City of GALT

2010 Urban Water Management Plan

FINAL • May 2013

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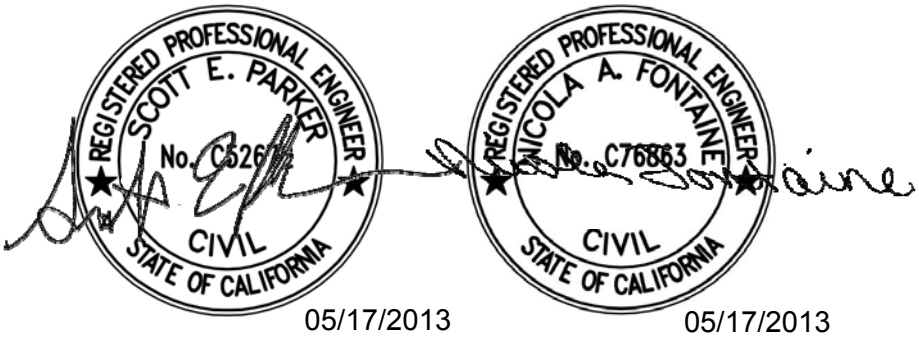

05/17/2013 05/17/2013

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2010 URBAN WATER MANAGEMENT PLAN

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City of Galt

2010 URBAN WATER MANAGEMENT PLAN

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1.1 PURPOSE

The California Water Code requires urban water suppliers within the state to prepare and adopt Urban Water Management Plans (UWMPs) for submission to the California Department of Water Resources (DWR). The UWMPs, which must be filed every five years, must satisfy the requirements of the Urban Water Management Planning Act (UWMPA) of 1983, including amendments that have been made to the Act. The UWMPA requires urban water suppliers servicing 3,000 or more connections, or supplying more than 3,000 acre-feet (AF) of water annually, to prepare a UWMP.

The purpose of the UWMP is to maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions. This report, which was prepared in compliance with the California Water Code, and as set forth in the guidelines and format established by the DWR, constitutes the City of Galt (City) 2010 UWMP.

1.2 BACKGROUND

1.2.1 Urban Water Management Planning Act

In 1983, State Assembly Bill 797 modified the California Water Code (CWC) Division 6 by creating the UWMPA. Several amendments to the original UWMPA, which were introduced since 1983, have increased the data requirements and planning elements to be included in the 2005 and 2010 UWMPs.

Initial amendments to the UWMPA required that total projected water use be compared to water supply sources over the next 20 years, in 5-year increments. Recent DWR guidelines also suggest projecting through a 25-year planning horizon to maintain a 20-year timeframe until the next UWMP update has been completed.

Other amendments require that UWMPs include provisions for recycled water use, demand management measures (DMMs), and a water shortage contingency plan. The UWMPA requires inclusion of a water shortage contingency plan, which meets the specifications, set forth therein. Recycled water was added in the reporting requirements for water usage and figures prominently in the requirements for evaluation of alternative water supplies, when future projections predict the need for additional water supplies. Each urban water purveyor must coordinate the preparation of the water shortage contingency plan with other urban water purveyors in the area, to the extent practicable. Water suppliers must also describe their water DMMs that are being implemented, or are scheduled for implementation.

In addition to the UWMPA and its amendments, there are several other regulations that are related to the content of the UWMP. In summary, the key relevant regulations are:

- Assembly Bill 1420: Requires implementation of DMMs/Best Management Practices (BMPs) and meeting the 20-by-2020 targets to qualify for water management grants or loans (CWC 10631.5 a and 10631 j).
- Assembly Bill 1465: Requires water suppliers to describe opportunities related to recycled water use and stormwater recapture to offset potable water use (CWC 10633).
- Amendments SB 610 (Costa, 2001), and AB 901 (Daucher, 2001) (Effective beginning January 1, 2002): Require counties and cities to consider information relating to the availability of water to supply new large developments by mandating the preparation of further water supply planning (CWC 10610.2) and Water Supply Assessments (CWC 10910 - 10915).
- Senate Bill 1087: Requires water suppliers to report single-family residential (SFR) and multi-family residential (MFR) projected water use for lower income areas separately (CWC 10631.1).
- Amendment SB 318 (Alpert, 2004): Requires the UWMP to describe the opportunities for development of desalinated water, including but not limited to, ocean water, brackish water, and groundwater, as long-term supply (CWC 10631 j).
- AB 105 (Wiggins, 2004): Requires urban water suppliers to submit their UWMPs to the California State Library (CWC 10644 a).
- Senate Bill x7-7: Requires development and use of new methodologies for reporting population growth estimates, base per capita use, and water conservation. This water bill also extended the 2010 UWMP submittal deadline for retail agencies to July 1, 2011. An agency can choose from four methods to establish their intermediate (2015) and year 2020 water conservation targets (CWC 10608.20 j).

1.2.2 Previous Urban Water Management Plan

Pursuant to the UWMPA, the City previously prepared an UWMP in 2005, which was approved and adopted on January 17, 2006. Following adoption, the 2005 UWMP was submitted to and formally approved by DWR. This 2010 UWMP report serves as an update to the 2005 UWMP.

1.2.3 Resource Maximization/Import Minimization

The City recognizes the importance of maintaining a high quality reliable water supply. Although water is a renewable resource, it is limited. A long-term reliable supply of water is essential to protect the local and state economy. The main focus for the City is to provide high quality water, maximize the efficient use of water, promote conservation, and promote recycled water use.

1.3 PLAN PREPARATION

This 2010 UWMP was prepared in compliance with the UWMPA (California Water Code §10610 et seq.) and the Water Conservation Bill of 2009 (SBX7-7). The 2010 UWMP was prepared by Carollo Engineers. Contact information for Carollo Engineers is included on the submittal letter to the City at the beginning of this document.

The information contained herein is based on City data, data included in available water supply planning documents, and review and update of data contained in the City's 2005 UWMP.

This section includes specific information on how the UWMP was prepared, coordinated with other agencies and the public, adopted, and implemented.

1.3.1 Coordination with Appropriate Agencies

The UWMPA requires that the UWMP identify the water agency's coordination with appropriate nearby agencies; see excerpt below.

> *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.*
>
> *10621 (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.*
>
> *10635 (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.*

At the present time, the City relies on the underlying groundwater basin as its sole water supply source. Accordingly, the City has endeavored to work closely with the other entities that draw upon the groundwater basin. For the development of this UWMP and other regional water planning efforts focusing on the long-term management of the shared groundwater basin, the City worked closely with area water purveyors and public interest groups. The City is participating in the preparation of a South Sacramento County Groundwater Management Plan. Additionally, the City has contributed to or participated in the following regional studies:

- Southeast Sacramento County Agricultural Water Authority Groundwater Management Plan, December 2002
- Sacramento County Water Plan, 1976

- Sacramento County Water Agency AB 3030 Groundwater Management Plan, adopted by the City November 14, 1994
- Sacramento County Water Agency Zone 40 Water Supply Master Plan Update, June 1995
- Sacramento County Water Agency, Phase II Groundwater Yield Analysis, Technical Memorandum No. 2 Impacts Analysis, April 1995
- Estimated of Annual Water Demand within the Sacramento County-Wide Area, May 1995

The City coordinated its efforts with relevant agencies and parties to ensure that the data and issues discussed in the plan are presented accurately. Table 1 summarizes how the UWMP preparation was coordinated. Appendix A contains copies of outreach documents.

Table 1 Coordination with Appropriate Agencies (Guidebook Table 1)
2010 Urban Water Management Plan
City of Galt

Coordinating Agencies	Participated in Developing the Plan	Commented on the Draft	Attended Public Meetings	Was Contacted for Assistance	Was Sent a Copy of the Draft Plan	Was Sent a Notice of Intention to Adopt	Not Involved No Information
U.S. Bureau of Reclamation				✓			
City Water Division	✓			✓			
City Wastewater Division	✓			✓			
City Management	✓			✓			
City Planning Department		✓		✓	✓	✓	
Southeast Sacramento County Agricultural Water Authority				✓			
Sacramento County Water Authority						✓	
Sacramento County						✓	

Notes: “Guidebook Table X” refers to a specific table in the “Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan” by DWR.

The City also provided formal written notification to Sacramento County that the City’s UWMP was being updated for 2010. In accordance with the UWMPA, this notification was provided at least 60 days prior to the public hearing of the plan. Copies of the final UWMP will be provided to Sacramento County no later than 30 days after its submission to DWR.

1.3.2 Public Participation

The UWMPA requires that the UWMP show the water agency solicited public participation; see excerpt below.

> *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.*

The City actively encourages public participation in its urban water management planning efforts. On February 20, 2013, the City placed a notice in the Galt Herald (City newspaper) and posted the notice at City Hall stating that its UWMP was being updated and that a public hearing would be conducted to address comments and concerns from members of the community. A copy of this notification is included in Appendix A. The Draft 2010 UWMP will be made available for public inspection at the City Clerk's Office, 380 Civic Drive, the Public Works Office, 495 Industrial Drive, and the Marian O. Lawrence Library, 1000 Caroline Avenue, during regular business hours. A copy of the UWMP will also be posted on the City Website to facilitate the public review of the document.

The City will hold a public hearing on March 19, 2013 at City Hall Council Chambers, 380 Civic Drive. The hearing provides an opportunity for the City's customers, residents, and employees to learn and ask questions about the current and future water supply of the City. At the hearing, the 2010 UWMP will be discussed as well as implementation of the water reduction plan.

1.3.3 Plan Adoption, Submittal, and Implementation

The UWMP will be finalized after the public hearing and approval by the City Council on, March 19, 2013 (see City Resolution in Appendix B). Following adoption, the City will submit the finalized UWMP to the DWR (see Commitment to Distribute in Appendix A). Within 30 days of submitting the UWMP to DWR, the adopted UWMP will be available for public review during normal business hours at the locations specified for viewing of the Draft 2010 UWMP, submitted to the California State Library, and submitted to the Sacramento County Water Authority (SCWA). A copy of the Galt City Council Resolution of Plan Adoption will be delivered to the DWR and SCWA along with the adopted UWMP.

1.3.3.1 Implementation

Review of the City's 2005 UWMP indicated that the implementation plan and schedule of action items by the City through 2009 were accomplished. The City has implemented, partially implemented, and planned the demand management measures detailed in the 2005 UWMP, has worked to reduce water usage and has improved and re-evaluated recycled water use since 2005. Updated implementation plans and schedules for on-going and/or future actions are provided in this 2010 UWMP.

1.4 ABBREVIATIONS AND DEFINITIONS

To conserve space and improve readability, the following abbreviations are used in this report. The abbreviations are spelled out in the text the first time the phrase or title is used in each chapter and subsequently identified by abbreviation only.

AF	acre-feet
AFY	acre-feet per year
BMPs	Best Management Practices
City	City of Galt
County	Sacramento County
DMMs	Demand Management Measures
DWR	California Department of Water Resources
ETo	Evapotranspiration
^{o}F	Degrees Fahrenheit
gpcd	gallons per capita per day
LAFCO	Sacramento County Local Agency Formation Commission
MFR	Multi-Family Residential
mgd	million gallons per day
SACOG	Sacramento Area Council of Governments
SCWA	Sacramento County Water Authority
SFR	Single-Family Residential
SWRCB	State Water Resources Control Board
RWQCD	Regional Water Quality Control Board
UWMP	Urban Water Management Plan
UWMPA	Urban Water Management Planning Act
WWTP	Wastewater Treatment Plant
WTP	Water Treatment Plant

Chapter 2

SYSTEM DESCRIPTION

The Urban Water Management Planning Act (UWMPA) requires that the Urban Water Management Plan (UWMP) include a description of the water purveyor's service area and various aspects of the area served including climate, population, and other demographic factors; see excerpt below.

> *10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:*
>
> *10631. (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

2.1 SERVICE AREA PHYSICAL DESCRIPTION

The City of Galt (City) is located in Sacramento County, approximately 20 miles south of the City of Sacramento along Highway 99 adjacent to the Northern California Delta Recreation Area and the Cosumnes River Preserve.

Figure 1 illustrates the City's current water distribution service area. The largest land use category is residential (rural, low density, medium density, medium-high density, and high density), which accounts for approximately 58 percent of acreage within the City limits. Commercial, office professional, and light industrial make up approximately 19 percent and other land uses such as mixed use, public/quasipublic, parks, and open space account for approximately 23 percent (2030 Galt General Plan Policy Document, April 2009 Land Use Map).

The current City limits (3,815.34 acres) represent all incorporated lands that are governed by the City. The City limits roughly extend from Dry Creek on the south to Twin Cities Road on the north; and from McFarland Street/Sparrow Drive on the west to Marengo Road on the east. The City's Wastewater Treatment Plant is a detached incorporated island located north of Twin Cities Road and west of Highway 99.

The City Sphere of Influence boundary, adopted by the Sacramento County Local Agency Formation Commission (LAFCO) on January 19, 2011, is coterminous with the City limits and Dry Creek on the south side, and borders Cherokee Lane on the east and Sargent Avenue on the west (see Figure 1).

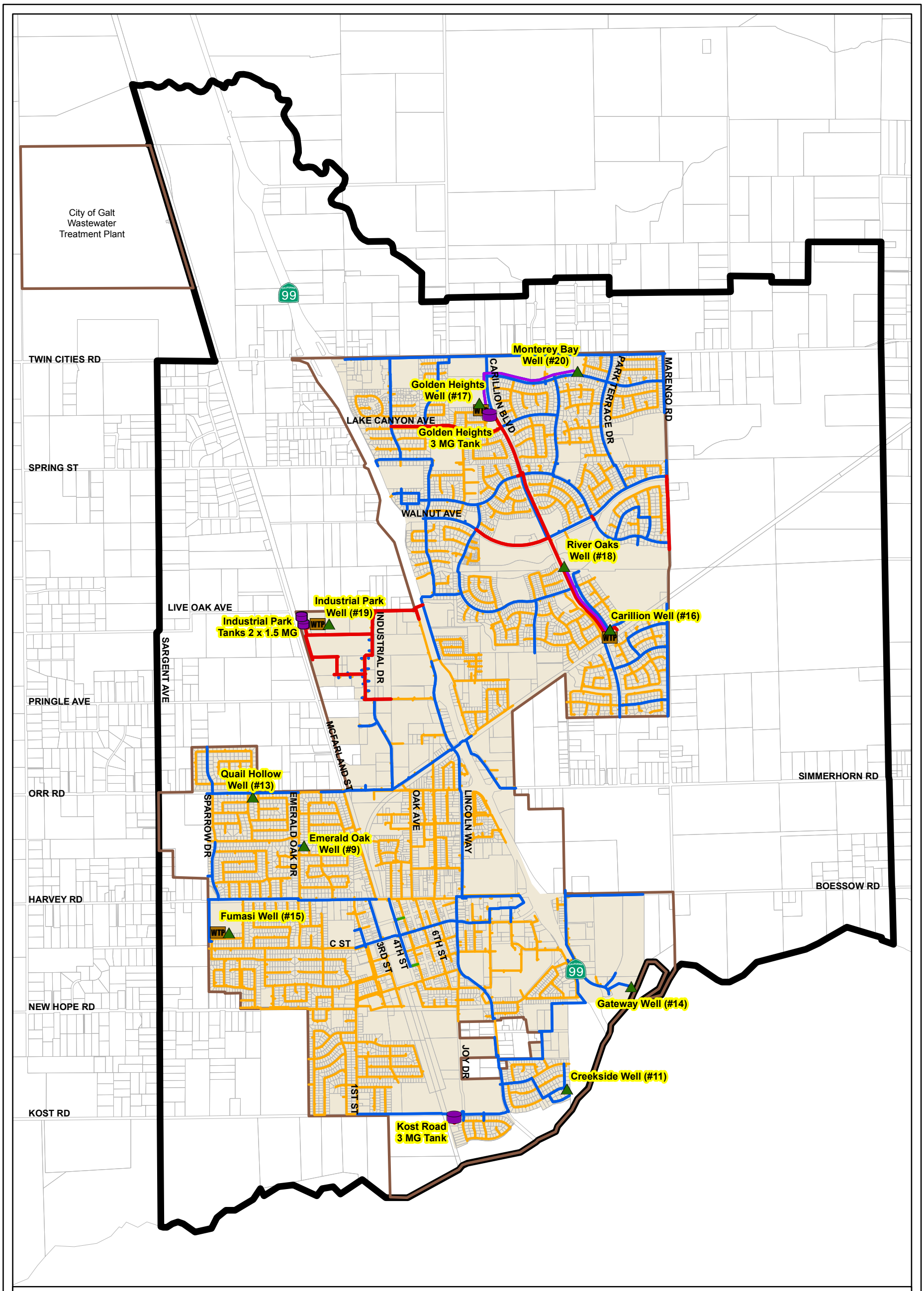

Figure 1
Current Water Service Area
2010 Urban Water Management Plan
City of Galt

2.1.1 Description of Transmission, Treatment, and Distribution Facilities

On January 1, 1966, the City took over all functions of the County Water District, which at the time was responsible for providing water service to the City. On April 18, 1967, Water Permit No. 67-20 was granted to the City by the State Board of Public Health to “operate a domestic water system within the City’s boundaries.”

The City owns, maintains, and operates water supply wells, treatment plants, storage tanks, and water lines throughout the City. The City manages and maintains over 99 miles of water lines spanning 1 to 24 inches in diameter, eight active wells, four above ground water storage tanks, and four treatment plants. The City pumps and delivers water to its residential, commercial, institutional, and industrial customers within the service area.

2.1.2 Climate

The City has a Mediterranean-type climate with dry, moderately hot summers and moderately wet winters. The January mean temperature is 44 degrees Fahrenheit (°F), with an average high of 55°F and an average low of 37°F. The July mean temperature is 72°F with an average high of 89°F and an average low of 56°F. Average annual rainfall is approximately 12.8 inches (value reflects the average of the annual averages from 2001 to 2010). The majority of rainfall occurs from October through April. Monthly precipitation has been as high as 7.44 inches and as low as 0.0 inches. The average relative humidity is 94 percent. Evapotranspiration (ETo) values, which serve as indicators of how much water is required to maintain healthy agriculture and landscaping, range from 0.92 inches during January to 7.47 inches in July. Temperature, rainfall, and ETo averages for the City are presented in Table 2. Climate data is from the California Irrigation Management Information’s Lodi West Station No. 166 (activated in September 2000).

Table 2 Climate Characteristics 2001-2010 2010 Urban Water Management Plan City of Galt					
Month	**Standard Monthly Average ETo [(1)] (inches)**	**Monthly Average Rainfall [(1)] (inches)**	**Monthly Average Temperature [(1)] (°F)**		
			Average	**Minimum**	**Maximum**
January	0.92	1.87	44.35	37.16	55.17
February	1.66	2.25	49.61	39.28	61.20
March	3.38	1.66	54.12	41.58	67.48
April	4.51	1.33	56.78	43.71	70.09
May	6.33	0.39	64.42	49.12	79.58
June	7.23	0.07	68.98	53.36	84.77
July	7.47	0.00	71.85	55.79	88.93
August	6.56	0.00	70.14	54.12	87.70
September	4.84	0.06	67.64	51.47	85.53
October	3.14	0.88	59.89	45.63	76.06
November	1.50	1.27	50.99	39.48	64.38
December	0.83	2.95	46.63	38.19	55.96
Average Annual [(2)]	48.36	12.8	58.83	45.77	73.14

Notes: Source: California Irrigation Management Information System Station 166 Lodi West (activated 9/2000).
ETo = Evapotranspiration
1. Data reflects the average of monthly averages from 2001 to 2010.
2. Data reflects the average of the annual averages from 2001 to 2010.

2.2 SERVICE AREA POPULATION

This section summarizes historical, current, and projected population trends in the City. Population projections are essential to the planning process and form the basis for most planning decisions, yet projecting future growth is far from an exact science given the complex set of variables that can affect the rate of growth. Typically, projections are developed by taking past patterns and combining them with assumptions regarding the future to obtain an estimate of future growth rates. These projections serve to provide the City insight on the type and quantity of future growth as well as guidance regarding future planning activities; therefore, such planning activities can only be as effective as the ability of local officials to anticipate population growth.

The City experienced significant growth from 1990 through 2000 with an increase of 9,650 new residents, accounting for a 110 percent change in population. From 2000 through 2010, the population grew from 19,472 (U.S. Census) to 23,647 (U.S. Census). Table 3

contains the current and projected population for 2010, 2015, 2020, 2025, and 2030. Data for 2015 through 2030 is from the 2030 General Plan (City of Galt 2030 General Plan, Existing Conditions Report, November 2005 and City of Galt General Plan, Policy Document, Public Review Draft, July 2008, Mintier & Associates et al.) The 2030 General Plan assumed an annualized population growth rate of 3.4 percent to forecast the City's population.

Table 3 Population - Current and Projected (Guidebook Table 2)
2010 Urban Water Management Plan
City of Galt

Service Area Population[1]	Years					
	2010	2015	2020	2025	2030	Data Source [2]
	23,647	32,779	38,000	44,150	51,291	2010 Census and 2030 General Plan

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare of 2010 Urban Water Management Plan" by DWR.

1. Service area population is defined as the population served by the distribution system.
2. 2010 Source: Census. 2015-2030 Source: City of Galt 2030 General Plan, Existing Conditions Report, November 2005 and City of Galt General Plan, Policy Document, Public Review Draft, July 2008, Mintier & Associates et al.

2.2.1 Other Demographic Factors

The City is historically an agricultural based community, and has become an important transportation hub for rail and trucking. It has also evolved into a residential community for the Sacramento and San Joaquin Counties. The demographic information (2011 Galt Housing Element, Draft) indicates that, the majority of residents are families with children.

Employment is focused in retail, services, transportation, and agricultural industries. Many residents who have administrative and professional jobs commute to Stockton or Sacramento (2011 Galt Housing Element, Draft).

2.3 PLANNED DEVELOPMENT

The UWMPA requires that the UWMP identify the major developments within the agency's service area that would require water supply planning; see excerpt below.

10910. (a) Any city or county that determines that a project, as defined in section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

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

10912 (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 plant, or industrial park planned to house more than 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.

No projects are identified on the City Current Development Project List (June 15, 2010) that meet the criteria listed in California Water Code Section 10912. The projects on the Current Development Project List consist of parks and recreation, shopping centers of less than 133,000 square feet, residential projects of 5 to 274 single-family dwellings, business and industrial buildings of less than 20,000 square feet, and a hotel with less than 70 rooms.

Chapter 3

SYSTEM DEMANDS

The Urban Water Management Planning Act (UWMPA) requires that the Urban Water Management Plan (UWMP) identify the quantity of water supplied to the agency's customers including a breakdown by user classification; see excerpt below.

> *10631 (e) (1) Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), 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; 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.*

This section describes the water system demands, the calculated baseline (base daily per capita daily) water use, the interim and urban water use targets, and the water use reduction plan.

3.1 BASELINES AND TARGETS

The UWMPA requires that the UWMP identify the baseline water demand, urban water use target, and interim urban water use target for the City of Galt (City); see excerpt below.

> *10608.20 (e) (1) An urban retail water supplier shall include in its urban water management plan…due in 2010 the 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.*

The base daily per capita use is the first step in determining the various urban water use targets over the 20-year planning horizon. The current per capita use sets the "baseline" on which the urban and interim water use targets are determined. These targets are necessary to judge compliance with the 2020 use reductions set forth in the Water Conservation Bill of 2009.

3.1.1 Baseline

The first step in developing the baseline water use for the City is determining the applicable range and years for which the baseline average will be calculated. The UWMPA stipulates an agency may use either a 10 or 15-year average to determine their baseline. To be able to use the 15-year average baseline, the UWMPA stipulates that 10 percent or more of an

agency's total water deliveries in 2008 must be from recycled water. Since the City had no recycled water deliveries to customers in 2008, a 10-year average must be used for baseline determination. In addition to the 10-year baseline, a 5-year baseline is also calculated, which will be used to establish the minimum criteria for the City's use reduction targets. A summary of the 10-year baseline range and 5-year baseline range is included in Table 4.

Table 4 Base Period Ranges (Guidebook Table 13)
2010 Urban Water Management Plan
City of Galt

Base	Parameter	Value	Units
10-Year Base Period	2008 total water deliveries	5,953	acre-feet per year
	2008 total volume of delivered recycled water	0	acre-feet per year
	2008 recycled water as a percent of total deliveries	0	percent
	Number of years in base period	10	years
	Year beginning base period range	1999	
	Year ending base period range	2008	
5-Year Base Period	Number of years in base period	5	years
	Year beginning base period range	2005	
	Year ending base period range	2009	

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

The data used to calculate the 10-year baseline is included in Table 5. The UWMPA requires a continuous range, with the end of the range ending between December 31, 2004 and December 31, 2010, be used for baseline determination.

Table 5 Base Daily Per Capita Water Use – 10-Year Range (Guidebook Table 14)
2010 Urban Water Management Plan
City of Galt

Base Period Year		Distribution System Population[1]	Daily System Gross Water Use[2] (million gallons per day)	Annual Daily Per Capita Water Use (gallons per capita per day)
Sequence	Calendar Year			
1	1999	18,215	4.0	217
2	2000	19,472	4.1	211
3	2001	20,136	4.4	220
4	2002	21,087	4.4	209
5	2003	22,069	4.5	202
6	2004	22,240	4.6	209
7	2005	22,856	4.7	207
8	2006	23,065	5.1	219
9	2007	23,466	5.5	236
10	2008	23,882	5.3	223
Base Average Daily Per Capita Water Use				**215**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. Source: Census and Department of Finance. The entire water service area is within the City limits.
2. Source: City production data (calendar year).

The data used to calculate the 5-year baseline is included in Table 6. The UWMPA requires a continuous range, with the end of the range ending between December 31, 2007 and December 31, 2010, be used for baseline determination.

Table 6 Base Daily Per Capita Water Use – 5-Year Range (Guidebook Table 15) 2010 Urban Water Management Plan City of Galt				
Base Period Year		**Distribution System Population[1]**	**Daily System Gross Water Use[2] (million gallons per day)**	**Annual Daily Per Capita Water Use (gallons per capita per day)**
Sequence	**Calendar Year**			
1	2005	22,856	4.7	207
2	2006	23,065	5.1	219
3	2007	23,466	5.5	236
4	2008	23,882	5.3	223
5	2009	24,145	5.1	212
Base Average Daily Per Capita Water Use				**219**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. Source: 2005 through 2009 Department of Finance.
2. Source: City production data (calendar year).

3.1.2 Targets

The UWMPA requires urban water suppliers to determine the interim and urban water use targets for 2015 and 2020, respectively.

The 2015 interim water use target is the planned daily per capita water use in 2015, a value halfway between the baseline daily per capita water use and the 2020 urban water use target (2010 UWMP Guidebook).

The 2020 urban water use target is how much water is planned to be delivered, in 2020 to each resident within an urban water supplier's distribution system area, taking into account water conservation practices that currently are and plan to be implemented (2010 UWMP Guidebook).

Four target methods have been developed, and identify the specific steps water suppliers shall follow to establish these targets. A brief description of each method, as well as the water use calculated using each methodology, is included below.

3.1.2.1 Method 1 – 80 Percent of Base Daily Per Capita Water Use

Method 1 requires an urban water supplier to first determine the base daily per capita use. In order to determine the target using Method 1, 80 percent of the base daily per capita use

(10-year base period) is calculated. Based on the daily per capita use of 215 gallons per capita per day (gpcd) determined previously (Table 5), the target use for Method 1 is 172 gpcd.

3.1.2.2 Method 2 – Performance Standards

Method 2 requires water suppliers to use baseline commercial, industrial, institutional, indoor residential, and landscaped area water use over the baseline time period, to calculate a water use target. Based on the nature of the data required to determine a target using Method 2, it is not feasible for the City to use this methodology.

3.1.2.3 Method 3 – 95 Percent of Hydrologic Region Target

Method 3 requires water suppliers to use 95 percent of the hydrologic region target to determine the water use target for 2020. A map showing the California hydrologic regions and 2020 conservation goals is included in the final Guidebook to Assist Urban Water Suppliers to Prepare a 2010 UWMP. The Method 3 target for the San Joaquin River region is 165 gpcd (95 percent of the San Joaquin River region value [174 gpcd]).

3.1.2.4 Method 4 – Savings by Water Sector

Method 4 identifies water savings obtained through identified practices and subtracts them from the base daily per capita water use value identified for the water supplier. The water savings identified that can be used to reduce the base daily per capita water use value include:

- Indoor residential use savings
- Metered savings
- Commercial, industrial, and institutional (CII) savings
- Landscape and water loss savings

To calculate the CII savings, a retail water supplier must have data for the entire baseline period used in the base daily capita water use calculation. The City does not have metered water use data over the base period (1999-2008); therefore, it is not feasible for the City to use this methodology.

3.1.2.5 Minimum Water Use Reduction Requirement

The final step in determining the applicability of the water use target for the City is to confirm that the water use targets meet the minimum reduction requirements as defined by the Department of Water Resources (DWR). To confirm the target, the 5-year average baseline (219 gpcd) previously determined (Table 6) is used. In order to meet the minimum criteria, the chosen 2020 urban water use target must fall below 95 percent of the 5-year baseline, which for the City is 208 gpcd.

3.2 SUMMARY OF BASELINES AND TARGETS

Based on the water use targets calculated above, the City's water use target for 2020 is 172 gpcd. Based on the 10-year baseline of 215 gpcd, the 2015 interim water use target is 194 gpcd.

This 2020 water use target was determined using Method 1, which corresponds to 80 percent of the 10-year baseline. According to the DWR guidelines, this target is valid since it is less than the target confirmation criteria of 208 gpcd. A summary of the various baselines, use targets determined based on various methodologies, 2020 use target, and the interim use target are summarized in Table 7.

Table 7 Baseline and Targets Summary
2010 Urban Water Management Plan
City of Gallt

Baselines (1) (gpcd)		Target Determination Methods (gpcd)				Target Confirmation(6) (gpcd)	2020 Target(7) (gpcd)	2015 Interim Target(8) (gpcd)
10-Year	5-Year	1(2)	2(3)	3(4)	4(5)			
215	219	172	NA	165	NA	208	172	194

Notes:
1. Refer to Tables 4, 5, and 6 for source of data.
2. Method 1 – 80 percent of the 10-year base daily per capita water use.
3. Method 2 – Insufficient data is available to determine an Urban Water Use Target.
4. Method 3 – 95 percent of the Regional Target.
5. Method 4 – Insufficient data is available to determine an Urban Water Use Target.
6. Defined as 95 percent of the 5-year base daily per capita water use.
7. 2020 Urban Water Use Target determined using Method 1. The 2020 urban water use target is how much water is planned to be delivered in 2020 to each resident within an urban water supplier's distribution system area, taking into account water conservation practices that currently are and plan to be implemented (2010 UWMP Guidebook).
8. Interim Urban Water Use Target defined as the average of 10-year base gpcd and the 2020 Target. The 2015 interim water use target is the planned daily per capita water use in 2015, a value halfway between the baseline daily per capita water use and the 2020 urban water use target (2010 UWMP Guidebook).

3.3 WATER DEMANDS

Water demands served by the City are primarily residential, CII, and landscape irrigation. As of 2010, the City maintains approximately 808 water meters, which represents approximately 12 percent of the total connections in the service area. Consequently, estimates of water use are based largely on production data. The City classifies meters (2010) into the following categories: 544 residential (includes single- and multi-family), 209 commercial/institutional/industrial, and 55 landscape irrigation meters. It has been assumed for the purposes of this UWMP, that all residences will be converted to metered service no later than 2025.

In order to develop estimated current and future water demands by water use sector, the following information was used: current water production and metered deliveries data, the City's per capita water demand target, and the projected water demands based on water use targets. The City did not track metered water deliveries for the first half of 2005, thus Table 8 does not contain water deliveries by account type. The total delivery for 2005 is from City production records. The resulting estimated annual water demands within the City's service area are provided for 2015, 2020, 2025, and 2030 in Tables 10 through 12. In accordance with DWR requirements, the total deliveries for 2015, 2020, and beyond were estimated based on the assumption that the City will meet its 2015 and 2020 per capita water use targets.

Table 8 Water Deliveries – Actual 2005 (Guidebook Table 3)
2010 Urban Water Management Plan
City of Galt

	2005				
	Metered		Not Metered		Total
Water Use Sectors	**# of accounts**	**Deliveries, acre-feet per year**	**# of accounts**	**Deliveries, acre-feet per year**	**Deliveries, acre-feet per year**
Single- and Multi- Family Residential	Not available	Not available	Not available	Not available	Not available
Commercial, Institutional, and Industrial	Not available	Not available	Not available	Not available	Not available
Irrigation	Not available	Not available	Not available	Not available	Not available
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	Not available	Not available	Not available	Not available	**5,300**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
Information on accounts and water delivers by account type not available for entire year.
Source: 2005 production record.

Table 9 Water Deliveries – Actual 2010 (Guidebook Table 4)
2010 Urban Water Management Plan
City of Galt

	2010				
	Metered		Not Metered		Total
Water Use Sectors	**# of accounts**	**Deliveries, acre-feet per year**	**# of accounts**	**Deliveries, acre-feet per year**	**Deliveries, acre-feet per year**
Single- and Multi- Family Residential	544	927	6,000	1,666	2,593
Commercial, Institutional, and Industrial	209	2,348	0	0	2,348
Irrigation	55	233	0	0	233
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	**808**	**3,508**	**6,000**	**1,666**	**5,174**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
Source: City 2010 metered data and production records.

Table 10 Water Deliveries – Projected 2015 (Guidebook Table 5)
2010 Urban Water Management Plan
City of Galt

	2015				
	Metered		Not Metered		Total
Water Use Sectors	**# of accounts**	**Deliveries, acre-feet per year**	**# of accounts**	**Deliveries, acre-feet per year**	**Deliveries, acre-feet per year**
Single- and Multi- Family Residential	3,363	2,968	6,000	1,499	4,467
Commercial, Institutional, and Industrial	239	2,416	0	0	2,416
Irrigation	63	240	0	0	240
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	**3,665**	**5,624**	**6,000**	**1,499**	**7,123**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. Account projections based on growth rate of 3.4 percent. It is assumed that all new connections will be metered.

Table 11 Water Deliveries – Projected 2020 (Guidebook Table 6)
2010 Urban Water Management Plan
City of Galt

	2020				
	Metered		Not Metered		Total
Water Use Sectors	**# of accounts**	**Deliveries, acre-feet per year**	**# of accounts**	**Deliveries, acre-feet per year**	**Deliveries, acre-feet per year**
Single- and Multi- Family Residential	10,974	4,559	0	0	4,559
Commercial, Institutional, and Industrial	273	2,512	0	0	2,512
Irrigation	72	250	0	0	250
Agriculture	0	0	0	0	0
Other	0	0	0	0	0
Total	**11,319**	**7,321**	**0**	**0**	**7,321**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. Account projections based on growth rate of 3.4 percent. It is assumed that all new connections will be metered.

Table 12 Water Deliveries – Projected 2025 and 2030 (Guidebook Table 7) 2010 Urban Water Management Plan City of Galt				
	2025		2030	
	Metered		Metered	
Water Use Sectors	**# of accounts**	**Deliveries, acre-feet per year**	**# of accounts**	**Deliveries, acre-feet per year**
Single- and Multi- Family Residential	12,872	5,351	15,076	6,273
Commercial, Institutional, and Industrial	312	2,870	357	3,284
Irrigation	82	285	94	326
Agriculture	0	0	0	0
Other	0	0	0	0
Total	**13,266**	**8,506**	**15,527**	**9,883**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
2010 Water Distribution System Master Plan - Buildout assumed in 2030.
1. Account projections based on growth rate of 3.4 percent. It is assumed that all connections (new and existing) will be metered by 2025.

3.3.1 Sales to Other Agencies

To date, the City has made no sales of treated water to other agencies, nor does the City anticipate any in the future.

3.3.2 Total Water Demands

The City's total water demands are summarized in Table 13.

Table 13 Total Water Use (Guidebook Table 11) 2010 Urban Water Management Plan City of Galt						
Water Use	**2005**	**2010**	**2015**	**2020**	**2025**	**2030**
Total water deliveries	5,300	5,174	7,123	7,321	8,506	9,883
Sales to other water agencies	0	0	0	0	0	0
Additional water uses and losses	0	0	0	0	0	0
Total, acre-feet per year	**5,300**	**5,174**	**7,123**	**7,321**	**8,506**	**9,883**
Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare of 2010 Urban Water Management Plan" by DWR.						

3.3.3 Lower Income Household Water Use Projections

The City's 2008-2013 Housing Element has been in the process of an update for the last several years. The Draft 2008-2013 Housing Element (November 2011) is currently under review by the California Department of Housing and Community Development (HCD). The City has not yet adopted the 2008-2013 Housing Element. Action is expected in 2013.

The most recent Sacramento Area Council of Governments (SACOG) Regional Housing Needs Plan (RHNP) has determined that Galt has a housing construction need of 635 units for the planning period 2006 - 2013. Of these units, 21.6 percent should be affordable to very low- and extremely low-income households, 10.4 percent to low-income households, 14.7 percent moderate-income households, and 53.2 percent above moderate-income households. Extremely low-, very low- and low-income housing needs represent 203 housing units of the City's total housing allocation.

Between January 1, 2006, and July 1, 2009, 56 housing units were built or had building permits finalized for units affordable to lower income households. The City has approved a tentative map of a development anticipated to be affordable to 247 low-income households and has enough vacant land to accommodate at least 223 additional units affordable to lower income households.

Some of the policies related to providing low-income housing in the City's 2008-2013 Draft Housing Element are listed below.

- Encourage the development of housing to meet the needs of extremely low-, very low- and low-income families.
- Allow for the development of affordable housing. The City shall not disapprove developments or condition project approvals in a manner that would make the projects infeasible.

- Review progress toward meeting housing affordability targets and implementation of each housing policy.
- Offer density bonuses and other incentives for construction of affordable housing.
- Encourage developers to utilize innovative approaches to providing affordable housing in the City.

The City will work on determining the estimated water demand per low-income housing unit for the 2015 UWMP update.

3.4 WHOLESALE WATER DEMAND PROJECTIONS

To date, the City has not purchased treated water from a wholesale supplier, nor does the City anticipate any in the future. The City does not wholesale treated water to other agencies, nor does the City plan to in the future.

3.5 WATER USE REDUCTION PLAN

The 2015 and 2020 conservation targets calculated for the City do not represent a significant effort to reach. In 2010, the City usage was 195 gpcd and the water use target for 2015 is 194 gpcd. Therefore, meeting the 2015 target should not be difficult for the City.

From 2009 to 2010 City water usage decreased by 17 gpcd. This decrease may have been due to the recession, local business closures, or a reduction in active connections (vacancies). The savings associated with the demand management measures that the City is currently implementing and plans to implement will result in a reduction of water use, helping the City meet the 2020 water use target. The City will avoid placing a disproportionate burden on any customer sector to meet the 2020 water use target.

Chapter 4

SYSTEM SUPPLIES

This section describes the sources of water available to the City of Galt (City).

4.1 WATER SOURCES

The Urban Water Management Planning Act (UWMPA) requires that the Urban Water Management Plan (UWMP) include a description of the agency's existing and future water supply sources for the next 20 years. The description of water supplies must include detailed information on the groundwater basin such as water rights, determination if the basin is in overdraft, adjudication decree, and other information from the groundwater management plan; see excerpt below.

> *10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:*
>
> *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) [to 20 years or as far as data is available]. 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:*
>
> *10631 (b) (1) A copy of any groundwater management plan adopted by the urban water supplier…*
>
> *10631 (b) (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 board has adjudicated the rights to pump groundwater…For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted…*
>
> *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 (b) (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 reasonable available, including, but not limited to, historic use records.*

4.1.1 Water Supply Facilities

The City currently utilizes local groundwater as its sole water supply source. The City extracts its water supply from the underlying groundwater San Joaquin Valley Basin Cosumnes Subbasin via eight active groundwater wells scattered throughout the water service area (refer to Figure 1). The pumping capacities of the City active wells (Table 14) currently range from 600 to 1,900 gallons per minute (gpm).

Table 14 Water Supply Wells 2010 Urban Water Management Plan City of Galt				
Well Name	**Well No.**	**Depth, feet**	**Flow, gpm**	**Notes**
Emerald Oaks	9	600	400	Not in-service due to elevated nitrate levels. Will be abandoned.
Creekside	11	660	650	Not in-service due to declining capacity, well condition, and casing. Will be abandoned.
Quail Hollow	13	470	450	Not in-service due to declining capacity, condition of pump and motor, and elevated arsenic levels. Will be abandoned.
Gateway	14	750	600	Water treated for manganese at the site.
Fumasi	15	652	700	Water treated at Fumasi WTP for manganese and arsenic. Currently only used for fire flow condition. Future rehab of filters and replacement of media scheduled.
Carillon	16	870	1,500	Water treated at Carillon WTP for manganese and arsenic.
Golden Heights	17	930	1,250	Water treated at the Golden Heights WTP for manganese. Well is in stand-by mode. Well will only be used during peak summer months, at an anticipated flow of approximately 1,150 gpm. (1)
Golden Heights	21	1,539	1,700	Water treated at the Golden Heights WTP.
River Oaks	18	91 3	1,300	Water treated at the Carillon WTP for manganese and arsenic.
Industrial Park	19	1,000	1,900	Water treated at the Industrial WTP for arsenic.
Monterey Bay	20	850	1,450	Water treated at the Golden Heights WTP for manganese. Well continuously used.

Notes:
1. Currently, the Golden Heights WTP does not have enough filtration capacity for the Golden Heights Well and the Monterey Bay Well to operate simultaneously. Upgrade of the WTP is almost complete. The anticipated treatment capacity is 4,500 gpm.

4.1.2 Current and Projected Water Supplies

Table 15 summarizes the current and projected water supply sources for the City.

Table 15 Water Supplies - Current and Projected (Guidebook Table 16) 2010 Urban Water Management Plan City of Galt					
Water Supply Sources	**Projected Supply (acre-feet per year)**				
Water purchased from:	**2010**	**2015**	**2020**	**2025**	**2030**
Wholesaler	0	0	0	0	0
Supplier-Produced Groundwater(1)	5,174	7,123	7,321	8,506	9,883
Supplier-Produced Surface Water	0	0	0	0	0
Transfers In	0	0	0	0	0
Exchanges In	0	0	0	0	0
Recycled Water	0	0	0	0	0
Desalinated Water	0	0	0	0	0
Other	0	0	0	0	0
Total	**5,174**	**7,123**	**7,321**	**8,506**	**9,883**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

1. Water supply estimates based on projected water demands. Assumed groundwater supply can be sufficiently increased to meet water demands.

4.1.2.1 Wholesale Supplies

The City does not purchase treated water from any other agencies.

4.2 GROUNDWATER

The City is located within the geomorphic province known as the Central Valley, which is divided into the Sacramento Valley and the San Joaquin Valley. The groundwater underlying the City is part of the larger San Joaquin Valley Groundwater Basin within the San Joaquin River Hydrologic Region. The City relies upon groundwater from the Cosumnes Subbasin (Department of Water Resources Groundwater Basin Number 5-22.16) of the San Joaquin Valley Groundwater Basin as its sole source of domestic potable water. The Cosumnes Subbasin is an unadjudicated basin that supports both municipal and agricultural users. Department of Water Resources (DWR) Bulletin 118, "California's Groundwater" contains a detailed description of the Cosumnes Subbasin and its characteristics and conditions. A copy of the Cosumnes Subbasin description is included in Appendix C (last updated in February 3, 2006).

Regarding the status of the Cosumnes Subbasin, Bulletin 118, as prepared by DWR, provides the following water balance discussion:

"Montgomery Watson Consultants (1993) developed a groundwater model for Sacramento County. A subsequent model was developed for San Joaquin County by Montgomery

Watson as part of the American River Water Resources Investigation (USBR 1996). Based on running these models together and with data updates, Bookman- Edmonston/Navigant Consulting provided estimates of several groundwater budget components for an area generally corresponding to the Cosumnes Subbasin. The data represent an average budget for the period from 1970 to 1995. Basin inflows include natural and applied water recharge, which total 269,518 acre-feet (af). Subsurface inflow and outflow are not known specifically, but the model indicates that there is a net subsurface outflow of 144,551 af. Other groundwater outflows include annual urban extraction of 35,063 af, and agricultural extraction calculated by the model of 94,198 af."

Based upon the water balance provided in Bulletin 118, groundwater outflows exceed groundwater inflows by approximately 4,300 acre-feet per year (AFY), suggesting a basin overdraft situation may exist. However, assuming a +/- 5 percent error, the water balance deficit of 4,300 AFY is potentially inconclusive with regard to the overall health of the basin.

Furthermore, DWR has continuously monitored the groundwater level at the City's Gateway Well since 1961. Over the period of record, there are two distinctive periods of declining ground water levels (first period is from 1963 to 1980 and the second is from 1984 to 1992). In each instance, over time, the groundwater levels have recovered such that the depth to groundwater either met or exceeded the groundwater level at the beginning of the period of decline. Figure 2 shows the groundwater levels at the well from 1961 to 2011.

Galt's groundwater wells were historically drilled to a depth of approximately 1,000 feet. At these depths, the groundwater quality in the City typically requires treatment for manganese and arsenic. In recent years, City staff learned that the City of Elk Grove drilled a well to a new aquifer at a depth of approximately 1,700 feet. This deeper aquifer (Merhten Formation) has low arsenic levels and has also been producing a higher water flow yield.

The City installed the Kost Road Monitoring Well in the same lower aquifer and found no detectable arsenic levels. For this reason, the City constructed a deep well at the Golden Heights location.

4.2.1 Groundwater Management Plan

The City participated with the South Area Water Council in preparation of a South Basin Groundwater Management Plan (GWMP). The October 2011 South Basin GWMP is included in Appendix D. Historical GWMPs that cover the Cosumnes Subbasin include the Southeast Sacramento County Agricultural Water Authority GWMP (December 2002), Sacramento Metropolitan Water Authority GWMP (December 2003), Eastern San Joaquin Groundwater Basin GWMP (September 2004), and the GWMP North San Joaquin Water Conservation District (May 1996).

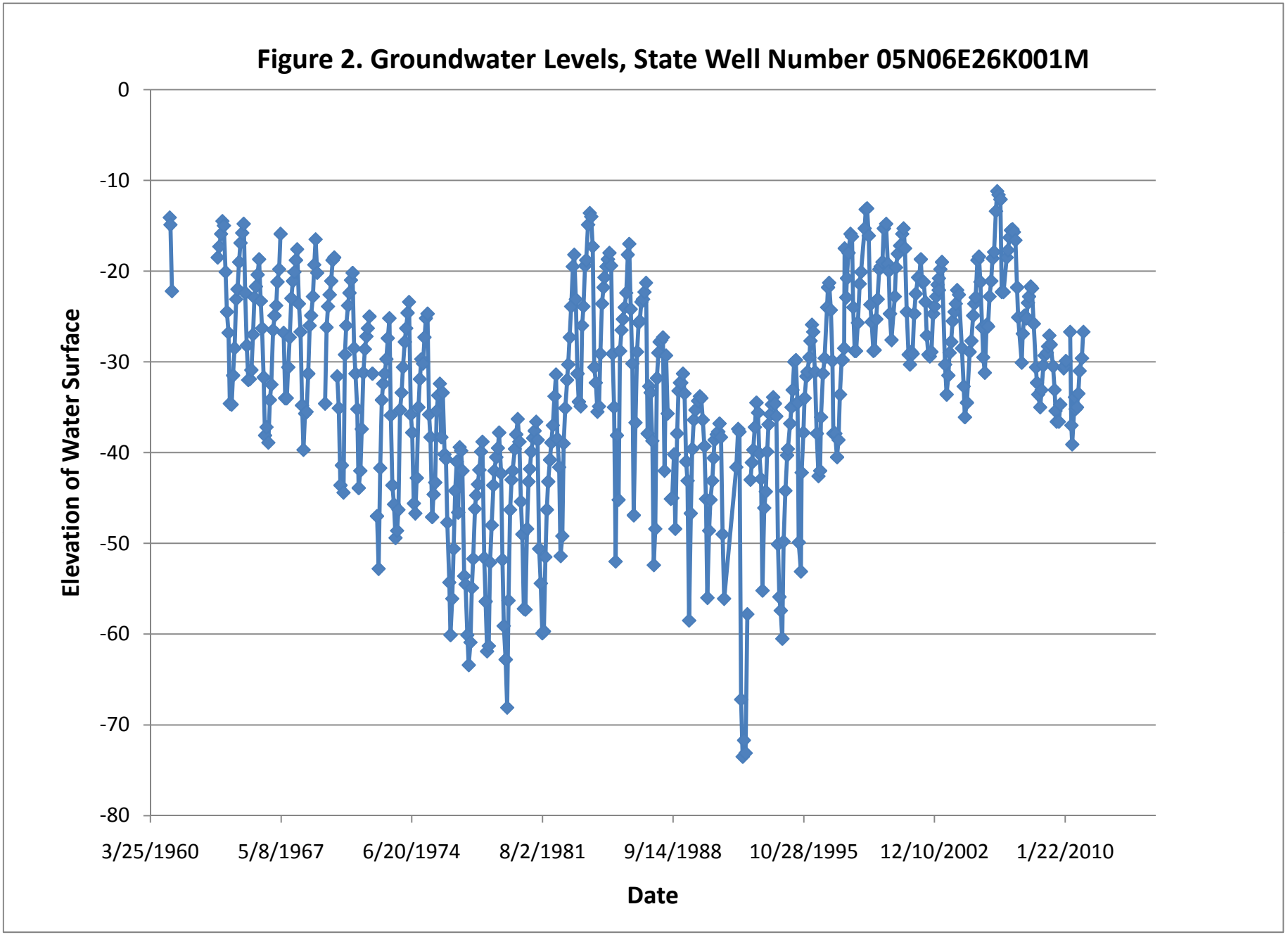
Figure 2. Groundwater Levels, State Well Number 05N06E26K001M
Elevation of Water Surface
0
-10
-20
-30
-40
-50
-60
-70
-80
3/25/1960
5/8/1967
6/20/1974
8/2/1981
9/14/1988
10/28/1995
12/10/2002
1/22/2010
Date

4.2.2 Existing and Projected Groundwater Pumping

The City's current sole source of supply is groundwater, which is extracted from the underground aquifers via eight active groundwater wells. The historical volume of groundwater pumped by the City over the past five years is provided in Table 16. The City's water supplies are entirely obtained from the San Joaquin Valley Groundwater Basin Cosumnes Subbasin.

Table 16 Groundwater – Volume Pumped (Guidebook Table 18)
2010 Urban Water Management Plan
City of Galt

Basin Name	Metered or Unmetered	2006	2007	2008	2009	2010
San Joaquin Valley Basin Cosumnes Subbasin	Metered(1)	5,668 AFY	6,203 AFY	5,953 AFY	5,741 AFY	5,174 AFY
Percent of total water supply			**100**	**100**	**100**	**100**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. Metered at Wells.
2. AFY = acre-feet per year

The projected amount of groundwater to be pumped through year 2030 (Table 17) is based on demand projections and incorporates water conservation associated with SBx7-7. The projected supply available to the City assumes that new wells will be developed in the future if warranted by demand.

Table 17 Groundwater – Volume Projected to be Pumped (Guidebook Table 19)
2010 Urban Water Management Plan
City of Galt

Basin Name	2015	2020	2025	2030
San Joaquin Valley Basin Cosumnes Subbasin	7,123 AFY	7,321 AFY	8,506 AFY	9,883 AFY
Percent of Total Water Supply	**100**	**100**	**100**	**100**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
Volume is based on demand projections and incorporates water conservation associated with SBx7-7.
1. AFY = acre-feet per year

As shown in Table 17, the City anticipates it can supply all of its water demands with groundwater from the Cosumnes Subbasin through the planning horizon. Future supply projects planned for groundwater are discussed in Section 4.6.

4.3 TRANSFER OPPORTUNITIES

The UWMPA requires the UWMP to address the opportunities for development of short or long-term transfer or exchange opportunities; see excerpt below.

> *10631 (d. Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

As stated in previous updates of the UWMP, the City is relatively isolated from neighboring potable water systems and, due to this isolation, the City is not participating in any inter-connection programs with neighboring purveyors. Therefore, transfer or exchange opportunities are not immediately available to the City.

4.4 DESALINATED WATER OPPORTUNITIES

The UWMPA requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water and groundwater; see excerpt below.

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

At the present time, the City does not foresee any opportunities for the use of desalinated water, including ocean water, brackish ocean water, and brackish groundwater, as a long-term supply. Because the City is not located in a coastal area, it is not practical nor economically feasible to implement a seawater desalination program. Additionally, groundwater in the region is not brackish in nature.

4.5 RECYCLED WATER OPPORTUNITIES

The UWMPA requires that the UWMP address the opportunities for development of recycled water, including the description of existing recycled water applications, quantities of wastewater currently being treated to recycled water standards, limitations on the use of available recycled water, an estimate of projected recycled water use, the feasibility of said projected uses, and practices to encourage the use of recycled water; see excerpt below.

> *10633. 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.*

The City's Recycled Water Evaluation Plan (June 2010) explored the feasibility of utilizing recycled water as a new source of water for landscape and/or agricultural irrigation within and near its existing and future City limits. The use of recycled water would supplement the groundwater supply typically used for these demands. The wastewater system and potential recycled water system are discussed below.

4.5.1 Wastewater Collection and Treatment Systems

The City owns, maintains, and operates the Wastewater Treatment Plant (WWTP), gravity sewer pipelines and forcemains, sewer lift stations, and pump stations. The WWTP is located west of Highway 99 and north of Twin Cities Road. The City collects wastewater from residential, commercial, institutional, and industrial customers within the service area. The WWTP is permitted for 3.0 million gallons per day (mgd). It currently operates at approximately 2.2 mgd. Treated effluent is used for irrigation purposes and/or is discharged to the Laguna Creek.

In January 2004, the Central Valley Regional Water Quality Control Board (RWQCB) adopted a new National Pollutant Discharge Elimination System (NPDES) permit (No. CA0081434) for the City WWTP. The NPDES permit, as adopted, required full compliance with a number of new effluent limits no later than November 2008; however, the new effluent limits were substantially vacated as a result of an appeal by the City to the State Water Resources Control Board (SWRCB). SWRCB policy requires that limitations established in accordance with the California Toxics Rule be met no later than May 18, 2010 (if discharging).

The WWTP consists of secondary treatment, tertiary filtration, and ultraviolet disinfection. Treatment processes include coarse bar screening, activated sludge, extended aeration in two oxidation ditches, two secondary clarifiers, tertiary filtration, and ultraviolet disinfection. Prior to the addition of UV disinfection the WWTP utilized chlorine gas disinfection and dechlorination with sulfur dioxide. To meet the NPDES discharge requirements, tertiary filtration, ultraviolet disinfection, and biosolids improvements (vacuum assisted dewatering system) were constructed (Tertiary Upgrade Project). The WWTP also includes an Effluent Storage Reservoir with a capacity of 70 million gallons.

4.5.2 Wastewater Disposal

The City owns and operates an agricultural reuse site where fodder crops are grown (crops that are not directly used for human consumption). The reuse site consists of 186-acres of agricultural property. The treated effluent, used at the reuse site, can be undisinfected secondary or disinfected tertiary treated recycled water. Treated effluent is pumped from the Effluent Storage Reservoir and applied to the reuse site. The reservoir is filled with undisinfected secondary or disinfected tertiary treated effluent primarily when the plant is not discharging to surface waters. Disinfected recycled water is discharged to Laguna Creek through an outfall to the Skunk Creek channel, downstream of the dam constructed

to impound the Effluent Storage Reservoir. The City is not required to discharge a specified amount to the Laguna Creek.

In the past, the City has land-applied biosolids within the 186-acre reuse site. In recent years, biosolids have been dewatered and hauled offsite by Synagro rather than land applied. In 2011, biosolids were dewatered using the new dewatering system and stored on site. The City plans to resume land application of biosolids at the WWTP (2012 Nutrient Management Plan Annual Report, February 2012).

The recycled water system is not used for irrigation when there is no irrigation demand during the wet season (typically November through March) and there is the possibility of NPDES permit violations for exceeding agronomic application rates and during biosolids application, disking, seeding, and cropping practices, which typically occur during March/April and October/November.

In 2011, the City applied recycled water (335 million gallons) to the reuse site from April through October (2012 Nutrient Management Plan Annual Report, February 2012). In 2012, recycled water was applied from May through September (average of monthly averages, 2.28 mgd). Future irrigation use is based on the assumption that the 2012 irrigation practices will be the normal operation on the existing reuse site.

Tables 18 and 19 contain current and projected wastewater collection, recycled water production, and recycled water disposal. For this UWMP it is assumed that recycled water will be used for irrigation at the reuse site and creek discharge. Disinfected tertiary effluent will be discharged to the creek when the irrigation flow rate is less than the WWTP effluent flow rate. The amount of recycled water used for irrigation will increase if the area available for irrigation increases in the future.

Table 18 Recycled Water – Wastewater Collection and Treatment (Guidebook Table 21) 2010 Urban Water Management Plan City of Galt

Type of Wastewater	2005	2010	2015	2020	2025	2030
Wastewater Collected and Treated in Service Area[1] (mgd)	2.14	2.19	3.50	4.16	4.90	5.60
Volume that meets recycled water standard[2] (mgd)	2.10	2.18	3.43	4.08	4.80	5.49

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

1. 2005 and 2010 flows are from plant records. Projected amounts from 2015 to 2030 are from the Wastewater Collection System Master Plan, May 2010.
2. 2005 and 2010 flows are flow plant records. Volume of water lost in treatment one to two percent (2005 and 2010). A two-percent loss was assumed for 2015-2030 estimates. WWTP can produce disinfected tertiary recycled water (2012 Nutrient Management Plan Annual Report, February 2012).

Table 19 Recycled Water – Non-Recycled Wastewater Disposal (Guidebook Table 22) 2010 Urban Water Management Plan City of Galt						
Method of Disposal	**Treatment Level**	**2010**	**2015**	**2020**	**2025**	**2030**
Creek discharge	Disinfected Tertiary	0.96	1.15	1.80	2.52	3.21
WWTP Reuse Site Irrigation	Undisinfected Secondary or Disinfected Tertiary	1.22	2.28	2.28	2.28	2.28
	Total (mgd)	**2.18**	**3.43**	**4.08**	**4.80**	**5.49**

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

1. 2010 flows are from plant records. Reuse site estimates based on 2012 irrigation practices on the existing reuse site area. Recycled water typically applied between May and September.

4.5.3 Potential Uses of Recycled Water

No infrastructure exists at this time to support recycled water use within the City. Approved uses of recycled water the City could implement in the future if a distribution system was constructed are shown in Table 20.

Table 20 Title 22 Approved Uses of Recycled Water 2010 Urban Water Management Plan City of Galt		
Treatment Level	**Approved Uses**	**Total Coliform Standard (Median)**
Disinfected Tertiary Recycled Water	Spray Irrigation of Food Crops Landscape Irrigation(1) Nonrestricted Recreational Impoundment	2.2/100 mL
Disinfected Secondary – 2.2 Recycled Water	Surface Irrigation of Food Crops Restricted Recreational Impoundment	2.2/100 mL
Disinfected Secondary – 23 Recycled Water	Pasture for Milking Animals Landscape Irrigation(2) Landscape Impoundment	23/100 mL
Undisinfected Secondary Recycled Water	Fodder, Fiber, Seed Crops	NA

Notes:

1. Includes unrestricted access golf courses, parks, playgrounds, school yards, and other landscaped areas with similar access.
2. Includes restricted access golf courses, cemeteries, freeway landscapes, and landscapes with similar public access.

The June 2010 Recycled Water Evaluation Plan identified a total of 63 potential recycled water customers, which included existing and future landscape irrigation customers, existing industrial customers, future landscape irrigation of commercial, industrial, and high

density residential land use areas, and irrigated areas within the Caltrans right of way of Highway 99.

Future development of a recycled water distribution system will require the construction of transmission system to serve potential existing and future customers. The implementation of these improvements will depend on the proximity to the WWTP as well as the City's growth patterns. A possible phasing of the improvements identified in the Recycled Evaluation Plan was developed based on the phasing of improvements in the Water Distribution System Master Plan and proximity to the WWTP. At this time, the potential future use quantities of recycled water cannot be estimated (Table 21) due to the timing, cost of the recycled water distribution system, and lack of nearby recycled water users.

Table 21 Recycled Water – Potential Future Use (Guidebook Table 23)
2010 Urban Water Management Plan
City of Galt

User Type	Description	Feasibility	2015	2020	2025	2030
Irrigation	Disinfected Tertiary Recycled Water	Feasible	0	0	0	0
		Total (acre-feet per year)	0	0	0	0

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

4.5.4 Encouraging Recycled Water Use

The City supports use of recycled water and has taken steps to promote and expand the use of reclaimed water and promote awareness among City stakeholders. No financial strategies have been developed, since the recycled water distribution system only exists in concept at this time. The only customer utilizing recycled water is the City.

4.5.5 Recycled Water Use Optimization Plan

At the present time, a Recycled Water Use Optimization Plan has not been developed because the recycled water distribution system only exists in concept at this point.

4.6 FUTURE WATER PROJECTS

The current City policy is to accommodate new potable water demands through additional groundwater pumping. This pumping capacity is to be provided via new wells equipped with treatment facilities for disinfection, as well as for the removal of iron, manganese, or other constituents as required by California Department of Public Health standards.

Table 22 contains the future water projects listed in the 2010 Water Distribution System Master Plan Capital Improvement Plan (CIP). Timing of the projects reflects the project phasing shown in the CIP; however, the timing of these projects may be postponed due to changes in population growth and water demands. The actual timing of the projects is

unknown, with the exception of the Golden Heights WTP upgrade. The project capacities have not been totaled in the table as some of the well projects may replace existing wells or projects reflect upgrades to existing water treatment plants (WTPs). The Golden Heights WTP and the Kost Well and WTP projects are described below.

Table 22 Future Water Supply Projects (Guidebook Table 26)
2010 Urban Water Management Plan
City of Galt

Project Name	Projected Start Date	Projected Completion Date[(1)]	Potential Project Constraints	Supply
Golden Heights WTP Upgrade (existing capacity 1,815 gpm)	--	2013	--	4,500 gpm
Kost Well	--	2015	--	2,000 gpm
Industrial Park WTP Upgrade (existing capacity 1,360 gpm)	--	2015	--	4,160 gpm
Kost WTP	--	2015	--	4,200 gpm
Five Wells (1,400 gpm each)	--	2015	--	7,000 gpm
Carillion WTP Upgrade (existing capacity 2,700 gpm)	--	2015	--	5,500 gpm
One Well	--	2020	--	1,400 gpm
Future WTP and Three Wells	--	2020	--	4,200 gpm
Future WTP and Three Wells	--	2030	--	4,200 gpm

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. Project completion date reflects the project phasing shown in the Capital Improvement Plan.

4.6.1 Golden Heights WTP

The existing Golden Heights WTP can treat water from the Golden Heights well or the Monterey Park well. Currently the WTP only has the treatment capacity to treat one well at a time. New filters are needed to treat more than one well at a time.

A deep well has been added to the Golden Heights site and improvements to the filter system to increase capacity are almost complete. With the completion of improvements to the filter system, the Golden Heights WTP anticipated treatment capacity is 4,500 gpm. It may be possible to run all three wells at the same time using blending techniques. This would be a significant increase to the City's water system capacity. This project should be completed by the middle of 2013.

4.6.2 Kost Well and Water Treatment Plant

In 1991, the Kost reservoir was built. Since there is no well at the site, the reservoir is filled through a flow control valve that allows water to flow into the reservoir during periods of higher pressure. It is difficult to fill the reservoir during the summer months and sustain enough pressure in the system.

A new deep well and WTP are planned for this location to fill the reservoir. The CIP scheduled this project in the 2009-2015 time period. This project would give the City more redundancy and provide better water pressures to the south end of the City. The Kost Well would replace the Fumasi and Gateway Wells, which would be placed in standby. It is anticipated that the Kost Well would have a capacity of 2,000 gpm. The filter vessels at the Creekside WTP may be utilized at the Kost WTP.

Chapter 5

WATER SUPPLY RELIABILITY AND WATER SHORTAGE CONTINGENCY PLANNING

The Urban Water Management Planning Act (UWMPA) requires that the Urban Water Management Plan (UWMP) address the reliability of the agency's water supplies. This includes supplies that are vulnerable to seasonal or climatic variations. In addition, an analysis must be included to address supply availability in a single-dry year and in multiple-dry years; see excerpt below.

> *10631 (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."*
>
> *10631 (c) (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 replace that source with alternative sources or water demand management measures, to the extent practicable.*

5.1 WATER SUPPLY RELIABILITY

There are two aspects of supply reliability that can be considered. The first relates to immediate service needs and is primarily a function of the availability and adequacy of the supply facilities. The second aspect is climate-related, and involves the availability of water during mild or severe drought periods.

When assessing the adequacy of the water supply, the City of Galt's (City) current water system is limited to the pumping and water system storage capacity. If warranted by demand, it is assumed the City would construct new wells and supply facilities. When assessing the vulnerability of the water supply due to seasonal or climatic changes, the City groundwater supply has not been impacted in the past due to seasonal or climatic changes.

Table 23 contains a summary of factors affecting water supply reliability.

5.1.1 Water Quality

The UWMPA requires that the UWMP include a discussion of water quality impacts on the reliability of an agency's water supplies; see excerpt below.

> *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.*

In general, groundwater quality in the Cosumnes Subbasin has a limited effect on the City's ability to provide its service area with a reliable source of high quality drinking water.

Table 23	Factors Resulting in Inconsistency of Supply (Guidebook Table 29) 2010 Urban Water Management Plan City of Galt						
Water Supply Sources[1]	Specific Source Name	Limitation Quantification[2]	Legal	Environmental	Water Quality[3]	Climatic	Additional Information
Groundwater	San Joaquin Valley Basin Cosumnes Subbasin	Yes	-	-	Yes	-	-

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.
1. From Guidebook Table 16 (Table 16 in this report).
2. Limited by pumping capacity.
3 Water quality factors may require additional treatment of the groundwater.

The groundwater is typically only treated for manganese and arsenic before distribution. Due to the nature of the groundwater quality, no future unaddressed impacts have been identified.

5.2 WATER SHORTAGE CONTINGENCY PLANNING

The UWMPA requires that the UWMP include an urban water shortage contingency analysis that addresses specified issues; see excerpt below.

> *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.*
>
> *10632 (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.*
>
> *10632 (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.*
>
> *10632 (f) Penalties or charges for excessive use, where applicable.*

On February 2, 1993, the City Council enacted Ordinance No. 93-01, which added Chapter 13.10 (Water Conservation), to the City Municipal Code (Appendix E). The ordinance prohibits the waste of water and contains prohibitions and actions during times of water supply shortages. The Chapter defines four stages of action. It is envisioned that demand

can be reduced up to 50 percent under provisions of this ordinance. The four stages of action are as noted in Table 24.

Table 24	**Water Shortage Contingency – Rationing Stages to Address Water Supply Shortages (Guidebook Table 35) 2010 Urban Water Management Plan City of Galt**	
Stage No.	**Water Supply Conditions**	**% Shortage**
1	Normal Water Supply	0
2	Water Alert	30
3	Water Warning	40
4	Water Crisis (Emergency)	50
Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan" by DWR.		

For planning purposes, the City has assumed that the above stages could result in water shortages created by a loss of pumping capacity caused by either well or distribution system failure.

Section 10620 (d)(2) of the California Water Code requires that the City coordinate, to the extent practicable, preparation of its urban water shortage contingency plan with other urban water suppliers and public agencies in the area. The City does not have any interconnections between its potable water system and potable water systems operated by other water suppliers.

The City Manager is to establish the state of the water use policy that shall be in effect from time to time based upon recommendations from the City Engineer. Such recommendations from the City Engineer may be based upon, but will not be limited to, times of drought, prolonged power outages or perception of such, natural disasters or water generation, or transmission system failures.

5.2.1 Emergency/Disaster Response Plan

The UWMPA requires that the UWMP include an urban water shortage contingency analysis that addresses a catastrophic interruption of water supplies; see excerpt below.

> *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 (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.*

The City has assessed the reliability of the supply in terms of the pumping ability during a sudden catastrophic event that has the potential for limiting the City's ability to produce and pump groundwater. Examples of potential catastrophic events that may cause a

mechanically related water shortage could include flooding, major fire emergencies, regional power outage, an earthquake, water contamination, and acts of sabotage.

The following scenarios are of concern to the City regarding its ability to provide water service. The scenarios are listed in order of relative priority, beginning with the worst case:

- An earthquake that disrupts both the City's distribution system and power supply
- Loss of supply due to groundwater contamination, from a sudden spill or unidentified leak that enters the groundwater from surface seepage
- Contamination that may spread throughout the groundwater basin
- Bacterial contamination due to pipeline failure
- Civil disturbance and purposeful interruption of water service

The inherent redundancy of the City water system (multiple independent wells, treatment facilities, generators, and storage tanks) helps to alleviate some of the risk from the catastrophic events listed above.

On March 5, 1995, the City Council adopted Resolution No. 95-35 amending the emergency notification procedures for water contamination incidents that are defined as "Acute Health Risks" in Section 64465 of Chapter 15, Title 22 of the California Code of Regulation, and the notification programs as defined in Title 22, Chapter 15 of the California Code of Regulations beginning with Section 64414-1 to Section 64467-1.

5.2.2 Stages of Action

Upon determination of the water use policy stage and, thereafter, any upgrade or downgrade of such stage, the City Manager is to determine the means by which the City will notify the residents. Notification may be achieved through newspaper, public notice, mailings, and utility billings or by a combination of such means as determined by the City Manager. The City's four-stage rationing plan prohibitions are described below.

5.2.2.1 Stage 1 – Normal Water Supply

1. The waste of water is prohibited. "Waste of water" under this section shall mean allowing water to escape from the water supply at the rate of one quart or more per hour from any leaky, worn or broken faucets, valves, pipes or other fixtures, or permitting water to run from any hose, hose nozzle, valve or sprinkler in a wasteful, useless or non-beneficial manner.

2. Free flowing water hoses shall be prohibited except where used for filling troughs, pools, spas, ponds, or similar uses. Automatic shutoff devices shall be used on all hoses for the purposes of watering lawns or gardens or for the washing of vehicles, boats, equipment, driveways, sidewalks, or similar uses.

3. All leaking water lines and/or faulty sprinkler systems must be repaired within five days. At the discretion of the City's public works department, and upon a showing or just cause by the use, the five-day limit may be extended. Any water line beyond and including the connection to the curb stop shall be the resident's responsibility for repair and replacement.

4. All pools, spas, ponds, and ornamental fountains shall be equipped with a re-circulating pump and shall be constructed in a leak-proof manner. Draining and refilling of such structure shall be allowed only for health, maintenance, or structural considerations.

5.2.2.2 Stage 2 – Water Alert

1. All requirements of Stage 1 apply, and in addition, landscape and pasture irrigation shall be limited to a maximum of three days per week, when necessary, and shall be based on the following odd-even schedule:

    a. Customers with street addresses ending with an even number may irrigate only on Wednesday and/or Friday and/or Sunday;

    b. Customers with street addresses ending with an odd number may irrigate only on Tuesday and/or Thursday and/or Saturday;

    c. No irrigation will be permitted on Mondays.

2. Draining and refilling of pools, spas, and ponds shall be allowed for health, maintenance, or structural considerations, after approval by the City Engineer. Customer requests for approval must be substantiated in writing by a pool consultant or equivalent.

3. Restaurants shall serve water only upon specific request.

4. No washing of sidewalks, streets, driveways, parking lots, structures, or similar uses will be allowed except as necessary for health, sanitary, or fire protection purposes.

5. Washing of vehicles, boats, equipment, etc. shall be accomplished under the following restrictions: water buckets shall be utilized and automatic shutoff devices shall be used for rinsing durations not to exceed three minutes.

5.2.2.3 Stage 3 – Water Warning

1. All requirements of Stage 1 and Stage 2 apply, except that: Watering lawns, flowerbeds, landscaping, and similar uses will be limited to two days per week with even addresses watering on Wednesdays and/or Sundays and odd addresses watering on Tuesdays and/or Saturdays.

2. The Director of Public Works of the City shall take the following precautions:

a. Flushing of sewers or fire hydrants shall be limited to essential operations for the benefit of public health or welfare;

b. Construction water usage, such as dust control, trench jetting, and compaction will be permitted only under specific authorization of the Director of Public Works;

c. On any construction site, no water shall be used for the cleaning of vehicles, equipment or fixed works.

3. The washing of sidewalks, streets, driveways, parking lots, structures, or similar uses is prohibited except as authorized in writing by the City Engineer.

5.2.2.4 Stage 4 – Water Crisis (Emergency)

1. All requirements of Stage 1, Stage 2, and Stage 3 shall apply except that: Landscaping and pasture irrigation with potable water is prohibited;

2. The washing of vehicles, boats, equipment, etc. is prohibited except at a commercial establishment that utilizes recycled or partially recycled water.

3. No potable water from the City's system shall be used to fill or refill any pools, spas, or ponds, etc. Use of ornamental fountains is prohibited.

4. No potable water from the City's system shall be used for construction purposes.

Table 25 summarizes the key prohibitions for each stage.

Table 25 Water Shortage Contingency – Mandatory Prohibitions (Guidebook Table 36) 2010 Urban Water Management Plan City of Galt

Examples of Prohibitions	Stage When
Free flowing hoses prohibited except where used for filling pools, etc.	1
No washing of sidewalks, streets, driveways, parking lots, etc., except as necessary for health, sanitary, or fire protection purposes	2
No washing of sidewalks, streets, driveways, parking lots, etc.	3
No potable water shall be used for landscape and pasture irrigation	4
No washing of vehicles, boats , equipment, etc. with potable water	4
No potable water shall be used to fill or refill and pools, spas, or ponds	4
No use of ornamental fountains	4
No potable water shall be used for construction purposes	4

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

5.2.3 Consumption Reduction Methods

A summary of the consumption reduction methods is shown below in Table 26.

Table 26 Water Shortage Contingency – Consumption Reduction Methods (Guidebook Table 37)
2010 Urban Water Management Plan
City of Galt

Consumption	Stage When	% Water Use Reduction Projected[(1)]
Voluntary measures	1	10-20
Mandatory prohibitions	1	10-50

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

1. Percent water use reduction projected for Stages reflects the cumulative water use reduction projected from previous Stages implemented. For example the Mandatory rationing begins in Stage 1 but is carried forward through Stage 4, hence the inclusion of a projected 50 percent reduction.

5.2.4 Penalties and Charges

The penalties stated in this section are deemed to neither limit nor repeal any other powers granted under state or federal law, or municipal ordinances. Notice or each and all violations shall be given in writing to the occupant of the site of the violation, or to any person in control of such site, or posted on the site in a conspicuous location. Each day any violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such, except as otherwise indicated. The penalties for excessive use are summarized in Table 27.

5.2.5 Residential Users and Unmetered Commercial/Industrial Uses

Since many of the City's customers pay for water use based on a flat rate, consumption limits that would apply in the most restrictive stages of water shortage cannot be based on measured water use. Consequently, the proposed consumption limits for residential users are based on restrictions of a specific use.

5.2.6 Minimum Supply for Next Three Years

Section 10631 (e)(2) of the California Water Code requires that the City estimate the minimum water supply available at the end of the 12, 24, and 36 months, assuming the worst case water supply shortage.

The City's reliance upon groundwater for its sole source of supply has effectively insulated the City from feeling the effects of a prolonged drought. The only effect of a prolonged drought would be the increasing depth to groundwater due to a slower than normal aquifer recharge and the probable increase in agricultural pumping that could create a localized overdrafted condition.

Table 27 Water Shortage Contingency – Penalties and Charges (Guidebook Table 38) 2010 Urban Water Management Plan City of Galt	
Penalties or Charges	**Stage When Penalty Takes Effect**
Second offense $25 added to water bill	1-3
Third offense $50 added to water bill	1-3
Fourth offense $100 added to water bill	1-3
Fifth offense installation of a water meter at customers expense in addition to a $100 reconnection fee	1-3
Additional offenses $100 added to water bill, plus installation of a flow restrictors at customers expense	1-3
Second offense $100 added to water bill	4
Third offense $200 added to water bill	4
Fourth offense installation of a water meter at customers expense in addition to a $200 reconnection fee	4
Additional offenses $200 added to water bill, plus installation of a flow restrictors at customers expense	4
Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.	

To respond to this potential basin overdraft, the City has joined with the agricultural pumpers to further their overall understanding of the basin, such that an allowable basin yield can be defined along with specific basin management objectives to enhance the long-term reliability of the basin. As a result, water supply estimates for the three-year worst-case scenario would not significantly differ from normal years.

5.2.7 Mechanism for Determining Actual Reductions in Water Use

The UWMPA requires that the UWMP include a means to determine the actual water use reduction in the event of a water shortage; see excerpt below.

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

All of the City's sources of water supply are metered and production records are recorded daily and compiled into daily, weekly, and monthly summaries. These records can be used by the City to determine the actual reduction in water usage pursuant to the given stage of action under the Urban Water Shortage Contingency Plan.

Once the City is fully metered and all customers have transitioned to metered billing, water reductions can be determined based on meter readings for each customer.

5.2.8 Analysis of Revenue Impacts of Reduced Sales during Shortages

According to the UWMPA, the UWMP is required to include an urban water shortage contingency analysis that addresses the financial impacts from reduced water sales and proposed measures to overcome deficits (e.g., development of a reserve account or special rate adjustments); see except below.

> *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 (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.*
>
> *10632 (g) An analysis of the impacts of each of the proposed measures to overcome those revenue and expenditure impacts, such as the development of reserves and rate adjustments.*

The revenue impacts due to reduced water usage may be significant once the City has transitioned all water users to metered service connections and eliminated flat rates. Although the variable costs of supplying water will be reduced as water usage decreases, the fixed costs will remain constant. The variable costs are linked to the operation of the wells (power, chemicals, and usage-based maintenance). The fixed costs are independent of well operation and include the debt for the capital improvement associated with the development of the wells and salaries for maintenance and operations personnel.

To overcome a reduction in revenue due to a water shortage the City will adjust the water rates. It is recommended that the City develop a reserve fund sufficient to provide for the continued operation of the water system in the event of a decline in water service revenue.

5.3 DROUGHT PLANNING

This section considers the City's water supply reliability during three water scenarios: normal water year, single-dry water year, and multiple-dry water years. These scenarios are defined as follows:

Average Year: a year in the historical sequence that most closely represents median runoff levels and patterns. It is defined as the median runoff over the previous 30 years or more. This median is recalculated every 10 years.

Single-Dry Year: generally considered to be the lowest annual runoff for a watershed since the water-year beginning in 1903. Suppliers should determine this for each watershed from which they receive supplies.

Multiple-Dry Years: generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903.

The City does not typically experience the impact of droughts since the water supply consists solely of groundwater. As a result, water supply estimates for the single-dry year and multiple-dry years would not significantly differ from average years. The average year water demands through 2030 were estimated based on population projections and water use targets.

Table 28 provides a comparison of the water supply production capabilities of the City and the projected demands. Since the only source of water for the City is groundwater, a prolonged drought has historically had little extended effect upon the availability of supply. From experience, periods of drought have resulted in short-term increases in the depth to groundwater due to the slower-than normal aquifer recharge. To date the temporary increase in depth to groundwater has not impacted the City's ability to supply water nor has there been any significant impact upon the well water quality. Therefore, comparison of the available supply and the future demand for the normal, single-dry and multiple-dry year scenarios is assumed to remain unchanged from the average year results. Therefore, tables containing single-dry and multiple-dry year comparisons have not been included.

Table 28 Supply and Demand Comparison- Average Year (Guidebook Table 32)
2010 Urban Water Management Plan
City of Galt

	2015	2020	2025	2030
Supply Totals (Guidebook Table 16), acre-feet per year	7,123	7,321	8,506	9,883
Demand Totals (Guidebook Table 11), acre-feet per year	7,123	7,321	8,506	9,883
Difference	0	0	0	0
Difference as % of Supply	0	0	0	0
Difference as % of Demand	0	0	0	0

Notes: "Guidebook Table X" refers to a specific table in the "Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan" by DWR.

As shown in Table 28, the City will have sufficient water production capabilities to support the growth of the community.

Chapter 6

DEMAND MANAGEMENT MEASURES

This chapter presents a detailed analysis of the Demand Management Measures (DMMs) contained in the Urban Water Management Planning Act (UWMPA), as well as the City of Galt (City) existing efforts to further develop their water conservation program. The description, effectiveness, implementation schedule, costs, and methods of improvement for each of the DMMs have been included; see excerpt below.

> *10631 (f)(1) and (2) Describe and provide a schedule of implementation for 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 prohibitions; and (N) Residential ultra-low-flush toilet replacement programs.*
>
> *10631 (f)(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.*
>
> *10631 (f)(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.*
>
> *10631 (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; and (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.*

6.1 INTRODUCTION

The UWMPA presents two distinct methods for providing information related to DMMs and meeting the requirements of Water Code Section 10631 (f) and (g). One method is to be a signatory to the Memorandum of Understanding (MOU) regarding Urban Water Conservation in California. The MOU requires the preparation of an annual report, which can be used to fulfill the DMM requirements of the UWMP. However, the City is not a signatory to the MOU and therefore not a member of the California Urban Water Conservation Council (CUWCC) at this time and does not prepare annual reports for the CUWCC. The other method for a water supplier, who is not member of CUWCC and not a signatory to the MOU, is to describe their current water conservation programs and demonstrate how they comply with the 14 DMMs specified in Water Code Section 10631.

6.1.1 City Commitment to Water Conservation

The City is committed to water conservation and has implemented or plans to implement several policies and on-going programs that promote and encourage water conservation. Table 29 provides an overview of the City's current water conservation policies and programs as they relate to the 14 DMMs specified in Water Code Section 10631. Detailed descriptions of the City's policies and programs follow.

Table 29 Demand Management Measure Overview 2010 Urban Water Management Plan City of Galt			
DMM	**DMM Description**	**City Conservation Program**	**Compliance with UWMPA**
1	Water Survey Programs for Single Family and Multi-Family Residential Customers	None at this time Conservation information on City website and in literature distributed to customers.	Planned
2	Residential Plumbing Retrofit	Low-flow fixtures required for all new construction and water conservation information is provided on the City website.	Partially Implemented
3	System Water Audits, Leak Detection and Repair	Leak repair, flow meters installed on wells, meter implementation plan in place, water main replacement program.	Partially Implemented
4	Metering with Commodity Rates for all New Connections and Retrofit of Existing Connections	All industrial and commercial customers are metered, residential meters installed on new homes constructed after January 2004. Metered customers billed on commodity rates.	Partially Implemented
5	Large Landscape Conservation Programs and Incentives	All large landscape water users within the City have been metered, landscape plans required with permits, encourage use of drought tolerant plants and drip irrigation systems.	Yes
6	High Efficiency - Washing Machine Rebate Program	Local energy provider offers rebates; City plans to notify customers of rebates.	Planned
7	Public Information Programs	Public information program in place.	Yes
8	School Education Programs	School education program upon request.	Planned
9	Conservation Programs for Commercial, Industrial, and Institutional Accounts	All commercial, industrial, and institutional accounts are metered, audits and conservation materials available.	Yes
10	Wholesale Agency Programs	Not applicable.	NA
11	Conservation Pricing	Meter Implementation Plan	Planned
12	Water Conservation Coordinator	Part-time Water Conservation Coordinator.	Partially Implemented
13	Water Waste Prohibition	Water waste prohibitions in City code.	Yes
14	Residential Ultra-Low Flush Toilet Replacement Program	City is in the process of evaluating options for a ULFT replacement program.	Planned

6.2 DMM 1: WATER SURVEY PROGRAMS FOR SINGLE FAMILY AND MULTI-FAMILY RESIDENTIAL CUSTOMERS

This program consists of offering water audits to single-family and multi-family residential customers. Audits include reviewing water usage history with the customer, identifying leaks inside and outside the home, and recommending improvements. Residents are generally provided with recommendations for improvements, plumbing retrofit kits, and water conservation literature.

The City is in the process of installing meters on all connections. One important component of the metering system is that it allows usage information to be reviewed by the customers. This information allows individual customers to track water usage and potentially try to conserve water. Water conservation information will be provided to every customer who makes a call related to his or her water usage. City employees will visit any home to assess water usage, determine if there are leaks, and to provide educational information. Irrigation methods, timing clocks, and other methods to conserve water outdoors are reviewed with customers. Customers are instructed on methods to determine if a toilet is leaking water.

As envisioned, upon customer request, City Public Works staff would perform an on-site inspection of a customer's residence in order to ascertain potential sources of water waste. Non-mandatory control measures would be suggested and education regarding the importance of water conservation would be provided. The City website provides information on water conservation through the consumer confidence reports, the UWMP, and the City code (Title 13, 13-10). As the City becomes metered, it is anticipated that customers will request water surveys.

Methods to Evaluate Effectiveness:

The best way to evaluate the effectiveness of implemented water surveys is periodic review of water use for customers that have received surveys.

Conservation Savings:

Because it is up to the individual customer to implement survey recommendations, savings are difficult to quantify at this time.

Implementation Schedule:

Water Survey Programs: planned as budgetary constraints, workloads, and schedules allow. The City will try to initiate a residential customer service water survey program using existing City Public Works staff. It is assumed more requests for surveys will occur in the future as the City becomes metered.

Methods to Improve Effectiveness:

Advertising water surveys would maximize the effectiveness of this DMM.

6.3 DMM 2: RESIDENTIAL PLUMBING RETROFIT

This water demand management measure involves enforcement of plumbing fixture efficiency standards and encourages programs to retrofit existing inefficient fixtures with newer reduced flow fixtures. This retrofit program focuses on plumbing installed prior to 1992, in part due to the passage of the Federal Energy Policy Act of 1992, which restricted all newly manufactured faucets and showerheads to a flow of 2.5 gallons per minute (DWR, August 1994).

The City adopted the Green Building Standards Code, also known as CALGreen[1] in December 2010 that requires all new buildings to be more energy efficient and environmentally responsible. CALGreen requires water conservation measures on all new construction. The Code has both residential and non-residential water efficiency and conservation components requiring that newly constructed buildings reduce water consumption by 20 percent. The residential portion of the code applies to newly constructed, low-rise residential structures, three stories or less. CALGreen does not currently apply to remodels and existing homes.

As the City becomes metered, residents of older homes may install low-flow fixtures voluntarily.

Methods to Evaluate Effectiveness:

The effectiveness of this DMM is based upon the percentage of customers that install low-flow fixtures.

Conservation Savings:

Because it is up to the individual customer to implement retrofit of low-flow fixtures, savings are difficult to quantify. The CUWCC estimates that a low-flow showerhead retrofit will save approximately 2.9 gallons per capita per day (gpcd) on post-1980 constructed homes and 7.2 gpcd on pre-1980 constructed homes. The average savings for a toilet retrofit is 1.3 gpcd on pre-1980 constructed homes only.

Implementation Schedule:

New homes must meet City's building code.

City website contains water conservation information.

Methods to Improve Effectiveness:

A first step to improve the effectiveness of this DMM would be to quantify the number of pre-1992 residential customers and provide information on water-saving retrofits. Additionally, ensuring that building inspectors, building department staff, major developers,

[1] California Green Building Standards Code, California Code of Regulations Part II of Title 24.

and plumbing supply outlets are fully informed about current plumbing standards and requirements would improve effectiveness. The building department could provide additional information/coordination during building permit phase for older homes. This retrofit program could be coordinated with the residential water audits previously described. A retrofit program could also be strengthened by provision of a rebate or a credit on the customer's account with proof of low-flow fixture installation.

6.4 DMM 3: SYSTEM WATER AUDITS, LEAK DETECTION AND REPAIR

This DMM focuses on the water distribution system itself, and includes water audits, leak detection, and repair. The first step in a water audit is relatively straightforward, involving comparison of the amount of water produced with the amount of water delivered to customers. The difference is termed "unaccounted water," which includes actual losses (leaks) in the distribution system, authorized but unmetered use (e.g., hydrant flushing and fire fighting), unauthorized water use, and meter error.

When a complaint is lodged regarding a potential water leak, the City takes swift action to identify and repair the given leak as warranted. To minimize system losses, when a leak is reported, the City performs acoustical monitoring to rapidly locate and repair the leak.

The City has installed flow meters on each of the water supply wells so that the production rate of each well can be monitored regularly. Once all services are metered, the City will be able to compare production and consumption records to audit the performance of the water system. This will allow the City to quickly identify and correct system inefficiencies, thus reducing system losses.

The City 2010 Water Distribution Master Plan proposed that approximately 2.5 miles of existing pipeline be replaced to correct existing deficiencies. The City has a water main replacement program to replace older pipes throughout the City. It is assumed that the City will replace approximately 50,000 feet of older water mains through 2030, which accounts for roughly 10 percent of the existing system. On an annual basis, this equates to approximately one-half mile of water main replacements per year. The City also plans to consider an asset management/condition assessment program to identify which pipes need to be replaced and establish a schedule for replacement, as well as assess the pipe condition.

Methods to Evaluate Effectiveness:

The best way to evaluate the effectiveness of this program is to compare water production data at the wells with water consumption from the City's customers. Without meters in place to compare water supply and demand data, it is very difficult to evaluate the effectiveness of the pipeline replacement program. A Metering Implementation Plan, however, has begun. For more information on the City's Metering Implementation Plan, see DMM 4.

Conservation Savings:

Conservation savings are difficult to determine without meters in place.

Implementation Schedule:

Water Pipeline Replacement Program: On-going

System Water Audits: To be implemented once City is metered

Methods to Improve Effectiveness:

The City should develop a regular leak detection program to focus work areas for the future and implement an asset management/condition assessment program.

6.5 DMM 4: METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

This DMM has two parts. The first part includes the metering of all new connections and meter retrofitting of existing connections. The second includes the development of commodity water rates, which amounts to billing by volume of water usage and not decreasing the water price for increased use.

Installing water meters and billing for actual water use provides a strong incentive for customers to use less water and equalizes service cost for each customer to their actual use (high water users would pay a more equitable share of the system costs). Water metering can reduce exterior landscape water use and can also achieve a modest reduction in interior water use.

The full implementation of a volume based rate structure must await the installation of residential meters. To date, the City has completed the installation of water meters for all industrial, commercial, and irrigation customers. Residential meters have been installed at all new homes constructed after January 2004. Those customers who have an operational meter are billed for water service based upon metered consumption.

The City Water Code Section 13.04.060 addresses water meters, as outlined below:

Section 13.04.060 Metered flows.

A. All commercial and industrial services and all new residential units shall be metered and shall be charged based on the metered rates. Existing unmetered residential units will be metered when the City Council so directs. The Director of Public Works shall determine, for accounts and special uses not susceptible of classification under the resolutions adopted pursuant *to this Chapter, whether exemptions to installing meters and/or metering water flow shall be granted.*

The City has released a turn-key water meter services request for proposals, so the City anticipates that all customers (not just residential) will be metered by 2025.

Methods to Evaluate Effectiveness

The best way to evaluate the effectiveness of metering is periodic review of customer water use. Additionally, current water use per capita can be compared with historic data (before and after commodity rates are established).

Conservation Savings:

Metered accounts may result in a 20 percent reduction in demand compared to non-metered accounts.

Implementation Schedule:

Meter implementation plan in place

Billing at commodity rates: On-going

Meter Installation for all connections: On-going

Methods to Improve Effectiveness:

The data collected by the City for the existing residential units that have meters installed should be used to establish a baseline of water use for later comparison.

6.6 DMM 5: LARGE LANDSCAPE CONSERVATION PROGRAMS AND INCENTIVES

Water demand by large landscape water users can be managed by providing water audits and incentives for water conservation. The first consideration of this measure begins with identifying large irrigators and their water use, followed by development of a program for regular auditing (at least one every five years), with provisions that include water conservation training and information, with financial incentives.

At this time, large landscape water users within the City are limited to schools and parks where water is used to irrigate playgrounds and turf. All large landscape water users within the City have been metered. Furthermore, these facilities are consistently monitored by their respective agencies for leaks and water waste.

In addition, the City has incorporated a plan review process prior to issuing a permit for construction for all new industrial, commercial, and multi-family projects whereby a detailed landscaping plan is required. During the plan review process, the City encourages the utilization of drought tolerant plants as well as the incorporation of drip irrigation systems.

Methods to Evaluate Effectiveness:

The City can review changes in water use for customer types and areas of the City where detailed landscaping plans were required to evaluate effectiveness.

Conservation Savings:

Savings is hard to determine at this time.

Implementation Schedule:

Water-Efficient Landscape Requirements: On-going

Detailed Landscape Plan Requirements: On-going

Metering citywide: On-going

Methods to Improve Effectiveness:

Continue meter implementation plan to provide incentives to customers to reduce water use. It is likely that customers will reduce exterior water use voluntarily once metered.

6.7 DMM 6: HIGH-EFFICIENCY WASHING MACHINE REBATE PROGRAMS

Typically, a high-efficiency washing machine rebate program would offer a $75 to $125 rebate to qualifying customers who install them in their home. SMUD is the energy service provider for the area and offers rebates for high-efficiency washing machines. The washer rebate is $75 or $125 per installation depending on the model. Applications for these rebates are available on-line.

The City currently does not have a rebate program for high-efficiency washing machines but is considering notifying its customers of the SMUD rebates as a method of increasing the number of water efficient washing machines in the City.

Methods to Evaluate Effectiveness:

The City can review changes in water use for customers that have installed high-efficiency washers provided the information is available from SMUD.

Conservation Savings:

Savings is hard to determine at this time. Information requested from SMUD has not been received as of January 2013.

Implementation Schedule:

High-Efficiency Washing Machine Rebate Program: Available through SMUD.

Methods to Improve Effectiveness:

Notifying customers of the SMUD rebates as a method of increasing the number of water efficient washing machines could improve water conservation within the City.

6.8 DMM 7: PUBLIC INFORMATION PROGRAMS

Current public information for water demand management includes coordination with other agencies and provision of programs promoting water conservation, speakers for the media or community groups, public service announcements, water conservation bill inserts, and daily water use comparisons on customer's bills.

The City has implemented this water DMM through the provision of quarterly newsletters delivered to the residents, as well as providing bill inserts promoting water conservation, and providing information on the City website.

Methods to Evaluate Effectiveness:

The effectiveness of this program is determined by the amount of information available to the community. To evaluate the information, the City could track the number of documents distributed, special events attended, and other activities pursued to promote water conservation. The City could also track customer response and any commentary regarding the information provided.

Conservation Savings:

The CUWCC has not quantified the savings of this DMM; however, the City believes that this program is beneficial and necessary to implement other DMMs effectively.

Implementation Schedule:

Public information program: On-going

Distribution of bill inserts: On-going

Methods to Improve Effectiveness:

Public information can be one of the best tools to conserve water. Use of a Water Conservation Coordinator, discussed in DMM 12, could optimize the program by coordinating additional opportunities for community speakers and special events. Additionally, the building department could provide additional information/coordination during building permit phase for new and older homes.

6.9 DMM 8: SCHOOL EDUCATION PROGRAMS

Components of this DMM include provision of education materials, instructional assistance, and classroom presentations. The City does not have an active school education program but plans to implement a program over the next five years if budgetary and workload constraints allow. The City has, when requested, provided speakers and educational materials to the local schools regarding water conservation.

Methods to Evaluate Effectiveness:

The effectiveness of this program is determined by the number of students and schools that participate. To evaluate the effectiveness after this DMM is fully implemented, the City could track the number of presentations and tours given. The City could also survey the institutions and educators that participate in the program.

Conservation Savings:

The CUWCC has not quantified the savings of this DMM; but the City believes that this program will be beneficial to the community and important to the long-term success of the overall water conservation program effort.

Implementation Schedule:

School education programs: When requested

Methods to Improve Effectiveness:

Similar to a public information program, a school education program can also be one of the best tools to conserve water. The American Water Works Association (AWWA) and the Water Education Foundation (WEF) provide educational material for youth to explain the water cycle and pollution, and to promote water conservation, including videos, bookmarks, games, and water experiments. The City could include material available from AWWA and WEF in the school education program. The Water Conservation Coordinator could enhance the program by meeting with school principals and educators to promote classroom presentations and field trips. Educational water conservation projects could be undertaken by the Eagle Scouts, City Youth Committee, and other groups to education children about conservation.

6.10 DMM 9: CONSERVATION PROGRAMS FOR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL ACCOUNTS

Implementation of water conservation for commercial, industrial, and institutional customers includes identifying the largest water users among industrial and commercial customers; offering audits and incentives sufficient to conserve water; and providing follow-up audits as needed.

At this time, all commercial, industrial, and institutional water customers are metered and charged for water usage in accordance with their metered use. The City provides water audits and water conservation information to their metered customers upon request. Furthermore, in an effort to promote water conservation in relation to the City's commercial, industrial, and institutional customers, the City requires the submittal of a detailed landscaping plan as part of the permit application for new development. During the application review, the City promotes the usage of drought tolerant plants and drip irrigation systems. As mentioned previously the City adopted CalGreen water conservation building requirements, which applies to state-owned buildings, state university and community college buildings, and privately owned buildings used for retail, office, and medical services.

Methods to Evaluate Effectiveness:

The programs in place for this DMM are difficult to evaluate. The best way to determine the effectiveness of this DMM is to monitor the actual water use. The City should monitor the water use and assess demand characteristics and water use patterns.

Conservation Savings:

The actual savings for this DMM will vary, however, the City believes that this program is beneficial and necessary to implement other DMMs effectively.

Implementation Schedule:

Conservation Program: On-going

Requirements for Water Efficient Landscape: On-going

Audits and water conservation literature: Upon request

Methods to Improve Effectiveness:

The City should gather additional information about coordinating with the Public Works department and/or local energy utilities to provide surveys for commercial, institutional, and industrial customers.

6.11 DMM 10: WHOLESALE AGENCY PROGRAMS

This DMM applies to wholesale agencies only and therefore is not applicable to the City.

6.12 DMM 11: CONSERVATION PRICING

Implementation of this measure includes, at a minimum, eliminating "non-conserving" pricing and adopting "conserving" pricing. This measure pertains to both water service and sewer service, where the urban water supplier also provides sewer service.

Water conservation is encouraged through a pricing system that rewards customers who use less water with financial incentives, while high water users are charged a higher rate. Often this is implemented through a two or three-tiered pricing system. As the City installs water meters, the City will continue to transition customers from flat rate pricing to commodity rate pricing. The 2011 proposed water rates for metered customers consists of a monthly rate based on meter size as well as a rate per 100 cubic feet based on usage. As the City becomes fully metered customers will be transitioned to metered pricing based on usage.

Methods to Evaluate Effectiveness:

The effectiveness of this DMM can be better determined once the City if fully metered.

Conservation Savings:

Water savings due to conservation pricing is difficult to determine since the City is currently in the process of becoming metered.

Implementation Schedule:

Conservation Pricing: In Process

Methods to Improve Effectiveness:

In addition to metered water rates, the City should consider charging a sewer service rate based on water consumption.

6.13 DMM 12: WATER CONSERVATION COORDINATOR

This DMM entails designating a water conservation coordinator responsible for managing water conservation efforts and evaluating the results.

When budget allows, the City has a part time Water Conservation Coordinator on staff. The Water Conservation Coordinator tasks include, but are not limited to monthly tracking of production vs. consumption, enforcement of water use restrictions, and implementation of conservation programs.

Methods to Evaluate Effectiveness:

The effectiveness of this DMM is determined by the work performed by the Water Conservation Coordinator.

Conservation Savings:

The actual savings for this DMM is hard to determine, however the City believes that this program is beneficial.

Implementation Schedule:

Water Conservation Coordinator: Partially Implemented

Methods to Improve Effectiveness:

The City should set up performance standards and goals, and compare them with the results. The City could educate community volunteers to aid the City in water conservation efforts.

6.14 DMM 13: WATER WASTE PROHIBITIONS

This DMM involves adoption of an ordinance prohibiting water waste. Specific suggested prohibitions include the following: gutter flooding, single-pass cooling systems in new connections, non re-circulating systems in all new conveyer car wash and commercial laundry systems, and non re-circulating decorative water fountains.

The City has adopted an ordinance prohibiting specific water wasting activities as described above. A copy of the ordinance is included in Appendix E.

Methods to Evaluate Effectiveness:

The effectiveness of this DMM can be determined by a decrease in violators. The number of citations and violations should be reported annually.

Conservation Savings:

The CUWCC has not determined any methods to quantify the savings of this DMM but the City believes that this program is necessary to curtail flagrant water waste situations.

Implementation Schedule:

Water waste prohibitions: On-going

Methods to Improve Effectiveness:

The City should continue to monitor the effectiveness of this DMM. If an area is determined to have excessive violations, the City should implement a specific public outreach program informing the public about the specific ordinance.

6.15 DMM 14: RESIDENTIAL ULTRA-LOW FLUSH TOILET REPLACEMENT PROGRAMS

Ultra-low flush toilets (ULFTs) are defined by a flush volume in the range between 1.28-gallons per flush (gpf) and 1.6-gpf. Older toilet fixtures can range between 3.5-gpf and 5.0-gpf. As noted previously, the City has adopted the CALGreen building code which includes requirements for plumbing fixtures. CALGreen requires that toilets are 1.28 gpf in all new

construction. The City does not currently have a retrofit program. An effective retrofit program can be achieved through voluntary replacement with financial incentives, or through mandatory measures, for example, requiring ULFT installation at time of property resale or as a permitting requirement for major renovations involving changes in the sanitary sewer lines. The City is evaluating the options regarding implementation of a retrofit program where existing toilets could be replaced with ULFT. As the City grows, the percent of ULFTs will grow accordingly.

Methods to Evaluate Effectiveness:

A database can be maintained on the number of new residential units constructed requiring ULFTs, and the average number of toilets per household. This database can be used to determine the percentage of single and multi-family residential units that have ULFTs.

Conservation Savings:

Other Cities have seen an average savings of approximately 2.4 gallons per flush over the high-water-using toilets that were replaced.

Implementation Schedule:

Retrofit program: Being evaluated

Installation of ULFTs required for all new residential construction

Methods to Improve Effectiveness:

To increase the number of retrofits for existing homes in the future, the City should pursue opportunities for grants. Advertizing the monetary savings resulting from the installation of a ULFT to metered customers may improve effectiveness.

Chapter 7

CLIMATE CHANGE

The potential water supply and demand effects related to climate change have not been included in this Urban Water Management Plan. Climate change is an optional section in the UWMP "Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan".

Chapter 8

COMPLETED UWMP CHECKLIST

A completed Urban Water Management Plan checklist is attached.

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)		Chapter 1 Section 1.3 Table 1
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)		Chapter 1 Section 1.3 Appendix A
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)		Appendix B
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)		Chapter 1 Section 1.3 Appendix A
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		Chapter 1 Section 1.3.2 Appendix A
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 A
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Appendix B
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Chapter 1 Section 1.3.3

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)		Chapter 1 Section 1.3.3 Appendix A
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		Chapter 1 Section 1.3.3 Appendix A
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Chapter 2 Section 2.1 Figure 1
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Chapter 2 Section 2.1.2 Section 2.2.1
10	Indicate the current population of the service area	10631(a)		Chapter 2 Section 2.2 Table 3
11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)		Chapter 2 Section 2.2 Table 3
12	Describe other demographic factors affecting the supplier's water management planning.	10631(a)		Chapter 2 Section 2.2.1
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)		Chapter 3 Section 3.1 Tables 4, 5, and 6 Section 3.2 Table 7
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)		Not Applicable

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		Not Applicable Until 2015
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)		Chapter 3 Section 3.3 Tables 8-13
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)		Not Applicable
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)		Chapter 3 Section 3.3.3
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)		Chapter 4 Section 4.1 Tables 14, 15 and 22
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)		Chapter 4 Section 4.2
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)		Chapter 4 Section 4.2.1 Appendix D
16	Describe the groundwater basin.	10631(b)(2)		Chapter 4 Section 4.2 Appendix C
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		Chapter 4 Section 4.2 Unadjudicated basin Not Applicable

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)		Not Applicable
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)		Chapter 4 Section 4.2 Figure 2 Appendix C Appendix D
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)		Chapter 4 Section 4.2.2 Table 16
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)		Chapter 4 Section 4.2.2 Table 17
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		Chapter 4 Section 4.3
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)		Chapter 4 Section 4.6 Table 22
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Chapter 4 Section 4.4
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		Chapter 4 Section 4.5

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
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)		Chapter 4 Section 4.5.1 Section 4.5.2 Tables 18 and 19
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)		Chapter 4 Section 4.5 Tables 18 and 19
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)		Chapter 4 Section 4.5.2 Table 19
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)		Chapter 4 Section 4.5.3 Tables 20
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)		Chapter 4 Section 4.5.3 Table 21
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)		Chapter 4 Section 4.5.4
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)		Chapter 4 Section 4.5.5
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)		Chapter 5 Sections 5.2 Tables 24, 25, 26, and 27
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)		Chapter 5 Section 5.1 Table 23

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
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)		Chapter 5 Section 5.1 Table 23
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)		Chapter 5 Section 5.2.2
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)		Chapter 5 Section 5.2.6
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)		Chapter 5 Section 5.2.1
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)		Chapter 5 Section 5.2.2 Table 25
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)		Chapter 5 Section 5.2.3 Table 26
40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Chapter 5 Section 5.2.4 Table 27
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)		Chapter 5 Section 5.2.8
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Chapter 5 Section 5.2 Appendix E

No.	UWMP requirement [a]	Calif. Water Code reference	Additional clarification	UWMP location
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Chapter 5 Section 5.2.7
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		Chapter 5 Section 5.1
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)		Chapter 5 Section 5.3 Table 28
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)		Chapter 6 Table 29
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f)(3)		Chapter 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)		Chapter 6
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)		Not applicable
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)		Not Applicable

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 A

OUTREACH DOCUMENTS

Notice of Prep to Interested parties

Public Notice

Commitment to Distribute

City of GALT

Public Works Department

05-11-2011

Mr. Steven C. Szalay, Interim County Director
County of Sacramento
700 H. Street, Room 7650
Sacramento, Ca 95814

Subject: **Notice of Preparation of the 2010 City of Galt Urban Water Management Plan (UWMP)**

Dear Mr. Szalay,

Pursuant to the requirements of the California Water Code, Division 6, Part 2.6 Urban Water Management Planning, Section 10621 (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.

This letter is intended to notify your agency that the City of Galt (City) is in process of preparing the 2010 UWMP. Based on the City's current schedule, we expect to have a public review draft of the 2010 UWMP available for review in July 2011, at which point your agency will receive a notification letter that the draft UWMP is available for public review.

If your agency would like to submit comments or provide input to the City in anticipation of the development of the 2010 UWMP, please submit written copies to:

Lisa Sanders
Senior Civil Engineer
City of Galt Public Works Dept.
495 Industrial Drive
Galt, CA 95632

Sincerely,

CITY OF GALT

Lisa Sanders
Senior Civil Engineer

cc: Tommy Greci, Carollo Engineers, Inc.

Bill to: Elizabeth Aguire, City Clerk
City of Galt
380 Civic Drive
Galt, CA 95632

Publish Two Times:
February 20, 2013
February 27, 2013

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Galt City Council will hold a Public Hearing in the Council Chamber of the City Hall, 380 Civic Drive, Galt, California, on the date and time indicated below, or as soon thereafter that the matter can be heard, to receive and consider all evidence and reports relative to the matters described below.

MATTERS TO BE CONSIDERED

Adoption of the Update to the City's Urban Water Management Plan

CITY COUNCIL HEARING

PUBLIC HEARING DATE AND TIME: March 19, 2013, at 7:00 p.m.

Further, such data and information regarding the matters to be considered at the Public Hearing described in this notice are available for review and inspection and are on file in the City Clerk's Office, 380 Civic Drive, Galt, California, the Public Works Office, 495 Industrial Drive, Galt, California, and the Marian O. Lawrence Library, 1000 Caroline Avenue, Galt, California, during regular business hours. The document is also available for viewing on the City's website.

If you challenge the approval of the above noted matters in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City of Galt at, or prior to, the public hearing.

Dated: February 14, 2013

Steve Winkler, Public Works Director

Elizabeth Aguire, City Clerk

Commitment to Distribute the 2010 Urban Water Management Plan

The documentation currently included in these appendices satisfies California Water Code parts 10621(b) and 10642.

Two other sections of the California Water Code specify UWMP documentation that must take place after the submission of the supplier's UWMP to the DWR. These parts are as follows:

- Part 10644(a), requiring documentation that within 30 days of submitting the UWMP to DWR, the adopted UWMP has been or will be submitted to the California State Library and any city or county to which the supplier provides water.
- Part 10645, requiring documentation that the supplier will make the UWMP available for public review no later than 30 days after submission to DWR.

In order to satisfy these requirements, the City will perform the following actions:

- The City will submit its 2010 UWMP to the California DWR in April 2013.
- The City will send a printed or electronic copy of its 2010 UWMP to the California State Library and to the cities and counties within which it provides water. The City will do this within 30 days from filing with DWR.
- The City will make their 2010 UWMP available for public review within 30 days from filing with DWR.

Appendix B

CITY ADOPTION RESOLUTION

RESOLUTION NO. 2013-18

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GALT, CALIFORNIA APPROVING THE 2010 URBAN WATER MANAGEMENT PLAN UPDATE

WHEREAS, California's Urban Water Management Planning Act requires urban water suppliers serving more than 3,000 customers or supplying more than 3,000 acre-feet annually to develop an Urban Water Management Plan, and update the plan at 5 year intervals; and

WHEREAS, the City's 2010 Urban Water Management has been prepared to address changes in the Urban Water Management Planning Act since 2005, including incorporation of documentation regarding the City's compliance with the Water Conservation Act of 2009 (SBx7-7); and

WHEREAS, public notification of the completion and availability of the City's 2010 Urban Water Management Plan was completed pursuant to Section 6066 of the Government Code; and

WHEREAS, Water Code Section 10652 exempts adoption of the City's 2010 Urban Water Management Plan from the provisions of the California Environmental Quality Act; and

WHEREAS, a properly noticed public hearing was held by the City Council of the City of Galt on March 19, 2013, to receive public comments regarding the 2010 Urban Water Management Plan.

NOW, THEREFORE BE IT RESOLVED AND ORDERED that the City Council of the City of Galt, California hereby approves finalization and submittal of the 2010 Urban Water Management Plan to the California Department of Water Resources for final approval.

The City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original Resolutions.

PASSED AND ADOPTED by the City Council of the City of Galt, California, this 19th day of March, 2013, upon a motion by Council Member Campion, seconded by Council Member Crews, by the following vote, to wit:

AYES:	Council Members:	Singleton, Payne, Campion, Crews, Powers
NOES:	Council Members:	
ABSTAIN:	Council Members:	
ABSENT:	Council Members:	

Marylou Powers
MAYOR, City of Galt

ATTEST:

Elizabeth Ague
City Clerk, City of Galt

Appendix C

DEPARTMENT OF WATER RESOURCES BULLETIN 118
COSUMNES SUBBASIN

San Joaquin Valley Groundwater Basin
Cosumnes Subbasin

- Groundwater Basin Number: 5-22.16
- County: Sacramento, San Joaquin
- Surface Area: 281,000 acres (439 square miles)

Basin Boundaries and Hydrology

The San Joaquin Valley comprises the southern portion of the Great Valley Geomorphic Province of California. The Great Valley is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The Cosumnes Subbasin is defined by the areal extent of unconsolidated to semiconsolidated sedimentary deposits that are bounded on the north and west by the Cosumnes River, on the south by the Mokelumne River, and on the east by consolidated bedrock of the Sierra Nevada Mountains.

The Cosumnes Subbasin is bounded on the south and southwest by the Eastern San Joaquin Subbasin and on the north to northwest by the South American Subbasin of the Sacramento Valley Groundwater Basin. The subbasin drains westward through three major rivers namely, the Cosumnes on the north, Dry Creek in the middle of the basin, and the Mokelumne River on the south. A large surface water body, the Camanche Reservoir, is located along a portion of the Mokelumne River in the southeast part of the subbasin.

Annual precipitation within the subbasin ranges from approximately 15 inches on the west to about 22 inches on the east.

Hydrogeologic Information

Water Bearing Formations

The Cosumnes subbasin aquifer system is comprised of continental deposits of Late Tertiary to Quaternary age. These deposits include Younger Alluvium, Older Alluvium, and Miocene/Pliocene Volcanics. The cumulative thickness of these deposits increases from a few hundred feet near the Sierra Nevada foothills on the east to over 2,500 feet along the western margin of the subbasin.

Younger Alluvium: This unit includes Recent stream channel deposits and dredge tailings. The maximum combined thickness of all the younger alluvial units is about 100 feet. Calculated specific yield values range from about 6 percent in the alluvial deposits to about 12 percent in the stream channel deposits (Olmstead and Davis 1961).

Minor exposures of dredge tailings are present along the Cosumnes and Mokelumne Rivers at the eastern margin of the subbasin. They consist of windrows of gravel, cobbles, boulders, sand, and silt resulting from gold dredging operations. The tailings are highly permeable, but well construction is complicated by the presence of cobbles and boulders.

The stream channel deposits include sediments deposited in the channels of active streams as well as overbank deposits and terraces of those streams. They occur along the Sacramento, Cosumnes, and Mokelumne Rivers and their major tributaries and consist primarily of unconsolidated silt, fine- to medium-grained sand, and gravel. Sand and gravel zones in the younger alluvium are highly permeable and yield significant quantities of water to wells.

Older Alluvium: This unit consists of loosely to moderately compacted sand, silt, and gravel deposited in alluvial fans during the Pliocene and Pleistocene. A number of formational names have been assigned to the older alluvium, including the Modesto and Riverbank Formations (Helley and Harwood, 1985), Victor Formation and Laguna Formation (Olmstead and Davis, 1961), and Victor Formation, Laguna Formation, Arroyo Seco Gravels, South Fork Gravels, and Fair Oaks Formation (DWR, 1974). The older alluvial units are widely exposed between the Sierra Nevada foothills and overlying younger alluvial units near the axis of the Sacramento Valley. Thickness of the older alluvium is about 100 to 650 feet. It is moderately permeable. The calculated specific yield of these deposits is approximately 6 to 7 percent (Olmstead and Davis 1961).

Miocene/Pliocene Volcanics: This unit consists of the Mehrten Formation, a sequence of fragmental volcanic rocks, which crops out in a discontinuous band along the eastern margin of the basin. It is composed of intervals of "black sands," stream gravels, silt, and clay interbedded with intervals of dense tuff breccia. The sand and gravel intervals are highly permeable and wells completed in them can have high yields. The tuff breccia intervals act as confining layers. Thickness of the unit is between 200 and 1,200 feet. Specific yields for this unit range from about 6 to 12 percent (O&D 1961).

Groundwater Level Trends

A review of 23 long-term hydrographs dating back to the early 1960s shows a fairly consistent pattern of water level trends through much of the subbasin. Wells outside the influence of the Cosumnes River declined from the mid-1960s to about 1980 on the order of 20 to 30 feet. From 1980 through 1986, water levels recovered on the order of 5 to 10 feet. During the 1987 through 1992 drought, water levels once again declined by 10 to 15 feet. From 1993 through 2000, much of the basin recovered by 15 to 20 feet, leaving water levels at the about the same elevation or slightly higher than they were in the mid-1980s. One exception is along the eastern subbasin margin where water levels remained fairly constant during the 1993 through 2000 recovery period. Prior to that, those eastern wells behaved similarly to other wells in the subbasin.

Groundwater Storage

Groundwater Storage Capacity. Groundwater storage capacity is estimated to be on the order of 6,000,000 af based on data from DWR 1967 and DWR 1974. This estimate is based on a surface area of 281,000 acres, an aquifer thickness of 290 feet (20 to 310 feet depths), and an average specific yield of 7.4 percent.

Groundwater in Storage. There are no published estimates of groundwater in storage available.

Groundwater Budget (Type A)

Montgomery Watson Consultants (Montgomery Watson 1993) developed a groundwater model for Sacramento County. A subsequent model was developed for San Joaquin County by Montgomery Watson as part of the American River Water Resources Investigation (USBR 1996). Based on running these models together and with data updates, Bookman-Edmonston/Navigant Consulting provided estimates of several groundwater budget components for an area generally corresponding to the Cosumnes Subbasin. The data represent an average budget for the period from 1970 to 1995. Basin inflows include natural and applied water recharge, which total 269,518 af. Subsurface inflow and outflow are not known specifically, but the model indicates that there is a net subsurface outflow of 144,551 af. Other groundwater outflows include annual urban extraction of 35,063 af, and agricultural extraction calculated by the model of 94,198 af.

Groundwater Quality

Characterization. Groundwater contained in the water-bearing deposits underlying most of Sacramento County is of excellent mineral quality for irrigation and domestic use (DWR 1974). Within the subbasin, calcium-magnesium and calcium-sodium bicarbonate water types are most common (DWR 1974 and Sorenson 1981). Groundwater from wells in the San Joaquin County portion of the subbasin typically show specific conductance values of less than 500 μmhos/cm (Sorenson 1981). Based on analyses of 20 water supply wells in the subbasin, TDS ranges from 140 to 438 mg/L and averages about 218 mg/L.

Impairments. No significant impairments were identified.

Water Quality in Public Supply Wells

Constituent Group[1]	Number of wells sampled[2]	Number of wells with a concentration above an MCL[3]
Inorganics – Primary	26	0
Radiological	17	0
Nitrates	30	0
Pesticides	22	1
VOCs and SVOCs	22	0
Inorganics – Secondary	26	21

[1] A description of each member in the constituent groups and a generalized discussion of the relevance of these groups are included in *California's Groundwater – Bulletin 118* by DWR (2003).
[2] Represents distinct number of wells sampled as required under DHS Title 22 program from 1994 through 2000.
[3] Each well reported with a concentration above an MCL was confirmed with a second detection above an MCL. This information is intended as an indicator of the types of activities that cause contamination in a given basin. It represents the water quality at the sample location. It does not indicate the water quality delivered to the consumer. More detailed drinking water quality information can be obtained from the local water purveyor and its annual Consumer Confidence Report.

Well Characteristics

	Well yields (gal/min)	
Municipal/Irrigation	Well yields in the fresh water-bearing formations underlying the basin range (in general) from about 650 to 1,500 gpm	
	Total depths (ft)	
Domestic	Range: 10 – 812	Average: 261 (Based on 832 well completion reports)
Municipal/Irrigation	Range: 130 – 934	Average: 473 (Based on 48 well completion reports)

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
DWR and cooperators	Groundwater levels	71 wells semiannually 4 wells monthly
DWR and cooperators	Miscellaneous water quality	13 wells every two years
Department of Health Services and cooperators	Title 22 water quality	72 wells annually

Basin Management

Groundwater management:	San Joaquin County adopted a groundwater management ordinance in 1996. Sacramento Metropolitan Water Authority adopted an AB 3030 plan on November 14, 1994. Water agencies that are part of the authority and active in the Cosumnes subbasin are denoted by a *. Northeastern San Joaquin County Groundwater Banking Authority adopted a groundwater management plan.
Water agencies	
Public	Galt ID*, Jackson Valley ID, North Delta WA, North San Joaquin WCD, Omochumne-Hartnell WD*, Clay WD*, Amador WA, Calaveras County WD, City of Galt Service Area*, Rancho Murieta CSD*, Sacramento County WD, Sacramento County MUD, North San Joaquin WCD
Private	

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Errata

Updated groundwater management information and added hotlinks to applicable websites. (2/03/06)

Appendix D

SOUTH BASIN GROUNDWATER MANAGEMENT PLAN

The South Basin Groundwater Management Plan can be viewed at the address below.

http://ohwd.org/ESW/Files/SSCAWA_GMP_final%5B1%5D.pdf

Appendix E

CITY CODE WATER CONSERVATION CHAPTER

Title 13

WATER SERVICES

Chapters:

Chapter 13.04

WATER DEPARTMENT

Sections:

Section 13.04.010 Water department established.

Unless the context specifically indicates otherwise, the meanings and terms used in this Chapter shall be as stated in section 13.04.030 of this code.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.04.020 Service area.

The area in which service is or will be furnished by the department is that area lying within the City limits as the limits now prevail or may from time to time exist, and those areas outside the City limits which have been approved for such service by the City Council.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.04.030 Definitions.

Unless the context specifically indicates otherwise, the meaning of terms used throughout Title 13 shall be as follows:

A. Air-gap - means the physical break between the supply pipe and a receiving vessel.

B. Applicant - means the owner, or the agent of the owner, of property for which a service connection or a specific permit is requested.

C. Auxiliary supply - means any water supply located on or available to a premise other than the public water system.

D. AWWA standard - means an official standard developed and approved by the American Water Works Association.

E. Backflow - means a flow condition caused by a differential in pressure that causes the flow of other liquids, gases, mixtures, or substances into the distribution lines of a potable water supply from any source or sources other than the public water system supply source.

F. Backflow prevention device - means devices which have passed laboratory and field evaluation tests performed by a backflow testing technician certified by the California Department of Health Services.

G. Commercial service - means provision of service to premises where the customer primarily is engaged in a business, trade or profession and includes all services not defined as domestic services. The term shall be used interchangeably with "industrial service”.

H. Contamination - means a degradation of the quality of potable water by any foreign substance which creates a hazard to the public health or which may impair the usefulness or quality of the water.

I. Cross-connection - means any unprotected actual or potential connection between a potable water supply including the public water system and any source or system containing unapproved water or any substance that is not or cannot be approved as safe, wholesome, and potable.

J. Customer - means the owner, or agent of the owner, tenant, or lessee of the property receiving service, who has applied for and is the account holder for the service. For the purposes of this Title, a tenant (such as a tenant of a master-metered multi-unit building) is not the “customer” if the owner is the account holder.

K. Director - means the Director of Public Works for the City of Galt, or his/her authorized representative.

L. Domestic service - means provision of service for household residential purposes to single-family and multiple-family dwelling units.

M. Double check valve assembly - means an assembly of at least two independently acting check valves including tightly closing shutoff valves on each side of the check valve assembly and test cocks.

N. Finance Director - means the Director of the Finance Department for the City of Galt or his/her representative.O. Flat-rate service - means provision of water in unmeasured quantities for a fixed periodic charge.

P. Health agency - means the California Department of Health Services or its designee.

Q. Industrial service - means provision of service to premises where the customer primarily is engaged in a business, industry, trade, or profession and includes all services, not defined as domestic services. The term shall be used interchangeably with "commercial service."

R. Local health agency - means the Sacramento County Environmental Management Department.

S. Mains - means distribution pipelines located in streets, highways, public ways, or private rights-of-way which are used to serve the public.

T. Metered service - means provision of water in measured quantities for a periodic charge based upon the quantity delivered.

U. Person - means any individual, firm, company, association, society, corporation, or group.

V. Premise - means the integral property or area, including improvements thereon, to which service is or will be provided. For residential units, a premise shall be a building or part of a building with its appurtenances.

W. Public water system - means the portion of the water system owned and operated by the City.

X. Reduced pressure principle assembly - means a backflow prevention device incorporating two independently acting check valves, a hydraulically operating and mechanically independent pressure relief valve, a shutoff valve at each end of the device, and necessary testing appurtenances.Y. Service connection - means the pipe, valves and other facilities by means of which service is conducted to or from the premises and the City's distribution systemZ. Service box - means the valve box, curb stop, or meter box at the point of connection to the public water system typically located near the curb or behind the sidewalk.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.04.040 Application for service.

All applications for the beginning, changing or discontinuing of water service shall be made to employees of the Finance Department on forms provided by the Finance Department and new customers shall pay a deposit in an amount not to exceed three times the monthly service charge as a deposit in advance of the start of service. For purposes of this section, new customers shall include commercial, industrial, and residential customers, excluding tenants of master-metered multi-unit buildings, and those whose service has been discontinued due to nonpayment.
(Ord. 2004-07, Add, 10/19/2004)

Section 13.04.050 Charges.

A. There is levied and assessed upon each premises having any water connection with the public water system of the city or otherwise receiving water from the public water system, a service charge payable as provided in this Chapter, in an amount determined as set forth in this section. Fees will also be charged for services rendered in accordance with Title 13 for special water permits.

B. Rates and charges for water service shall be fixed, from time to time, by resolution of the City Council.

C. Outside the City limits each person, firm, individual business or corporation using the City water system shall pay for the use of such facilities, a water service charge in accordance with this section.

D. When service is rendered for a period less than one billing cycle due to registering or terminating service, the charge will be prorated for the time the service was rendered. There shall be no proration for service discontinued for less than one billing cycle for lack of payment.

E. For periods of absence, during which services are discontinued, which exceed two weeks, any customer who provides at least twenty-four hours notice to City of such absence, shall be provided a credit for a period of nonuse upon payment of the discontinuation of service fee. Upon return, the customer shall be responsible for notifying City within twenty-four hours of such return and the necessity of recommencing service.

F. When more than one flat, dwelling unit,

or apartment building, or one premise, is supplied through one water tap, the charges by meter or by flat rate, as applicable, shall be to the owner and any applicable flat rates shall be charged in full for each and every premise connected with the water supply and capable of receiving service. If the premises have different owners, the water service shall be separated and separate service tap lines installed at the owner(s) expense prior to service being started.
(Ord. 2004-07, Added, 10/19/2004)

Section 13.04.060 Metered flows.

A. All commercial and industrial services and all new residential units shall be metered and shall be charged based on the metered rates. Existing unmetered residential units will be metered when the City Council so directs. The Director of Public Works shall determine, for accounts and special uses not susceptible of classification under the resolutions adopted pursuant to this Chapter, whether exemptions to installing meters and/or metering water flow shall be granted. The rates for metered flow shall be fixed, per section 13.04.050.

B. Should the applicant desire a water meter installed in his water service or should the code require that one be installed, the applicant shall pay the rental of the same together with all costs of installation in accordance with the metered rate schedule.
(Ord. 2004-07, Added, 10/19/2004)

Section 13.04.070 Billing.

A. The billing period will cover one month in arrears and one month in advance. Bills are due on receipt. Payment of bills shall be in cash and where payment is made by check, acceptance of the check does not constitute payment until honored by the bank drawn upon. If the check is dishonored, it will be considered as if no payment has been made.

B. If the bill is not paid when due, or by the fifth day of the calendar month following the billing period for which the bill is rendered, a penalty of ten percent of the delinquent amount shall be added. However, only one penalty of ten percent of delinquent amount per billing period will apply.

C. Upon application to the Finance Director by any person to whom a penalty is assessed, the Director may waive or refund a penalty or service charge upon showing of excusable neglect, error by parties other than the person to whom the penalty is assessed, or extreme hardship. Such application must be made within thirty (30) days of notification of the assessment of the service charge or penalty. A refusal to waive or refund a service charge or penalty, after application is made, may be appealed by submission of a written appeal hearing request to the City Clerk within thirty (30) days of the date of the notification of the Finance Director's decision. The hearing shall be set and conducted pursuant to section 21.03.060. The hearing officer's decision is final.

D. Commercial property owners and owners of all master-metered multi-unit residential buildings shall be responsible for all bills for water used on their premises and any and all unpaid bills for water service shall become a lien on the real property and may be collectible by legal action or by refusal of service to the premises until the account is paid in full, or by application of all or a portion of the deposit amount set forth in this Chapter to the unpaid bill, or by any combination of these methods.

E. The customer for water service for residential property, excluding master-metered multi-unit residential buildings, who may be either the property owner or tenant, shall be responsible for all bills for water used on their premises and any and all unpaid bills for water service. Unpaid bills may be collectible by application of all or a portion of the deposit money to the unpaid bill, by recordation of a lien on the real property, by other remedies as allowed by law, or by any combination of these methods.

F. The City may refuse service for outstanding unpaid bills. When service has been discontinued for nonpayment, a charge as established by resolution of the City Council as adopted from time to time must be paid in addition to the bill before service will be restored. In addition, in the event the Finance Department has applied any portion of the deposit to unpaid bills prior to the restoration of service, the customer must also replenish the

deposit up to the maximum amount provided in this Chapter.
(Ord. 2006-07, Amended, 06/06/2006; Ord. 2004-07, Add, 10/19/2004)

Section 13.04.080 Revenue use.

The revenues generated thereof from the water fund may be used only for providing water services through the management, construction, operations, and maintenance of the water system and related support services.
(Ord. 2004-07, Added, 10/19/2004)

Section 13.04.090 Authority to inspect premises.

The Director and other duly authorized employees of the City bearing proper credentials and identification shall be permitted access to any premises where water is used at reasonable hours for the purpose of inspection and observation of any water connections, pipes, taps, or other water apparatus or equipment. If consent is not granted, the City shall have the right forthwith to discontinue such water service.
(Ord. 2004-07, Add, 10/19/2004)

Section 13.04.100 Inspection and work on properties subject to easements.

The Director and other duly authorized employees of the City bearing proper credentials and identification shall be permitted to enter all private properties through which the City holds an easement for the purposes of, but not limited to, inspection, observation, measurement, sampling, repair, and maintenance of any portion of the water works lying within such easement. All entry and subsequent work, if any on such easement, shall be done in full accordance with the terms of the easement and any agreements pertaining to the private property involved.
(Ord. 2004-07, Add, 10/19/2004)

Section 13.04.110 Discontinuance of service.

The City reserves the right to discontinue water services consistent with applicable law to any customer who does not observe the rules or regulations set forth in this Title.
(Ord. 2004-07, Add, 10/19/2004)

Section 13.04.120 Violation.

The Director or designee shall enforce the provisions of this Title. Violation of any of the provisions of this Title is unlawful and an offense. Each day during which any violation of the provisions of this Title exists shall be deemed a separate and distinct violation. Such violations shall be punished as provided by Chapter 21.01 of Title 21.
(Ord. 2006-07, Amended, 06/06/2006; Ord. 2004-07, Add, 10/19/2004)

Chapter 13.08

WATER CONNECTIONS

Sections:

Section 13.08.010 Definitions.

Unless the context specifically indicates otherwise, the meanings and terms used in this Chapter shall be as stated in section 13.04.030 of this code.

(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.020 Use of public water system required.

Generally, premises requiring water service within the City limits shall connect to the City public water system.

A. New premises within 400 feet of an existing City water main shall be connected to that main for all water needs at the expense of the property owner.

B. Existing premises within 400 feet of an existing City water main not currently connected to the City water system, but being served through a privately owned well, shall be connected to the City public water system upon failure of the well or when the well requires substantial repairs. Any repair requiring a permit from the county shall be considered substantial. Additionally, such premises shall be connected to the City public water system when substantial private improvements are made to a premise. Private improvements that require public frontage improvements as defined in Title 15 of this code shall be considered substantial. Any wells servicing the premises shall then be destroyed in accordance with state and county requirements. All costs to connect to the public water system shall be at the expense of the property owner.

C. The Director of Public Works may grant exceptions to A & B above when in his/her determination it is infeasible to connect the premises to the City water system or it is in the best interests of the City to delay or forgo connection.

(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.030 Private well prohibited.

No person shall construct a new groundwater well in the City without permission of the Director of Public Works. Such permission shall only be granted if an exception is granted to connecting to the City public water system.

(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.040 Hydrant permit required.

No person shall make any connection to a fire hydrant or any other temporary connection point in the public water system without a written permit issued by the Director or a written agreement with the City. A copy of the permit issued must be present at the location where the temporary connection is made during the period of use.

(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.050 Connection permit required.

No person, except a duly authorized employee of the City shall make any connection

to the water mains except when authorized by a City issued encroachment permit or approved public improvement plan issued by the Director. A building permit may also be required if connecting to a premise. The applicant shall pay all applicable connection fees, the amount of which shall be fixed, from time to time, by resolution of the City Council.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.060 Connection fees.

The cost of connecting into a public water main within the City shall, until further changed by the City, be collectible at that time in which the building permit is issued to the applicant. The cost of resurfacing and/or repairing the City streets in connection therewith and in addition thereto the damage done, if any, to the public water system, will be in addition to the connection fee. The connection fees shall be established from time to time by resolution adopted by the City Council.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.070 Fund for water system improvements.

In the event that the connection fees set forth in Section 14.10.060 are not used by an applicant under the direction of the City for water system improvements external to the premises or site, the money or a portion thereof not used shall be used in the future for improvements to the City water system at the City's discretion. None of these funds shall be used for maintenance of the system.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.080 Connections by unauthorized person prohibited.

No person or persons except duly authorized City employees or licensed contractors to whom a permit has been especially granted by the City for the doing of the work, shall be permitted to connect any private water line from any building, premises or fixtures, with the public water system in the City. No unauthorized person shall uncover, make any connection with or opening into, use, alter or disturb any public water line, facility, or water system appurtenance thereof.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.090 Connections - liability for injury.

Any person connecting any private water line with a public water line shall be held responsible for any injury he may cause to the water system or the public street. The cost of repairing the damage if not paid by the person causing the same within thirty days shall become a lien upon the property owned or occupied by the person causing the damage, and may be foreclosed in the same manner as claims for labor or materials under the lien laws of this state, except that no equity or redemption shall apply.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.100 Maintenance of public water connections.

Where premises are connected to the City water mains, it is the responsibility of the property owner, at the owner's expense, to maintain the water service lateral from the premises to the City owned service connection box. Such maintenance shall include the removal of tree roots and the protection of the service box. The service box lid shall be kept free of turf and dirt and be accessible from the sidewalk. No fence or other obstruction shall separate the service box from the sidewalk or street curb. The property owner is also responsible for repairs of the lateral line within the property boundaries. The City will repair damaged and deteriorated lateral lines in the City right-of-way at City expense, unless such damage was caused by the property owner.
(Ord. 2004-07, Added, 10/19/2004)

Section 13.08.110 Tampering with service connections prohibited.

No unauthorized person shall tamper with or alter any meter, connection, turn-off valve, or any other part of the City water system. The curb stops for water are for the use of the City and shall not be turned off or on except by duly authorized City employees. In addition to

penalties and other remedies, the City reserves that right to discontinue water service to any customer tampering with or altering any meter, connection, turn-off valve or any other part of the City water service. The costs to the City for repair of any damage to curb stops, meters or other water system components relating to an individual customer's service, including replacement of locks as necessary, may be charged to the water account customer.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.150 Unauthorized service.

No plumber, contractor, or owner shall leave the water turned on at a new building unless he has knowledge that the service is on by consent of the duly authorized employees of the department, nor shall he reconnect any service found shut off at the service stop.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.170 Responsibility for maintenance of service pipes, valves and other appliances.

The owner or occupants of premises where water is used must keep all service pipes, valves and other appliances in good repair at all times and the department will not be liable for any damage occasioned by broken pipes or other apparatus within the applicant's premises or under his control.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.180 Water supply restricted to premises covered by contract.

Except as otherwise provide in this section, no person shall supply water service from his/her own service to any other property, manually or through a physical connection. A person may supply water to another property in the following circumstances:

A. With written authorization from the Director, and where such water service is through a physical connection in a manner deemed safe by the Director, and on a temporary basis to facilitate repairs on the water system, or to avoid an immediate health or safety risk; or

B. Where such water service is restricted to the manual watering of the landscaping of an adjacent property during:

1. periods of vacancy or

2. to avoid an immediate health or safety risk.

C. A person undertaking watering has the responsibility to obtain permission from the owner of the property being watered.
(Ord. 2008-03, Amended, 07/01/2008; Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Section 13.08.190 Temporary discontinuance of service for repairs.

The department reserves the right to limit the amount of water to any consumer should occasion demand, and shall not be liable for any damage caused by temporary discontinuance of service while making repairs or replacements.
(Ord. 2004-07, Repealed and Replaced, 10/19/2004)

Chapter 13.10

WATER CONSERVATION

Sections:

Section 13.10.010 Findings of facts.

It is found and determined that:

A. Water is a most precious resource for the health and benefit of the citizens of Galt and an adequate supply of water for the present and future must be protected.

B. The central valley region in general and the city in particular are experiencing a decline in ground water supplies. This overdraft situation is the result of the removal of water from the ground through agricultural and domestic wells in quantities which are in excess of the quantity of water that is replenished into the ground water supply through natural processes.

C. An increase in demand for water supplies throughout the state and in Galt in particular can be expected as long as growth continues.

D. The waste of water is an unreasonable and nonbene-ficial use of water and is a detriment to the maintenance of the necessary supply of water necessary for public health, welfare and safety.

E. Conservation of water will reduce water demand and will thus have a positive effect on the supply of water and at the same time, will have a positive effect on the maintenance and operation of the system of supply and on energy conservation. (Ord. 93-01 § 2 (part))

Section 13.10.020 Purpose.

It is the purpose of this chapter to promote the public health, welfare and safety through provisions designed to:

A. Encourage water conservation by the public and industry and by the various commercial uses;

B. Minimize or eliminate the waste of water through voluntary compliance and through increased rates or other punitive action;

C. Reduce the per capita water consumption in the city during the years of normal precipitation and during years of drought;

D. Protect and conserve the supply of water during any of several kinds of emergency or crisis. (Ord. 93-01 § 2 (part))

Section 13.10.030 Methods.

To accomplish the stated purposes, this chapter establishes:

A. A staged water use policy governing the use of water within the city based upon the adequacy or inadequacy of water supplies;

B. Regulations that specify the nonpermitted uses of water according to the state implemented;

C. Penalties for noncompliance;

D. Waivers from any or all requirements of this chapter in the case of hardship, overriding considerations of health or welfare, or otherwise, as specified. (Ord. 93-01 § 2 (part))

Section 13.10.040 Implementation.

The city manager shall establish the state of the water use policy which shall be in effect from time to time based upon recommendations of the city engineer. Such recommendation of the city engineer may be based upon, but shall not be limited to times of drought, prolonged power outages or the perception of such, natural disasters or water generation or transmission system failures. Such water use policy stage shall remain in full force and effect until subsequent action is taken by the city manager to upgrade or downgrade the stage as may be necessary or desirable. (Ord. 93-01 § 2 (part))

Section 13.10.050 Notification.

Upon determination of the water use policy stage and thereafter, any upgrade or downgrade

of such stage, the city manager shall determine the means by which the city shall notify residents. Notification may be achieved through newspaper, public notice, mailings, utility billings or by a combination of such or by other means as determined by the city manager. (Ord. 93-01 § 2 (part))

Section 13.10.060 Water use policy.

A. Stage 1--Normal Water Supply.

1. The waste of water is prohibited. "Waste of water" under this section shall mean allowing water to escape from the water supply at the rate of one quart or more per hour from any leaky, worn or broken faucets, valves, pipes or other fixtures, or permitting water to run from any hose, hose nozzle, valve or sprinkler in a wasteful, useless or nonbeneficial manner.

2. Free flowing water hoses shall be prohibited except where used for filling troughs, pools, spas, ponds or similar uses. Automatic shutoff devices shall be used on all hoses for the purposes of watering lawns or gardens or for the washing of vehicles, boats, equipment, driveways, sidewalks, or similar uses.

3. All leaking water lines and/or faulty sprinkler systems must be repaired within five days. At the discretion of the city's public works department, and upon a showing or just cause by the use, the five-day limit may be extended. Any water line beyond and including the correction to the curb stop shall be the resident's responsibility for repair and replacement.

4. All pools, spas, ponds and ornamental fountains shall be equipped with a recirculating pump and shall be constructed in a leak-proof manner. Draining and refilling of such structure shall be allowed only for health, maintenance or structural considerations.

B. Stage 2--Water Alert.

1. All requirements of stage 1 apply, and in addition, landscape and pasture irrigation shall be limited to a maximum of three days per week, when necessary, and shall be based on the following odd-even schedule:

Customers with street addresses ending with an even number may irrigate only on Wednesday and/or Friday and/or Sunday;

Customers with street addresses ending with an odd number may irrigate only on Tuesday and/or Thursday and/or Saturday;

No irrigation will be permitted on Mondays.

2. Draining and refilling of pools, spas and ponds shall be allowed for health, maintenance or structural considerations, after approval by the city engineer. Customer requests for approval must be substantiated in writing by a pool consultant or equivalent.

3. Restaurants shall serve water only upon specific request.

4. No washing of sidewalks, streets, driveways, parking lots, structures, or similar uses will be allowed except as necessary for health, sanitary or fire protection purposes.

5. Washing of vehicles, boats, equipment, etc. shall be accomplished under the following restrictions:

a. Water buckets shall be utilized;

b. Water hoses with automatic shutoff devices may be used for rinsing for a duration not to exceed three minutes.

c. Stage 3--Water Warning.

1. All requirements of stage 1 and stage 2 apply, except that:

2. Watering lawns, flower beds, landscaping, and similar uses will be limited to two days per week with even addresses watering on Wednesdays and/or Sundays and odd addresses watering on Tuesdays and/or Saturdays.

3. The director of public works of the city shall take the following precautions:

a. Flushing of sewers or fire hydrants shall be limited to essential operations for the benefit of public health or welfare;

b. Construction water usage, such as dust control, trench jetting, and compaction will be permitted only under specific authorization of the director of public works;

c. On any construction site no water shall be used for the cleaning of vehicles, equipment or fixed works.

4. The washing of sidewalks, streets, driveways, parking lots, structures, or similar uses is prohibited except as authorized in writing by the city engineer.

D. Stage 4--Water Crisis (Emergency).

1. All requirements of stage 1, stage 2 and stage 3 shall apply except that:

a. Landscaping and pasture irrigation with potable water is prohibited;

b. The washing of vehicles, boats,

equipment, etc. is prohibited except at a commercial establishment that utilizes recycled or partially recycled water;

c. No potable water from the city's system shall be used to fill or refill any pools, spas or ponds, etc. Use of ornamental fountains is prohibited;

d. No potable water from the city's system shall be used for construction purposes. (Ord. 93-01 § 2 (part))

Section 13.10.070 Additional requirements for commercial industrial uses.

Due to the diversity of present and future commercial and industrial uses in the city and the water requirements pertaining thereto, the city manager is authorized to impose additional restrictions on water use, to prevent waste of water or the unreasonable nonbeneficial use of water, on a case by case basis to any specific business or industry. Such requirements shall be made in writing and thereafter shall remain in full force and effect within the provisions of this chapter until notice is given in writing to the contrary. (Ord. 93-01 § 2 (part))

Section 13.10.080 Enforcement.

All employees, permanent or temporary, or contractees or the city designated by the city manager or by the city manger's designee, are authorized to enforce the provisions of this chapter. (Ord. 93-01 § 2 (part))

Section 13.10.090 Penalties.

The penalties stated in this section are deemed to neither limit nor repeal any other powers granted under state or federal law or Chapter 21.01 of Title 21. Notice of each and all violations of this Chapter shall be given in writing to the occupant of the site of the violation, or to any person in control of such site, or posted on the site in a conspicuous location. Each day any violation of this Chapter is committed or permitted to continue shall constitute a separate offense and shall be punishable as such, except as otherwise indicated in this Chapter.

A. For stages 1 through 3 of water use policy, the penalties for violations within a twelve-month period will be as follows:

1. First offense. Warning;

2. Second offense. Twenty-five dollars added to water bill, to account for wasted water;

3. Third offense. Fifty dollars added to water bill, to account for wasted water;

4. Fourth offense.One hundred dollars added to water bill, to account for wasted water;

5. Fifth offense. Customer will be required to install a water meter at his/her own expense in addition to a one hundred dollar reconnection fee;

6. Additional offenses. One hundred dollars added to water bill, to account for wasted water, plus the installation of a flow restrictor at customer's expense.

B. For stage 4 of water use policy, the following penalties will be applied for violations within a twelve-month period:

1. First offense. Warning;

2. Second offense. One hundred dollars added to water bill, to account for wasted water;

3. Third offense. Two hundred dollars added to water bill, to account for wasted water;

4. Fourth offense. Customer will be required to install a water meter at his/her own expense in addition to a two hundred dollar reconnection fee;

5. Additional offenses. Same as for stages 1 to 3 except two hundred dollars.

(Ord. 2006-07, Amended, 06/06/2006; Ord. 93-01 § 2 (part))

Section 13.10.100 Waivers.

Waivers to the requirements of this chapter may be issued at the discretion of the city manager or his appointed representative but only when based upon such considerations as hardship, health or safety matters, unjustifiable repair costs, overall benefit to the public, protection of sensitive, threatened or endangered plant species or habitats, or compliance with other state, federal or local laws. Applications for a waiver, together with any fees required, shall be made on the form provided for such and delivered to the city. The existence of a pending application for waiver of the requirements of this chapter shall in no way waive or suspend compliance with such requirements. the issuance of a waiver shall not abrogate or nullify previous offenses nor shall it be grounds for a reimbursement of fines as applied in accordance with this chapter. The issuance of a waiver shall

in no way limit or nullify the requirements of this chapter as they may apply to areas, violation or offenses other than those waived by such waiver. (Ord. 93-01 § 2 (part))

Section 13.10.110 Waiver fee.

A. The city council may, by resolution, and from time to time, prescribe fees as part of the application for a waiver of the requirements of this chapter. Such fees shall be for the sole purpose of defraying costs incurred in the administration of this chapter.

B. All application fees for a waiver shall be paid at the time of and with the filing of the application with the city. No application shall be deemed valid or complete until all prescribed fees have been paid. Unless otherwise prescribed, fees shall not be refundable in whole or in part whether or not the waiver is issued or approval granted, nor if permittee ceases operating under the waiver in advance of expiration of the term thereof, if any. (Ord. 93-01 § 2 (part))

Section 13.10.120 Content of application for a waiver.

A. Application for a waiver pursuant to Section 13.10.100 shall consist of the following information:

1. Name, signature, address and phone number of applicant requesting waiver;

2. Reasons for requesting waiver to include, but not necessarily be limited to hardship, health or safety matters, unjustifiable repair costs, overall benefit to the public, protection of sensitive, threatened or endangered plant species or habitats or compliance with other state, federal or local laws, etc;

3. A description of the duration for which compliance will not be achieved;

4. Location of the nonconforming fixture or faucet.

B. As part of the application process, the city may request estimates of repair costs attached or other materials necessary to substantiate reasons given for an application for waiver. (Ord. 93-01 § 2 (part))


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