiveness. An initial, trial, usage analysis of commercial and institutional accounts will be undertaken in 2015 as a basis for development of a long-range program.

7.10 DMM 8 - School Education Program

This DMM applies to wholesale agencies and defines a wholesaler's role in terms of financial, technical, and programmatic assistance to its retail agencies in implementing DMMs. The City is not a water wholesaler.

7.11 DMM 11 - Conservation Pricing

There are no seasonal rates; the present rate structure is an increasing rate structure (see DMM 4, Section 7.5). For single family residences, the first 700 cubic feet of water costs $13.20, the next 2,100 cubic feet is $0.90 per 100 cubic feet, the next 2,800 cubic feet is $0.95 per 100 cubic feet, and all usage thereafter is charged at $1.00 per 100 cubic feet.

7.12 DMM 12 - Water Conservation Coordinator

The City Manager has appointed a conservation coordinator, the Public Works Superintendent. The conservation coordinator is responsible for coordinating and expanding the City's water conservation program and providing residents with useful water conservation information.

7.13 DMM 13 - Residential Ultra-Low-Flush Toilet Replacement Programs

State legislation requires the installation of efficient plumbing in new construction, and effective in 1994 required that only ULFT be sold in California. Homes constructed since 1994 in the City have ULFT. The City's Water Conservation Ordinance (adopted in April 2003) requires that residential modeling be accompanied by retrofitting with low-flow fixtures. (Please see DMM 2 regarding new State law requirements.)

The City will, prior to submittal of a 2015 Urban Water Management Plan, aggressively seek grant funding for rebates for the replacement of high-flow fixtures with low-flow fixtures.

7.14 DMM 14 - Water Conservation Ordinance

This Ordinance (see Appendix J) provides the following requirements:

(1) "No person shall keep, maintain, operate, or use any water connection, hose, faucet, hydrant, pipe, outlet or plumbing fixture which is not tight and free from leakage, dripping or waste of water."

(2) "No person shall allow excessive water to run or waste from his property onto streets or highways."

(3) "No person shall willfully or negligently waste water in any manner."

(4) Outdoor watering for those with even numbered addresses is permitted on Tuesday, Thursday and Saturday, while odd numbered addresses may water on Wednesday, Friday and Sunday. Monday is a day on which no outdoor watering is allowed.

(5) Regulates and constrains the drainage of swimming pools.

(6) Prohibits washdown of exterior asphalt or concrete areas.

(7) Restricts water usage for washing cars, boats or other vehicles.

(8) Requires remodeling replacement of fixtures with low-flow units.

It provides for increasing fines, and ultimately for service flow restrictions, for repeated violations of the Ordinance.

The Ordinance has been, and will continue to be, effective. Its effectiveness is evaluated on a continuing basis by the Public Works Superintendent.

CHAPTER EIGHT

WATER SHORTAGE CONTINGENCY PLAN

CHAPTER EIGHT – WATER SHORTAGE CONTINGENCY PLAN

8.1 Stages of Actions

LAW

10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632. (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply and an outline of specific water supply conditions which are applicable to each stage.

(a) (4) 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.

(a) (5) 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.

(a) (6) Penalties or charges for excessive use, where applicable.

(a) (7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), 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.

(a) (8) A draft water shortage contingency resolution or ordinance.

(a) (9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

8.1.1 WATER SHORTAGE STAGES AND REDUCTION OBJECTIVES

Supply capacity must be designed to meet MDD plus standby and thus meet demands through the planning horizon of 2030. The 2030 standby capacity, reserved for emergency conditions such as equipment malfunctions, is estimated at 15 percent (3.17 mgd).

Water agencies relying solely on groundwater, such as the City, are much less likely to experience water shortages than those agencies relying primarily on surface water.

8.1.2 WATER REDUCTION STAGE TRIGGERING MECHANISMS

Emergency response actions should take effect when the City Manager declares that the City is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation and fire protection.

The declaration would be based on his/her judgment as to the degree of the immediate or future supply deficiency. Table 8.1-1 provides guidelines to assist in declaring water shortage stages.

Table 8.1-1
Guide for Declaring Water Shortage Stages

Stage	Condition
1	▪ Below average rainfall in the previous 12-24 months ▪ 10 percent or more of municipal wells out of service due to noncompliance with drinking water standards or other emergency ▪ Warm weather patterns typical of summer months
2	▪ Below average rainfall in the previous 24-36 months ▪ Prolonged periods of low water pressure ▪ 10 percent or more of municipal wells out of service due to noncompliance with drinking water standards or other emergency ▪ Warm weather typical of summer months
3	▪ Below average rainfall in the previous 36 months ▪ Prolonged periods of low water pressure ▪ 10 percent or more of municipal wells out of service due to noncompliance with drinking water standards or other emergency ▪ Warm weather patterns typical of summer months

A combination of voluntary and mandatory water conservation measures would be used to reduce water usage in the event of water shortages.

Table 8.1-2 outlines reduction objectives for each stage.

Table 8.1-2
Water Usage Reduction Objectives

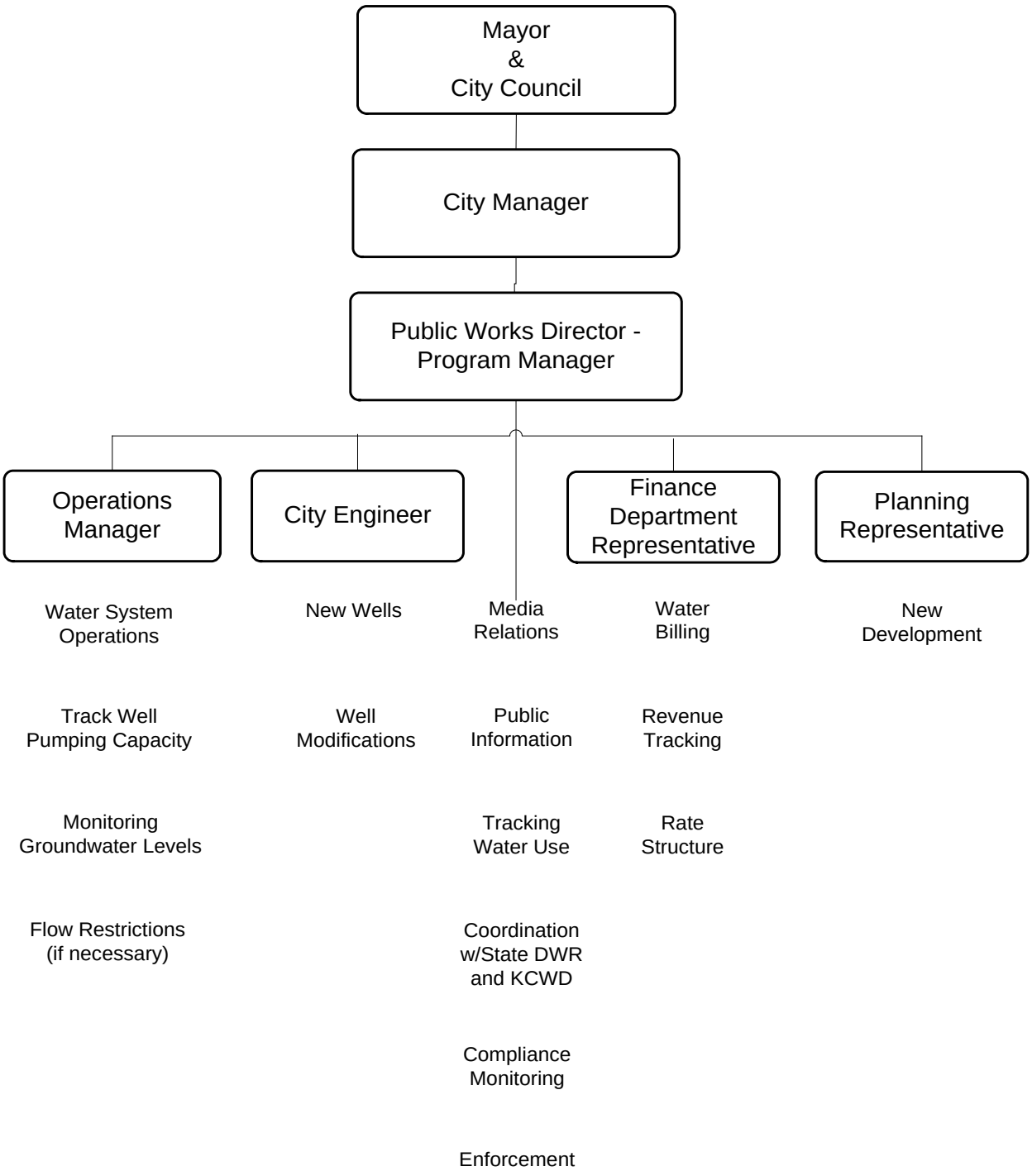
Stage	Description	Reduction Objective
1	(Minor Shortage Potential)	10-20% reduction in total water demands from baseline
2	(Moderate Shortage Potential)	20-35% reduction in total water demands from baseline
3	(Critical Shortage Potential)	35-50% reduction in total water demands from baseline

8.1.3 ADMINISTRATION OF WATER SHORTAGE PROGRAM

The administration of a water shortage program as described in this section would involve coordination among a number of City departments. It is anticipated that the Public Works Department would have primary responsibility for managing the program, since it is responsible for the City's water system. The Public Works Director would be the Program Manager and thus the primary coordinator of water shortage activities.

An appropriate organizational structure for a water shortage management team would be determined based on the actual situation. Figure 8-1 presents an example of a typical organization structure. Specific individuals would be designated to fill the identified roles. The City would not have to hire additional staff or outside contractors to implement the program.

Water Shortage Program Organizational Structure
Figure 8-1



The major elements to be considered in administering and implementing the program would include:

Identifying the City staff members to fill the key roles on the water shortage management team.

Intensifying the public information program to provide comprehensive information on necessary actions that must be undertaken by the City and by the public. The scope of the public information program can be developed by reviewing published references, especially those published by DWR, and researching successful aspects of current programs conducted by neighboring water agencies.

A public information hotline may be advisable to answer any questions regarding the program.

Monitoring program effectiveness: Ongoing monitoring will be needed to track supply availability and actual water user reductions. This procedure will allow the City to continuously re-evaluate the situation and make informal decisions as to whether another reduction level is needed.

Enforcing program requirements: For the 35 to 50 percent reduction program, enforcement of water use prohibitions and water use allocations would be important in achieving the program goals. Inspectors and enforcement personnel could be identified among City staff that are in the community on other business, such as police, park department staff, street maintenance staff, meter readers, etc.

Dealing with equity issues that might arise from the mandatory restrictions or higher water rates: Depending on the level of restriction, there may be a need to address concerns of individual customers who might have special conditions or extenuating circumstances and are unduly affected by the program. A procedure should be identified for dealing with such special requests and/or for reviewing specific accounts.

Coordinating with relevant local entities: Since the Lemoore Canal and Irrigation Company and the Lemoore Irrigation District are the principal water management agencies affecting Lemoore's water supply, it is critical to have ongoing coordination with contact persons at these entities who will be aware of the City's needs.

Adjusting water rates: Revenues from water sales should be reviewed periodically to determine whether an increase in rates might be needed to cover revenue shortfalls due to the decrease in demand.

Addressing new development proposals: During periods of severe water shortage, it may be necessary to impose additional requirements on new development to reduce new demand or to temporarily curtail new hook-ups.

It is essential that the water shortage contingency plan, as a component of the Urban Water Management Plan, undergoes a formal public review process including a public hearing. A thorough public review process will help minimize future objections when mandatory prohibitions are needed.

8.2 Water Shortage Contingency Ordinance or Resolution

The City Council will, by Resolution adopted at a regular or special, noticed, Council meeting adopt a Resolution declaring a water shortage when advised to do so by the City Manager. A draft copy of such a Resolution is included in this Plan as Appendix L.

8.3 Mandatory Prohibitions on Water Wasting

Mandatory compliance measures enacted during a water shortage are more severe than voluntary measures, produce greater savings, and are less costly to the utility. The principal drawback to these measures is customer resentment if the measures are not seen as equitable. Therefore, such measures need to be accompanied by a good public relations campaign.

Mandatory measures may include:

- Ordinances making water waste illegal (Stage 1 shortage);
- Ordinances controlling landscape irrigation (Stage 1 shortage);
- Ordinances restricting non-irrigation outdoor water uses (Stage 2 shortage);
- Prohibitions on new connections or the incorporation of new areas (Stage 2 shortage); and
- Rationing (Stage 3 shortage).

Prohibitions on new development may conflict with other policies and needs. However, if existing customers are called upon to make sacrifices during a drought period, they may feel that water agencies should concentrate on fulfilling current obligations rather than taking on new customers. Such prohibitions may need to be considered in the event of a critical shortage, such as the 50 percent reduction program. If necessary, an offset program might be considered whereby developers demonstrate that they will implement measures to conserve at least as much water in the existing community as their new project will use. In some cases, a two to one offset might be required of the new development.

The City currently enforces Municipal Code Section 7-7A-8, Title 7. The provisions of that Code section are summarized in Section 7.13 of this Plan; the full Code section is contained in Appendix J.

Customers violating the regulations and restrictions on water use set forth in the Code are penalized as follows:

1. *<u>First Violation</u>. A written notice of such violation shall be issued by the Public Works Department personnel or Police Department personnel.*

2. *<u>Second Violation</u>. A written notice of such violation shall be given of a second violation, and a charge of Fifteen and No/100 Dollars ($15.00) shall be added to the water bill of such person as a one-time penalty.*

3. *<u>Third Violation</u>. A written notice of such violation shall be given and a penalty of Twenty-five and No/100 ($25.00) shall be added to the water bill of such person as a one-time penalty.*

4. *<u>Fourth Violation</u>. A written notice of such violation shall be given and a charge of Fifty and No/100 Dollars ($50.00) shall be added to the water bill of such person as a one-time penalty.*

5. *<u>Fifth Violation</u>. A written notice shall be given of a fifth violation and the consumer shall have a flow restrictor placed in their service until such time that they can assure the Public Works Director that no more waste will occur. All costs, including overhead, for this installation shall be billed to the customer.*

8.4 Revenue and Expenditure Impacts/Measures to Overcome Impacts

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, it is frequently necessary to raise water rates because the revenue generated is based on lower total consumption while the costs, and resulting revenue required, are basically fixed. Typically water rates need to be increased when the indicated stages are implemented. However, reductions in water demands, especially peak demands, can delay the need to develop costly new water sources in growing communities.

The City does not currently have an emergency fund but will consider establishing such a fund to mitigate the impacts of a water shortage. The fund would then be used to stabilize water rates during periods of water shortage or disasters affecting the water supplies. Excess water revenues collected as a result of shortage rate adjustments would be used to enhance the emergency fund.

Table 8.4-1
Guide for Rate Adjustment

Stage	Rate Adjustment
1	25 percent increase over pre-shortage rates
2	50 percent increase over pre-shortage rates
3	100 percent increase over pre-shortage rates
End of Water Shortage Emergency	15 percent increase over pre-shortage rates. (This rate increase is implemented based on historical information from communities that experienced water shortage and found that consumption rate (gpcd) does not return to pre-shortage levels. In anticipation of reduced sales, the City rates would be set for one year at 115 percent of the pre-shortage rates. This rate increase should be re-evaluated every two years.)

8.5 Actions during a Catastrophic Interruption

During declared shortages, or when a shortage declaration appears imminent, the City Manager will activate a water shortage response team. The team includes: public utilities, water, fire, planning, health and emergency services. Other actions and procedures to be followed during catastrophic events will be developed.

8.6 Reduction Measuring Mechanism

The City's water system is supplied by groundwater wells. Each well includes a flow-monitoring device that records the amount of water entering the City's distribution system. The City would use these devices to monitor actual citywide reductions in water use.

CHAPTER NINE

WATER RECYCLING

CHAPTER NINE – WATER RECYCLING

LAW

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 supplied. To the extent practicable, the preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies and shall include all of the following:

10633 (a). A description of the wastewater collection and treatment systems in the supplier's service area, including quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

10633 (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.

10633 (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 determination with regard to the technical and economic feasibility of serving those uses, groundwater recharge, and other appropriate use…

10633 (d). The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years.

10633 (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.

10633 (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 and to promote recirculating uses.

9.1 Recycling Programs

The City of Lemoore, and the industries supplied by the City's water system, employ recycling procedures to minimize City water supply impacts on the groundwater basin. This Plan section describes the existing, and planned, recycling programs.

9.2 Olam

This industry, a tomato products processing facility, discharges approximately 90 percent of its total annual water usage directly to agricultural land previously supplied by groundwater, and surface water entitlements, for crop irrigation. The balance of the industry's effluent is discharged to the City's wastewater treatment and recycling facility. Thus essentially 100% of the industry's water usage is recycled.

9.3 Existing City Wastewater Treatment and Recycling Facilities

The City of Lemoore provides wastewater services to its residential, commercial, and industrial water users. The Waste Water Treatment Facility operates under Waste Discharge Order No. 96-050, issued by the RWQCB.

The WWTF was completed in 1974 and consisted of four aerated lagoons with diffused air systems, and a fifth pond for emergency storage of effluent. In 1987, the diffused air system was removed and replaced with floating surface aerators. The project site includes a holding/treatment pond used solely by Leprino Food Inc.

The existing facility has a permitted domestic waste/industrial waste design capacity of 4.5 mgd. The existing 30-inch diameter outfall line limits the ability of the WWTF to discharge water to a maximum of 5.7 mgd. The treatment facility includes: a pumping station and three treatment ponds, followed by gas chlorination prior to discharge to receiving waters.

A new headworks facility was constructed in 2004. The new headworks facility has an initial design capacity of 3.9 mgd and can be expanded to a design flow of 9.6 mgd. (Treated industrial wastes from the Leprino Foods facilities do not enter the treatment plant through the headworks but are discharged to the outfall downstream from the plant. Domestic flows average only 1.8 mgd.)

Effluent from the combined domestic and Leprino Foods waste discharges is conveyed via a 6-mile pipeline to the Westlake Canal. The recycled water is then used to supplement irrigation of about 50,000 acres of animal feed grains and cotton on Westlake Farms. Discharge to Westlake Canal was approximately 25 percent of the water utilized by domestic consumers and Leprino.

9.4 Leprino Foods

This industry pre-treats its process wastes before discharge to the downstream end of the City's wastewater treatment facilities. These wastes, approximately 2.8 million gallons per day, are transported through the City's 30-inch outfall line to Westlake Farms' irrigated agriculture acreage. In excess of 50% of the industry's water usage is recycled, the balance being evaporated in the cheese production process.

9.5 Projected Direct Recycling

It is anticipated that the effluent recycled by Olam will remain constant during the planning horizon and that Leprino's effluent will increase by 25%. The City's recycled domestic effluent will increase proportionate to anticipated population growth, essentially doubling during the planning period (through 2030).

The effectiveness of the existing and projected agricultural irrigation recycling program precludes the necessity of evaluating other recycling programs such as dual distribution systems. The two major industries, as cost-saving measures, fully recycle and multi-use water within their plants prior to discharge.

APPENDICES

Appendix A

State Code - Urban Water Management Planning Act

CALIFORNIA WATER CODE DIVISION 6
PART 2.6. URBAN WATER MANAGEMENT PLANNING

All California Codes have been updated to include the 2010 Statutes.

CHAPTER 1.	GENERAL DECLARATION AND POLICY	10610-10610.4
CHAPTER 2.	DEFINITIONS	10611-10617
CHAPTER 3.	URBAN WATER MANAGEMENT PLANS	
Article 1.	General Provisions	10620-10621
Article 2.	Contents of Plans	10630-10634
Article 2.5.	Water Service Reliability	10635
Article 3.	Adoption and Implementation of Plans	10640-10645
CHAPTER 4.	MISCELLANEOUS PROVISIONS	10650-10656

WATER CODE
SECTION 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact

on water management strategies and supply reliability.
(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:
(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

WATER CODE
SECTION 10611-10617

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city

and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

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.

WATER CODE
SECTION 10620-10621

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 areawide, regional, watershed, or basinwide 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.

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, at least 60 days prior to the public hearing on the plan required by Section 10642, 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).

WATER CODE
SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter that shall do all of 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.

(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 or 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 overdrafted or has projected that the basin will become overdrafted 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) (1) 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:

(A) An average water year.

(B) A single dry water year.

(C) Multiple dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(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).

(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 multifamily residential customers.

(B) Residential plumbing retrofit.

(C) System water audits, leak detection, and repair.

(D) Metering with commodity rates 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 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 noneconomic 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.
(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 use 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 the 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.
(j) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivisions (f) and (g) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California,"

dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(k) Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall

determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of

the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) 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:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) Penalties or charges for excessive use, where applicable.

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), 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.

(8) A draft water shortage contingency resolution or ordinance.

(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

(b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

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 quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) 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.

(d) 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, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) 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.

(f) 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.

(g) 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.

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.

WATER CODE SECTION 10635

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 water 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 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.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

WATER CODE
SECTION 10640-10645

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630).

The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(b) The department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report those water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section

10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

WATER CODE
SECTION 10650-10656

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the

"Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

Appendix B

UWMP Checklist

Table I-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
PLAN PREPARATION				
4	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.	10620(d)(2)		Section 3.11, 3.12; pages 3-1 to 3-3; Appendix G; see attached correspondence Section 1.6, page 1-5
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Appendix G; see attached correspondence
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 1.3, pages 1-1 to 1-3; Section 1.5, page 1-5
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water, no later than 60 days after the submission of this urban water management plan.	10635(b)		Appendix G; see attached correspondence
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Appendix G and Appendix D; Section 1.4, page 1-4
56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies, the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Appendix G; Appendix D and attached correspondence; Section 1.4, pages 1-4 and 1-5
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Appendix F
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Chapters 4 to 9

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State Library and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. This also includes amendments or changes.	10644(a)		Appendix G
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 1.4, page 1-5
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 2.6, page 2-6
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 2.2, page 2-1
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible. Use the method described in "Baseline Daily Per Capita Water Use." See Section M.	Section 2.4, pages 2-3 to 2-5
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)	2035 and 2040 can also be provided to support consistency with Water Supply Assessments and Written Verification of Water Supply documents.	Section 2.4, pages 2-3 to 2-6
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Section 2.5, page 2-6
SYSTEM DEMANDS				
1	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	10608.20(e)		Section 4, pages 4-2 to 4-8
2	*Wholesalers:* Include an assessment of present and proposed future measures, programs, and policies to help achieve the water use reductions. *Retailers:* Conduct at least one public hearing that includes general discussion of the urban retail water supplier's implementation plan for complying with the Water Conservation Bill of 2009.	10608.36 10608.26(a)	Retailers and wholesalers have slightly different requirements	N/A

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
3	Report progress in meeting urban water use targets using the standardized form.	10608.40		Sections 4.1.4 and 4.1.5, pages 4-1 to 4-6
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for the following: (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, conjunctive use, and (I) agriculture.	10631(e)(1)	Consider 'past' to be 2005, present to be 2010, and projected to be 2015, 2020, 2025, and 2030. Provide numbers for each category for each of these years.	Section 4.1.5, page 4-6
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)	Average year, single dry year, multiple dry years for 2015, 2020, 2025, and 2030.	N/A
34	Include projected water use for single-family and multifamily residential housing needed for lower income households, as identified in the housing element of any city, county, or city and county in the service area of the supplier.	10631.1(a)		Section 4.3, page 4-8
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)	The 'existing' water sources should be for the same year as the "current population" in line 10. 2035 and 2040 can also be provided.	Section 4.2.2, pages 4-7 and 4-8
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)	Source classifications are: surface water, groundwater, recycled water, storm water, desalinated sea water, desalinated brackish groundwater, and other.	Section 3, pages 3-1 to 3-13
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		Sections 3.1, 3.1.1, 3.1.2, pages 3-1 to 3-3
16	Describe the groundwater basin.	10631(b)(2)		Section 3.2, pages 3-3 to 3-8
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Not adjudicated

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		N/A
19	For groundwater basins that are not adjudicated, provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted 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. If the basin is adjudicated, indicate "not applicable" in the UWMP location column.	10631(b)(2)		Section 3.2, pages 3-3 to 3-8
20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		Section 4.1.1, pages 4-1, 4-2
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)	Provide projections for 2015, 2020, 2025, and 2030.	Sections 4.1.5 and 4.1.6, page 4-6
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Section 4.6, page 4-10
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demand management programs addressed in (f)(1). Include specific projects, describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 8
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		N/A
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 9, pages 9-1 and 9-2
45	Describe 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.	10633(a)		Section 9, page 9-2

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
46	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	10633(b)		Section 9, page 9-2
47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	10633(c)		Section 9, page 9-2
48	Describe and quantify the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.	10633(d)		Section 9, pages 9-1 and 9-2
49	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.	10633(e)		N/A
50	Describe the 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.	10633(f)		N/A
51	Provide 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.	10633(g)		Section 9, pages 9-1 and 9-2
WATER SHORTAGE RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING [b]				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 7, pages 7-1 to 7-6
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year, and (C) multiple dry water years.	10631(c)(1)		Section 5, pages 5-1 to 5-4
23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		N/A
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 8, pages 8-1 to 8-7

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
36	Provide 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.	10632(b)		N/A
37	Identify 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.	10632(c)		Section 5.3, page 5-4
38	Identify 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.	10632(d)		Section 8, pages 8-1 to 8-7
39	Specify 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.	10632(e)		
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 8.3, pages 8-5 and 8-6
41	Provide 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.	10632(g)		Section 8.4, page 8-6
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Appendix E
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 8.1.2, pages 8-1 and 8-2
52	Provide information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025, and 2030	Section 5.2, pages 5-3 and 5-4

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing 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 water year, and multiple dry water years. Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.	10635(a)		Sections 4.15 and 5.1.1, pages 4-6 to 4-8 and 5-2
DEMAND MANAGEMENT MEASURES				
26	Describe how each water demand management measures is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)	Discuss each DMM, even if it is not currently or planned for implementation. Provide any appropriate schedules.	Section 7, pages 7-1 to 7-6
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Section 7, pages 7-1 to 7-6
28	Provide 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 ability to further reduce demand.	10631(f)(4)		Section 4.1.1, Table 4.1-1, pages 4-1 and 4-2
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)	See 10631(g) for additional wording.	Section 7, pages 7-1 to 7-6
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	N/A

a The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.

b The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.

Appendix C

Abbreviations

AAWF	average annual water flow
AF	acre feet
AFY	acre-feet per year
Act	Urban Water Management Planning Act
BMPs	Best Management Practices
City	City of Lemoore
Contingency Plan	Urban Water Shortage Contingency Plan
County	Kings County
CUWCC	California Urban Water Conservation Council
DHS	California Department of Health Services
DMMs	Demand Management Measures
DWR	California Department of Water Resources
EDU	Equivalent Dwelling Unit
EPA	U.S. Environmental Protection Agency
ETo	Evapotranspiration-based
°F	Degrees Fahrenheit
GMP	Groundwater Management Program
gpcd	gallons per capita per day
gpd	gallons per day
gpm	gallons per minute
GWR	Groundwater Rule
KCWEC	Kings County Water Education Committee
KCWD	Kings County Water District
KRCD	Kings River Conservation District
LID	Laguna Irrigation District
MCL	Maximum Contaminant Limit
MDD	Maximum Day Demand
MG	million gallons
MGD	million gallons per day
MOU	Memorandum of Understanding
Plan	Urban Water Management Plan
RCP	reinforced concrete pipe
RWQCB	Regional Water Quality Control Board
taf	thousand acre-feet
UGB	Urban Growth Boundary
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Plan Act
ULFT	Ultra Low Flush Toilet
WWTF	Waste Water Treatment Facility

Appendix D

Public Notice

NOTICE OF PUBLIC HEARING

The City of Lemoore will conduct on _____ at 7:30 p.m. at the Council Chambers, 429 "C" Street, Lemoore a public hearing on the adoption of an updated Urban Water Management Plan.

This Plan, required by the State of California Water Code to be periodically updated, projects City water system supply and demand and includes plans to be adopted for water conservation and for water supply emergencies.

Copies of the draft updated Plan are available for inspection at the City Hall at 119 Fox Street, the office of the City Clerk and at the Lemoore Public Library at 457 "C" Street.

_____
City Clerk

_____
Date

Appendix E

Adoption Resolution

Resolution No. _____

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LEMOORE, ADOPTING AN URBAN WATER MANAGEMENT PLAN

At a regular meeting of the City Council of the City of Lemoore, duly called and held on _____ _____, at _____ P.M., it was moved by Council Member _____, and seconded by Council Member _____, and duly carried that the following resolution be adopted:

WHEREAS, pursuant to Assembly Bill 797, Water Code Section 10610, et. seq., the City of Lemoore has prepared an Urban Water Management Plan; and

WHEREAS, the City Council scheduled a public hearing for _____ to accept testimony regarding the Urban Water Management Plan; and

WHEREAS, the public hearing has been held as scheduled and any and all testimony has been received and considered regarding the Plan, and said Plan has been submitted in draft format to the Department of Water Resources, and minimally modified in accord with comments therefrom.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Lemoore approves and adopts the Urban Water Management Plan, incorporating therein the appointment of the Public Works Director as the City's Program Manager for water shortage activities and authorizing the City Manager to declare a water shortage should one occur and to implement or recommend thereafter, if necessary, the water shortage measures described in Chapter Eight of said Plan.

Passed and adopted at a regular meeting of the City Council of the City of Lemoore duly called and held on ____ day of _____, _____, by the following vote:

AYES: Council Member _____

_____

_____

_____

_____

NOES Council Member _____

_____

_____

_____

_____

Appendix F

Adopted Resolution

Appendix G

UWMP Distribution Plan

UWMP Distribution Plan

Important Dates for Water Suppliers

The 2010 UWMPs are to be approved by the water supplier's governing entity and submitted to DWR (California Water Code §10608.20). In addition to this, there are several important requirements for Urban Water Suppliers to consider regarding preparation, coordination, adoption, and submittal of UWMPs. The specific dates of these deadlines depend on when the UWMP is submitted to DWR. Important deadlines to consider are:

- 60-days prior to the Review/Adoption Hearing: The UWMP regulations requires that a hearing be held prior to adoption of an UWMP (CWC §10642). Any city or county within which a water supplier delivers water is to be notified at least 60 days prior to the hearing that the UWMP is being reviewed (CWC §10621);

- 30-days after Adoption: Submit the UWMP to DWR, the California State Library, and any city or county within which it supplies water. Copies of any changes or amendments also have to be submitted within 30 days (CWC §10644(a));

    - DWR requires both a hardcopy and an electronic copy of their UWMP. Mail the hardcopy to DWR, but the electronic copy can be uploaded through DOST or provided in a CD with the hardcopy. https://www.uw.water.ca.gov/dost

    - California Department of Water Resources
      P.O. Box 942836
      Sacramento, CA 94236

    - California State Library
      Government Publications Section
      PO Box 942837
      Sacramento, CA 94237-0001

- 30-days after Submission to DWR: Provide a copy of the UWMP for public review during normal business hours (CWC §10645); and

    - Made available at City Front Desk

- 60-days after Submission to DWR: Provide the applicable portions of the UWMP to any city or county within which the supplier provides water (CWC §10635(b)).

Appendix H

Agreement, City of Lemoore and Laguna Irrigation District

Bacigalupi, Neufeld & Rowley
Dale E. Bacigalupi (97197)
7112 N. Fresno Street, Suite 140
Fresno, California 93720
Tel 559.431.6800
Fax 559.431.4216

Attorneys for Petitioner CITY OF LEMOORE

Law Offices of Young Wooldridge, LLP.
Ernest Conant (89111)
1800 30th Street, 4th Floor
Bakersfield, CA 93031

Attorneys for Respondents LAGUNA IRRIGATION DISTRICT AND THE BOARD OF DIRECTORS OF THE LAGUNA IRRIGTION DISTRICT and Cross-Complaint LAGUNA IRRIGATION DISTRICT

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF KINGS

* * * * * * * * *

CITY OF LEMOORE Petitioner, v. LAGUNA IRRIGATION DISTRICT, THE BOARD OF DIRECTORS OF LAGUNA IRRIGATION DISTRICT, Respondents.	Case No.: 60415 AMENDED STIPULATION AND JUDGMENT
LAGUNA IRRIGATION DISTRICT, Cross-complainant, v. CITY OF LEMOORE, and ROES 1-100, inclusive, Cross-defendants.	

The parties, their heirs, successors, agents and assigns, hereby stipulate as follows:

1. (a) As of the date of this Amended Stipulation and Judgment, the City operates a well field equipped with four wells located outside of the City. The location and wells presently in operation at the City limits used for the sole purpose of pumping and delivering groundwater from the well field for municipal uses in the City. The location and wells presently in operation at the City well field are shown on Exhibit "A" attached hereto.

(b) The City shall limit its total pumping from all wells at its well field location to 3380 acre/ft per calendar year; provided, however, the City's may pump in excess of 3380 acre/ft per calendar year if either of the following two circumstances exist: (i) if an emergency is determined to exist by the City or otherwise pursuant to the provisions of Government Code §8558 or §8630, or (ii) the City may pump up to 3700 acre/ft per calendar year so long as the City has accumulated "Carryover". For purposes of this paragraph, the City may accumulate "Carryover" in any calendar year to the extent that City pumping from the well field has measured less than 3380 acre/ft; the annual "Carryover" shall be the difference if any, between the City's actual pumping from the well field and 3380 acre/ft. "Carryover" may be accumulated for the benefit of the City from year to year for a period of up to three consecutive years. For illustrative purposes only, the following examples illustrate the City's ability and opportunity to accumulate and use "Carryover" to enable the extraction of water from the well field in addition to 3380 acre/ft annually.

Example A:

Year	City Production
2004	3380 AF
2005	3180 AF
2006	3380 AF

The aggregate three-year "Carryover" equals 200-acre feet, therefore City would be allowed to pump up to 3580-acre feet in calendar year 2007.

In Example A, if the City used the entire "Carryover" in the year 2007, there would be no "Carryover" available in 2008 and would only be available in 2009 if, in 2008, "Carryover" were created by under pumping.

Example B:

Year	City Production
2004	3180
2005	3180
2006	3380

The aggregate three-year "Carryover" equals 400-acre feet; therefore City would be allowed to pump up to 3700-acre feet in 2007. In Example B, the City could not use the entire 400 acre feet in 2007 but would have available for use in 2008 80 acre-feet of Carryover if it pumped 3700 acre-feet in 2007 (3380 + 320 = 3700).

(c) The City shall annually report to District the amount of ground water produced from the well field for the preceding calendar year, and shall also report the amount of any "Carryover" created (by under pumping) or used (by over pumping). Following receipt of any annual report, the District may inspect meters on the City wells in the well field upon reasonable notice to verify water production data contained therein.

2. The City shall not build its proposed parallel transmission line and drill no additional wells at the well field. However, the City shall retain the right to repair, refurbish or replace existing wells at the well field. Replacement wells shall have similar capabilities to those replaced. The City shall not drill any new well within a 1 ½ mile radius of the outer perimeter of the existing well field.

3. (a) The City and the District have pursuant to the prior Stipulation and Judgment established a jointly held interest bearing escrow or bank account called The Joint Recharge Account. Disbursements shall be made for the purposes set forth herein. All interest accumulations shall remain on deposit in the Account and be used only for the purposes set forth herein. The parties shall have the obligation on behalf of both parties

hereto to locate surface water, from sources they determine to be reasonably available, to be purchased by the parties for the purposes of groundwater recharge in and under the District and the well field, with the funds in the Joint Recharge Account, all as more particularly described in Paragraph 4 hereof. Whether or not the water is purchased in the name of either or both parties, each party shall be entitled to claim recharge credit for one-half of all water purchased with the annual recharge payments in connection with any study, accounting, report or survey undertaken by either of the parties hereto or in connection with any report delivered to or required by any public agency. The City shall be entitled annually to use up to 250 acre feet of its share of the purchased recharge water for recharge/irrigation of its municipal golf course, so long as the said volume of recharge water is legally useable on the golf course property. The District is under no obligation to arrange or make any special delivery of water to the City for golf course irrigation purposes.

(b) On the basis of payments and accumulations made prior to the date hereof pursuant to paragraph 3 of the Stipulation and Judgment filed with this Court on June 15, 1995, the balance in the Joint Recharge Account is approximately $618,957.00. Within 30 days of the entry and filing with the Court of this Amended Stipulation and Judgment, the parties hereto shall cause the balance in the Joint Recharge Account to be reduced to $500,000 by disbursing and refunding to the City all funds in the account representing contributions of the City in excess of $250,000. To the extent that Laguna Irrigation District has contributed funds in excess of $250,000, said funds shall remain in the Joint Recharge Account and shall be counted as an offset to any future contributions of the District required by this Amended Stipulation and Judgment.

(c) To the extent that available funds in the Joint Recharge Account on April 1 of each year are less than $500,000 (not including any excess contributions by the District under subparagraph (b) above), each party will contribute one-half of the difference between the actual balance in the account and $500,000, provided, however, neither party shall be

required to contribute an amount greater that which would otherwise have been due in that year following the following formula: $62,500 increased annually by the annual changes published for December in the All Urban Consumer's (All West) Index. The base index is 151.2 published for December 1994. (For 2003, the adjusted amount equals $ 80,848.00).

By way of example and to illustrate the parties' intent with regard to the foregoing paragraph (c), the following hypothetical examples are illustrative: If on April 1 of any given year, the balance in the Joint Recharge Account were $400,000 each party would contribute $50,000 in that year. If on April 1 the balance in the Joint Recharge Account were $300,000, and under the formula referenced above, the maximum amount each party contributes is $90,000 in that year, each party will contribute $90,000 and the balance in the Joint Recharge Account after the contributions would be $480,000 ($300,000 plus $90,000 plus $90,000). If, on the other hand, the balance in the Joint Recharge Account were $500,000 on April 1, no contributions would be made by either party in that year.

(d) On or before April 1st of each year, a designee of the District and a designee of the City will together review rainfall and other factors, potential water purchases, potential capital costs and other potential projects which are consistent with the provisions of paragraph 4 hereof, and will further review the projected balance of the Joint Recharge Account in order to project expenditures and purchases out of the Joint Recharge Account for the fiscal year commencing on July 1 of that year. Said review and consultations will assist the parties in making decisions for expenditure of funds in the Joint Recharge Account as described in paragraph 4.

4. (a) The parties hereto shall expend all recharge payments made by both parties hereto and interest thereon and deposited in the Joint Recharge Account for the recharge of the aquifers underlying the well field and the District. All expenditures shall require the approval of both parties as hereinafter provided. Each party shall undertake every needful

activity, including but not limited to holding special or emergency meetings, if necessary, to timely consider and act upon proposed expenditures from the Joint Recharge Account.

(b) Permitted expenditures include purchasing recharge water and acquiring, constructing and maintaining recharge basins and related and necessary appurtenant pipelines, ditches and control mechanisms in locations, approved by the parties, which will recharge the aquifers which underlie the District and the well field. Recharge shall occur in a recharge basin (or basins) purchased hereunder (located within the boundaries of the district, near a District canal and in the forebay area east of the "A" Clay and Corcoran or "E" Clay), or by delivery of the water into the District canal system for irrigation use by the District, in the Kings River channel or at other locations or via other methods which the parties jointly approve.

(c) Expenditure approval shall not be withheld unreasonably. In this regard, both parties shall approve a proposed expenditure if a proposed expenditure will meet the objectives prescribed in Paragraph 4(b) hereof and the cost of the asset (water or facilities) does not exceed the market value of the asset.

(d) Within 90 days after the end of each calendar year, the District shall prepare a written report which accounts for the use and expenditure of the parties' recharge payments in the manner require by this Amended Stipulation and Judgment, and transmit a copy of the report to the City.

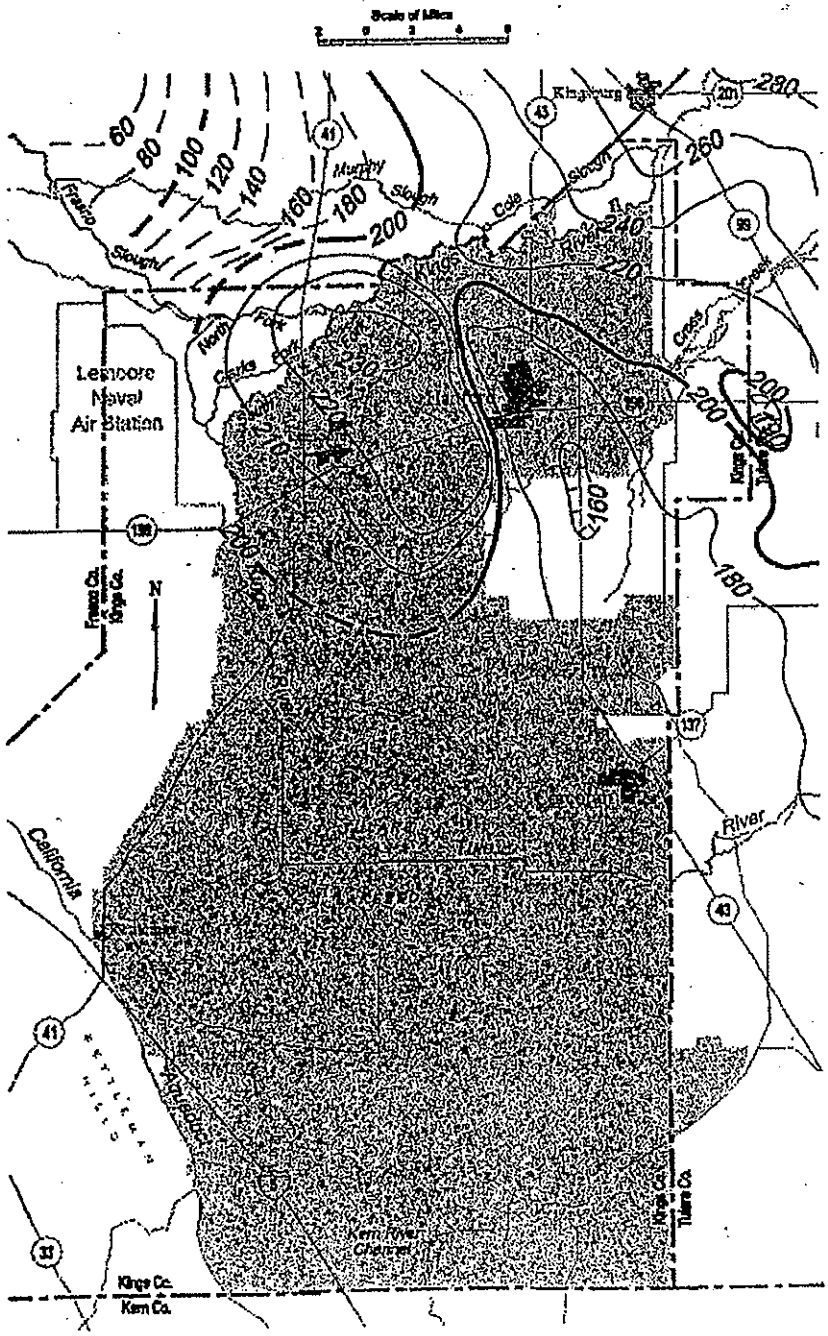
5. The District recognizes City's prescriptive right as against others to pump 3380 acre/ft of groundwater per calendar year for export from the City well field and use within the City limits. The District shall take no action to interfere with, disrupt or challenge the City's continued groundwater extraction and uses of the well field in the manner herein described. District is not required to assist City in any manner in any subsequent dispute concerning City's groundwater rights with any other parties.

Appendix I

Historical Groundwater Elevation Maps, Tulare Lake Subbasin

Tulare Lake Groundwater Basin

Spring 1989, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer

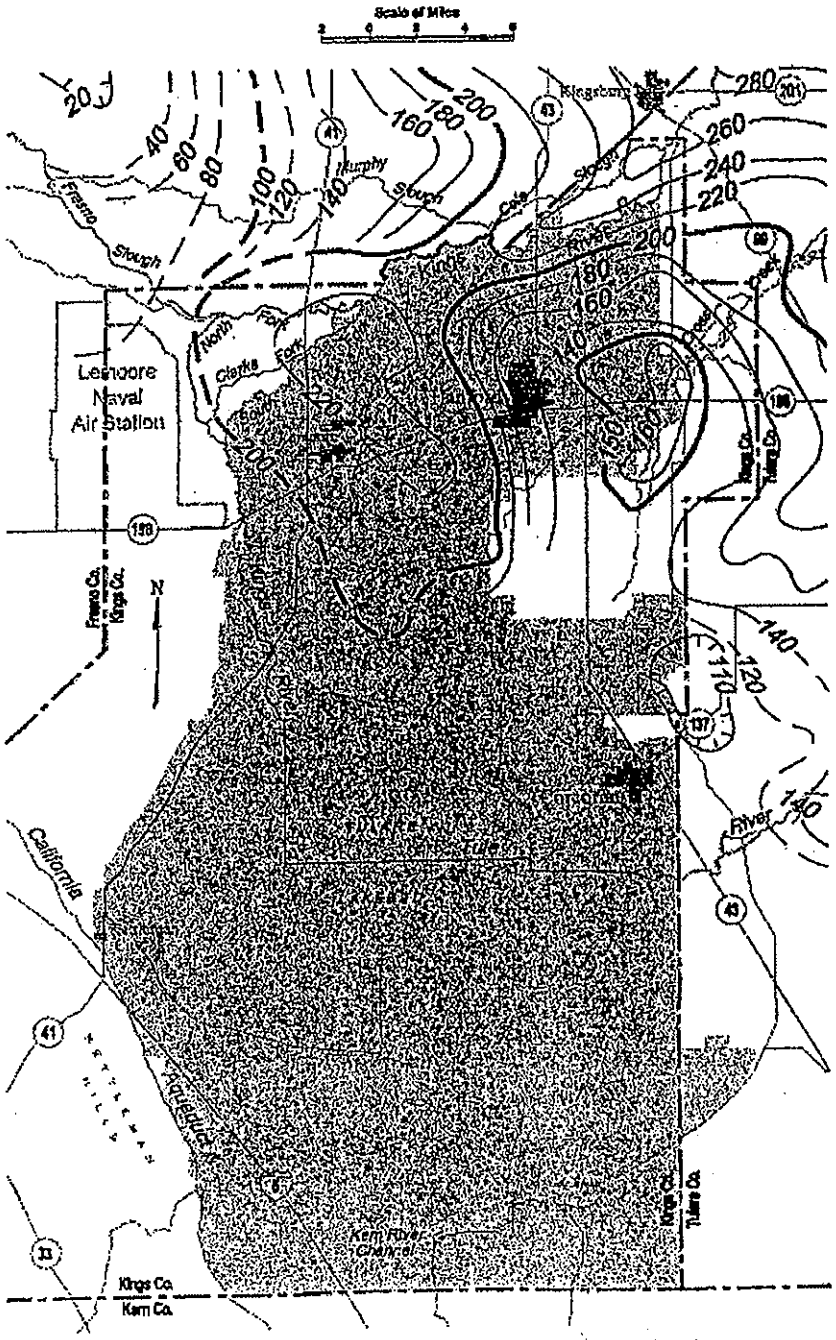


Contours are dashed where inferred. Contour interval is 10 and 20 feet.

Appendix
Groundwater Elevations Contours in 1989

Tulare Lake Groundwater Basin

Spring 1996, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer

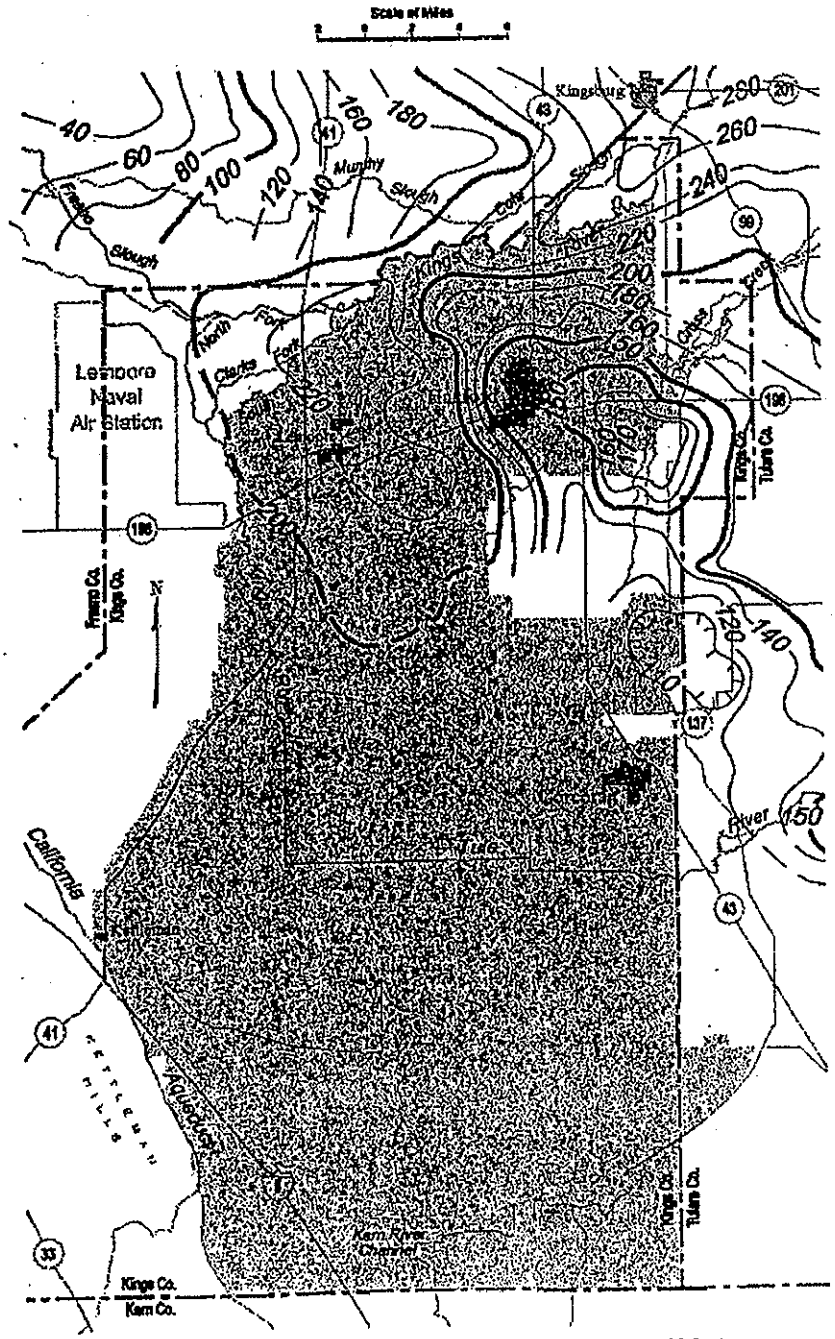


Contours are dashed where inferred. Contour interval is 10 and 20 feet.

Appendix
Groundwater Elevations Contours in 1996

Tulare Lake Groundwater Basin

Spring 1997, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer

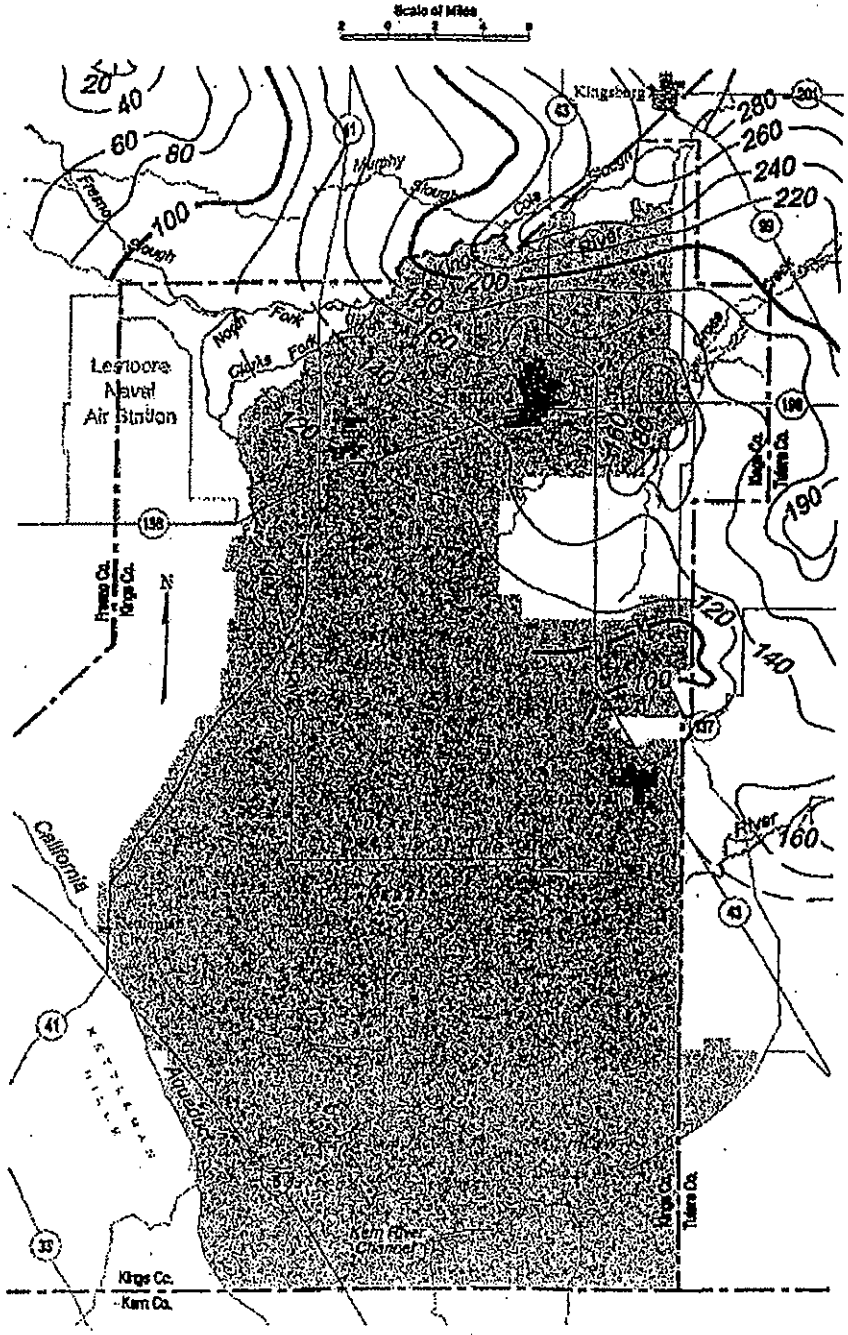


Contours are dashed where inferred. Contour interval is 10 and 20 feet.

Appendix
Groundwater Elevations Contours in 1997

Tulare Lake Groundwater Basin

Spring 1998, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer

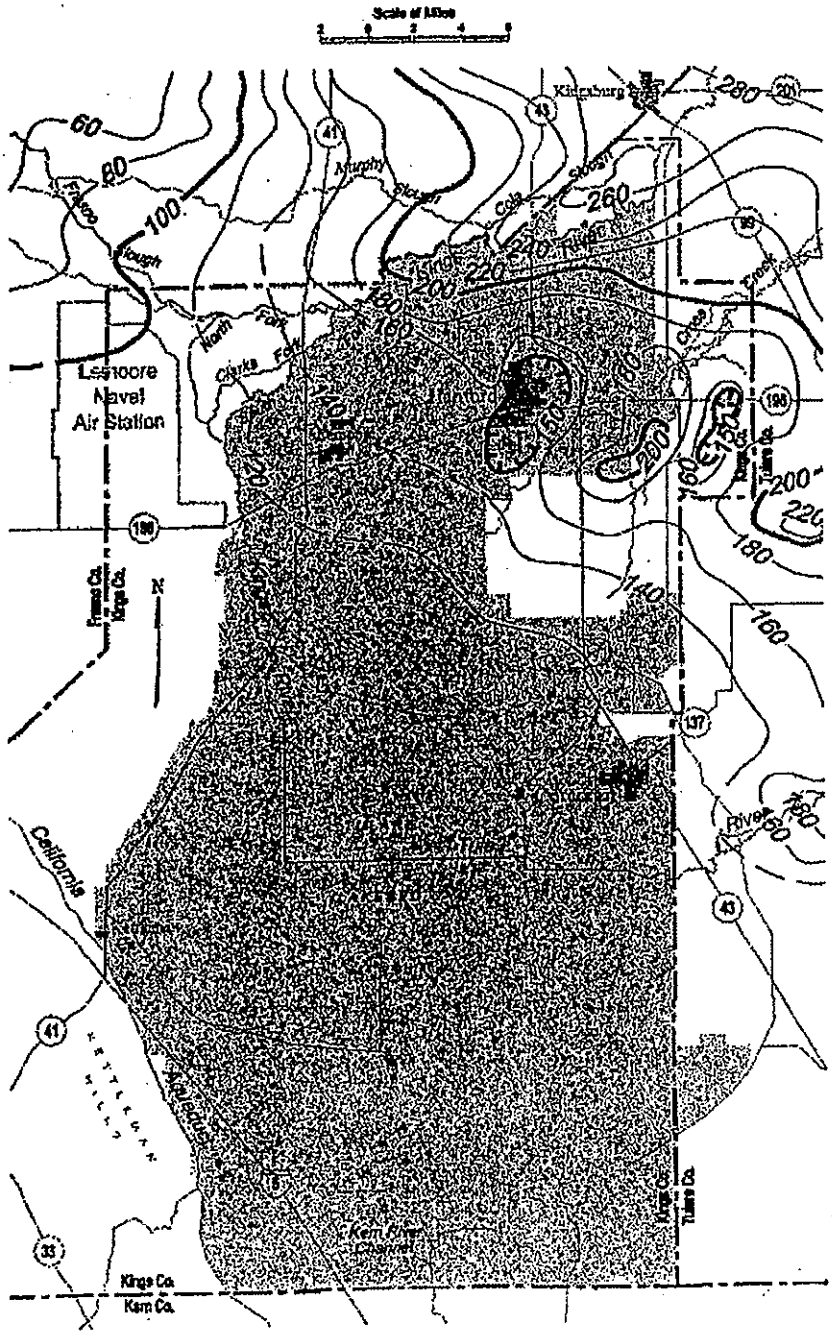


Contours are dashed where inferred. Contour interval is 10 and 20 feet.

Appendix
Groundwater Elevations Contours in 1998

Tulare Lake Groundwater Basin

Spring 1999, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer

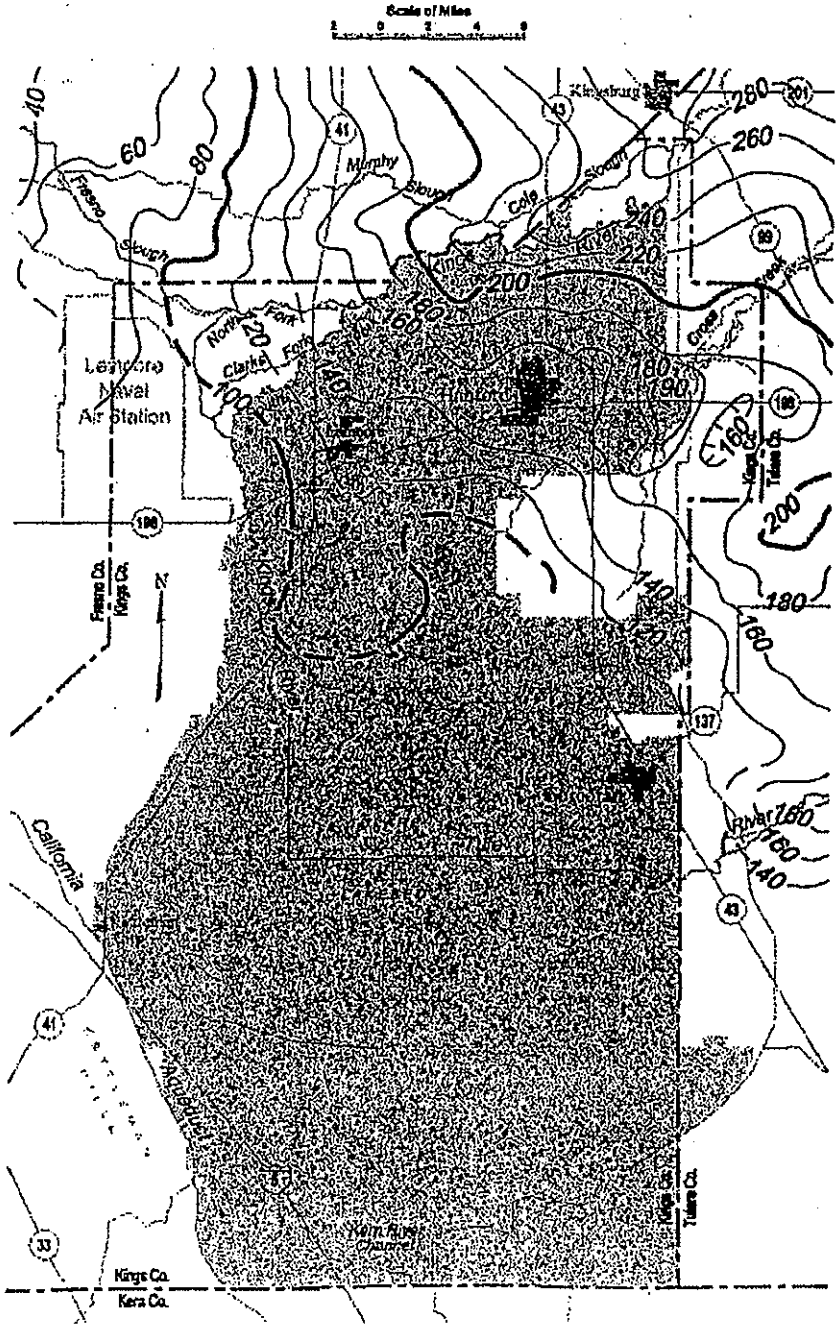


Contours are dashed where inferred. Contour interval is 10 and 20 feet.

Appendix
Groundwater Elevations Contours in 1999

Tulare Lake Groundwater Basin

Spring 2000, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer

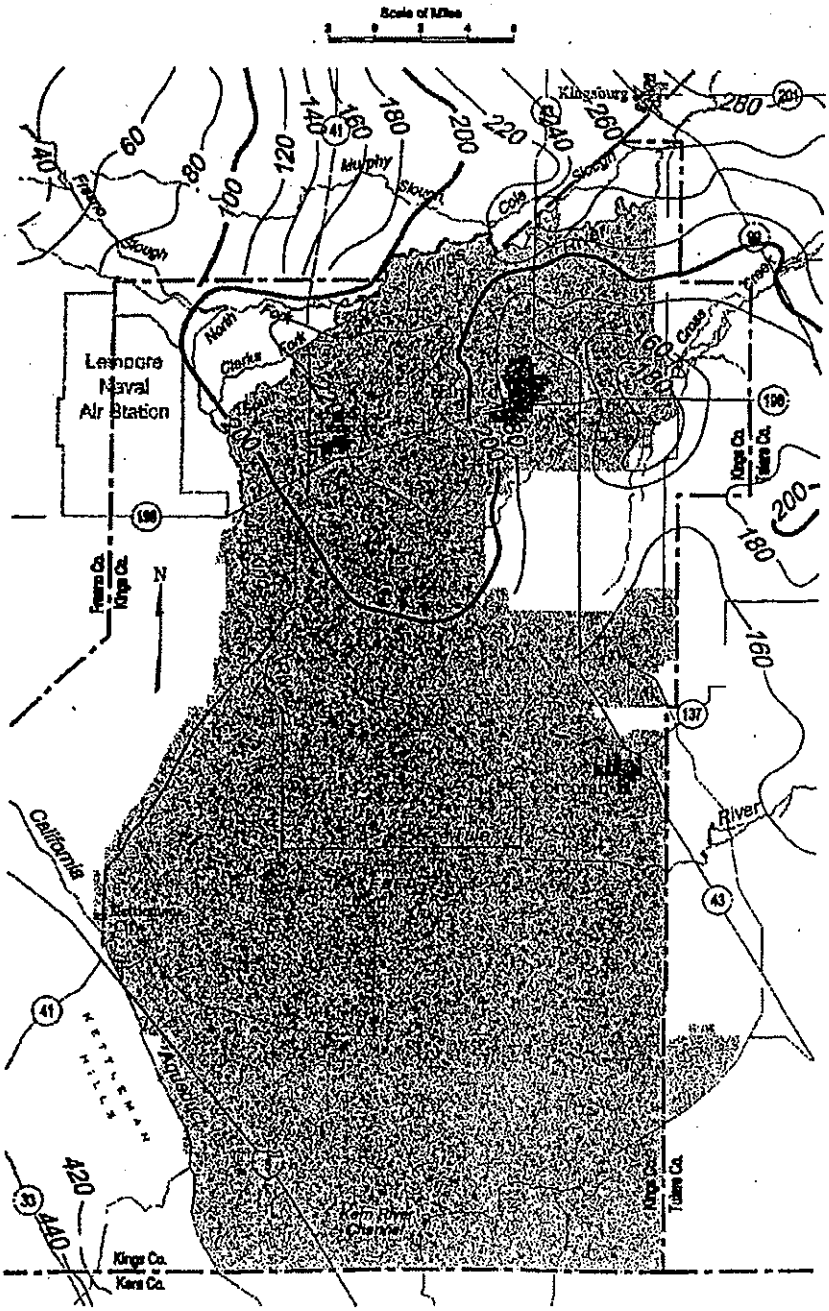


Contours are dashed where inferred. Contour interval is 10 and 20 feet.

Appendix
Groundwater Elevations Contours in 2000

Tulare Lake Groundwater Basin

Spring 2001, Lines of Equal Elevation of Water in Wells, Unconfined Aquifer



Contours are dashed where inferred. Contour interval is 20 feet.

Appendix
Groundwater Elevations Contours in 2001

Appendix J

Water Conservation Ordinance, City of Lemoore

ORDINANCE NO. 2003-04

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LEMOORE AMENDING SECTION 7-7A-8-1 OF CHAPTER 7A OF TITLE 7 OF THE LEMOORE MUNICIPAL CODE RELATING TO WASTE OF WATER

THE CITY COUNCIL OF THE CITY OF LEMOORE DOES ORDAIN AS FOLLOWS:

SECTION 1. Section 7-7A-8-1 of Chapter 7A of Title 7 of the Lemoore Municipal Code is hereby amended to read as follows:

7-7A-8-1: WATER CONSERVATION:

A. Definitions: Unless the context requires otherwise, the following definitions shall be used in the interpretation and construction of this Ordinance.

1. "Director" is the Director of Public Works of the City of Lemoore.

2. "Person" means any individual, firm, partnership, association, corporation, or political entity.

3. "Water" means any water obtained from the Water Department of the City of Lemoore.

B. Application of Regulations: The provisions of this Ordinance shall apply to all persons using City supplied water, both inside and outside of the City limits.

C. Regulations: In the use of water supplied by the City of Lemoore, the following requirements shall apply:

1. No person shall keep, maintain, operate, or use any water connection, hose, faucet, hydrant, pipe, outlet or plumbing fixture which is not tight and free from leakage, dripping or waste of water.

2. No person shall allow excessive water to run or waste from his property onto streets or highways.

3. No person shall willfully or negligently waste water in any manner.

4. Outdoor watering for those with even numbered addresses will be permitted on Tuesday, Thursday and Saturday, while odd numbered addresses may water on Wednesday, Friday and Sunday. Monday will be a day on which no outdoor watering is allowed.

5. The Public Works Director may grant a 30-day exception for new lawns not yet established.

6. Prohibition of draining of swimming pools with a capacity in excess of 5,000 gallons more that once every two years, except for structural repairs or to comply with public health standards determined by the County Health Officer. Residents with private swimming pools shall file a written application for a permit prior to draining their pools with the Public Works Department. The application shall include information as to reason for draining pool and in case of repairs, the nature and duration of repairs to be made and the date on which the pool will be drained.

7. Washing of exterior asphalt or concrete areas is prohibited except for those businesses that are governed by the Food and Drug Administration or State or County Health Department requirements that require these areas to be washed for health purposes. Documentation indicating such regulations must be provided to the Director.

8. The use of water for washing cars, boats or other vehicles is prohibited without the sue of a quick acting positive shut-off nozzle on the hose and the use of buckets for washing with water from hose used for light rinsing. These regulations apply to both residential customers and fund raising events. The business owner at which a fund raising car wash is held is responsible for both the enforcement of these regulations and any citations which may result due to abuse of these regulations.

9. All new construction and remodeling or additions to habitable areas with a valuation in excess of $5,000 will be required to install or replace existing faucets and shower heads with low flow devices and toilets with ultra-low flow units.

D. Violations, Notices and Penalties: The violation of any provisions of Subsection A of this Section shall result in the following actions by the City:

1. First Violation. A written notice of such violation shall be issued by the Public Works Department personnel or Police Department personnel.

2. Second Violation. A written notice of such violation shall be given of a second violation, and a charge of Fifteen and No/100 Dollars ($15.00) shall be added to the water bill of such person as a one-time penalty.

3. Third Violation. A written notice of such violation shall be given and a penalty of Twenty-five and No/100 Dollars ($25.00) shall be added to the water bill of such person as a one time penalty.

4. Fourth Violation. A written notice of such violation shall be given and a charge of Fifty and No/100 Dollars ($50.00) shall be added to the water bill of such person as a one time penalty.

5. Fifth Violation. A written notice shall be given of a fifth violation and the consumer shall have a flow restrictor placed in their service until such time that they can assure the Public Works Director that no more waste will occur. All costs, including overhead, for this installation shall be billed to the customer.

E. Determination of Number of Offenses. To determine whether a violation is other than a first offense, only notices issued within one year after the date of the first notice will be considered.

SECTION 3. This Ordinance shall take effect thirty (30) days after its adoption and before the expiration of fifteen (15) days after its adoption shall be published once in the Lemoore Advance, a newspaper of general circulation, published in the City of Lemoore.

The foregoing Ordinance was introduced at a Regular Meeting of the City Council of the City of Lemoore held on the 1st day of April, 2003 and passed and adopted at a Regular Meeting of the City Council held on the 15th day of April, 2003 by the following vote:

AYES: Purvis, Andreasen, Buford
NOES: None
ABSTAIN: None
ABSENT: Lahodny, Martin

APPROVED:

Thomas E. Buford
Mayor Pro Tem

ATTEST:

Helen M. Murray, City Clerk

CERTIFICATE

STATE OF CALIFORNIA)
COUNTY OF KINGS) ss.
CITY OF LEMOORE)

I, HELEN M. MURRAY, City Clerk of the City of Lemoore do hereby certify that the foregoing Ordinance was duly introduced at a Regular Meeting of the City Council held on the 1st. day of April, 2003 and passed and adopted at a Regular Meeting of the City Council held on the 15th day of April, 2003.

DATED: April 16, 2003

Helen M. Murray
City Clerk

NOTICE OF PROPOSED ORDINANCE
OF THE CITY COUNCIL OF THE CITY OF LEMOORE
AND SUMMARY THEREOF

NOTICE IS HEREBY GIVEN, that the City Council of the City of Lemoore will consider the adoption of a proposed ordinance at the regular meeting of the City Council to be held on Tuesday, April 15, 2003 at 7:30 p.m. in the City Council Chambers located at 429 "C" Street, Lemoore, CA 93245. A certified copy of the full text of the proposed ordinance shall be posted in the Office of the City Clerk at Lemoore City Hall at least five days prior to said Council Meeting and is available for public comment.

A summary of the proposed Ordinance is as follows:

The proposed Ordinance amends the Lemoore Municipal Code relating to waste of water.

Helen M. Murray
City Clerk

PUBLISH: April 10, 2003

NOTICE OF ADOPTED ORDINANCE
OF THE CITY COUNCIL OF THE CITY OF LEMOORE
AND SUMMARY THEREOF

NOTICE IS HEREBY GIVEN that the Lemoore City Council did pass and adopt Ordinance 2003-04 at a regular meeting of the City Council held on April 15, 2003 at 7:30 p.m. in the City Council Chambers located at 429 "C" Street, Lemoore, CA 93245. A certified copy of the full text of the ordinance shall be posted in the Office of the City Clerk at Lemoore City Hall and is available for public inspection.

A summary of the proposed Ordinance is as follows:

The Ordinance amends Section 7-7A-8-1 of Chapter 7A of Title 7 of the Lemoore Municipal Code relating to waste of water.

AYES: Purvis, Andreasen, Buford

NOES: None

ABSENT: Lahodny, Martin

ABSTAINING: None

PUBLISH: April 24, 2003

Appendix K

City of Lemoore Water Rate Ordinance

RESOLUTION NO. 2007-51

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LEMOORE PROVIDING FOR THE INCREASE OF WATER SYSTEM USER FEES

At a Regular Meeting of the City Council of the City of Lemoore duly called and held on December 18, 2007 at 7:30 p.m. on said day, it was moved by Council Member MARTIN, seconded by Council Member GREGO, and carried, that the following Resolution be adopted:

WHEREAS, Ordinance 8205 of the City Council of the City of Lemoore prescribed that user fees to be charged to users of the Water System of the City of Lemoore shall be established by Resolution of the City Council; and

WHEREAS, the cost to operate and maintain the Water System has increased since the last water rate increase; and

WHEREAS, the City is required to make remediation changes to the Water System which will increase costs for the City; and

WHEREAS, staff prepared and mailed a notice of public hearing to all property owners served by the Water System as required by Proposition 218 (Cal. Const. Article XIIID, Section 6); and

WHEREAS, the notice of public hearing informed property owners how and where to protest the proposed water rate increase and the notice conforms to the requirements of California Constitution Article XIIID; and

WHEREAS, the adoption of the proposed water rate increase is exempt from CEQA under Californian Public Resources Code Section 21080 (b)(8); and

WHEREAS, the City Council of the City of Lemoore held a Public Hearing on December 18, 2007 for the specific purpose of receiving public testimony regarding the establishment of said user fees; and

WHEREAS, at the hearing the City Council received and considered information regarding the anticipated expenses of the Water Department; and

WHEREAS, at the hearing the City Council received and considered written information and testimony; and

WHEREAS, the City Council has reviewed and followed the requirements of Proposition 218 regarding water service fees.

NOW, THEREFORE, BE IT RESOLVED by the City Council based on the foregoing recitals and the information and testimony presented at the hearing on December 18, 2007, as follows:

1. The City Council finds that insufficient written protests were presented to prevent the proposed rate increases from being adopted.

2. The City Council resolves that the revenues derived from the water user fees established herein will be used for proper purposes within the water enterprise fund and no portion of the revenues derived from the new water user fees will be used for prohibited purposed under section 6(b) of Proposition 218.

3. The City Council finds the adoption of the proposed water rate fee increases is exempt from CEQA under California Public Resources Code Section 21080(b)(8).

4. The City Council resolves that Resolution No. 9818, Section 1 and Section 2 are hereby amended effective December 26, 2007, as follows:

1. Metered Water Service

Dwelling Units/Use	Minimum Meter Charge per Unit	Water Included In Min Meter Charge per Unit/Use in cubic feet	Tiered Excess Water Use Charges per 100 cubic feet		
			$0.90	$0.95	$1.00
Single Family	$13.20	700	Up to 2800	Up to 5600	Above 5600
Duplexes/Triplexes	$9.45	500	Up to 2000	Up to 4000	Above 4000
Appartments - 4 or more served by 1 meter	$6.55	300	Up to 1200	Up to 2400	Above 2400
Mobile Home Parks	$6.55	300	Up to 1200	Up to 2400	Above 2400
Two or more dwellings served by 1 meter	$13.20	700	Up to 2800	Up to 5600	Above 5600
Two or more Uses served by 1 meter	$13.20	700	Up to 2800	Up to 5600	Above 5600
Commercial Establishments	$13.20	700	Up to 2800	Up to 5600	Above 5600
Industrial Uses	$13.20	700	Up to 2800	Up to 5600	Above 5600
Large Volume Industrial Users	$13.20	700	Up to 5,000,000	Above 5,000,000	
Schools on metered service	$13.20	700	Up to 2800	Up to 5600	Above 5600
All others	$13.20	700	Up to 2800	Up to 5600	Above 5600

2. Flat Rate Charges

Use	Monthly Rate
Single Family	$31.95
Multi-Family	$17.85 per unit
Large Grocery Stores	$32.70
Small Grocery Stores	$26.70
Other Commercial Establishments	$20.55
Lemoore Elementary School	$114.10
Lemoore High School	$160.40

* * * * *

Passed and adopted at a Regular Meeting of the City Council of the City of Lemoore held on December 18, 2007 by the following vote:

Ayes: MARTIN, GREGO, HORNSBY, MURRAY
Noes: NONE
Absent: RODARMEL
Abstaining: NONE

Approved:

John F. Murray, Mayor

Attest:

Nanci C. O. Lima, City Clerk

CERTIFICATE

STATE OF CALIFORNIA)
COUNTY OF KINGS) ss.
CITY OF LEMOORE)

I, NANCI C. O. LIMA, City Clerk of the City of Lemoore do hereby certify the foregoing Resolution of the City Council of the City of Lemoore was duly passed and adopted at a Regular Meeting of the City Council held on December 18, 2007 .

Dated: December 19, 2007

Nanci C. O. Lima

NANCI C. O. LIMA, City Clerk

Appendix L

Water Shortage Contingency Resolution

DRAFT

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LEMOORE
DECLARING A WATER SHORTAGE CONTINGENCY AND
AUTHORIZING STAFF ACTIONS BASED THEREON

At a _____ meeting of the City Council of the City of Lemoore duly called and held on _____, 20___ at ____ p.m. on said day, it was moved by Council Member _____, seconded by Council Member _____, and carried, that the following Resolution be adopted;

WHEREAS, the City Manager has reported to the City Council that the City's municipal water system is experiencing a water shortage as defined in Chapter Eight of the City's duly adopted Urban Water Management plan, and

WHEREAS, the City Manager has reported that the water shortage is a Stage ____ contingency as defined in the Plan,

NOW, THEREFORE, BE IT RESOLVED by the City Council based on the foregoing recitals and any information on testimony presented at the duly noticed and called meeting of the City Council at which this matter was considered that:

1. The City Manager is hereby authorized to implement and enforce the actions described for Stage ____ in the Urban Water Management Plan, and

2. To report to the Council the status of the water shortage at such times as the City Manager deems appropriate, and

3. To recommend to the Council the termination of all or any Stage-related measures at such time as the water shortage no longer exists, and

4. Adoption of the Stage _____ emergency measures necessitated by the water shortage are exempt from environmental review and processing in accord with California Environmental Quality Statues (Public Resources Code, Division 13), Section 21172 (CEQA Guidelines Section 15268(c)) CEQA California Public Resources Code Section _ _____.

Appendix M

Appointment of Water Conservation Coordinator

Mayor
William Siegel
Mayor Pro Tem
Lois Wynne
Council Members
John Gordon
Eddie Neal
Willard Rodarmel

City of
LEMOORE
CALIFORNIA

Public Works Department

711 W. Cinnamon Dr.
Lemoore □ CA 93245
Phone □ (559) 924-6735
FAX □ (559) 924-6708

December 2, 2013

David Wlaschin
Public Works Director
711 W. Cinnamon Drive
Lemoore, CA 93245

Subject: Appointment of Water Conservation Coordinator

Dear Mr. Wlaschin:

DMM Measure 12 (Section 7.12) of the City's 2010 Urban Water Management Program requires that the City appoint a Water Conservation Coordinator. Richard Pereira, Public Works Superintendent, is hereby so appointed.

Sincerely,

Jeff Laws
City Manager