

LOWER LAKE COUNTY WATERWORKS DISTRICT #1

MUNICIPAL SERVICE REVIEW

AND

SPHERE OF INFLUENCE

LAKE LAFCO

**ADOPTED
MAY 18, 2011**

**MSR- Resolution 2011-0001
SOI Resolution 2011-0002**

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	LAFCO's Responsibilities	1
1.2	Municipal Service Review Requirements	1
1.3	Lake LAFCO Policies and Procedures Related to Municipal Services	2
1.4	Preparation of the MSR	2
1.5	Description of Public Participation Process	2
1.6	California Environmental Quality Act (CEQA)	3
2	LOWER LAKE AREA	4
2.1	Lower Lake Community	4
2.2	Lower Lake Population Data	5
2.3	Lower Lake Population Growth	5
3	LOWER LAKE COUNTY WATERWORKS DISTRICT #1	7
3.1	Water Supply Treatment and Distribution Overview	7
3.2	Lower Lake Groundwater Basin	8
3.3	History of Lower Lake County Waterworks District #1	10
3.4	Lower Lake County Waterworks District #1 Government	10
3.5	Description of LLCWD#1 System	11
3.6	Capacity of LLCWD#1 Water System	16
3.7	Projected Future Demand on the LLCWD#1 System	17
3.8	LLCWD#1 Planned Improvements and Funding	18
3.9	LLCWD#1 Projected Costs and Funding Sources	21
4	MUNICIPAL SERVICE REVIEW	26
4.1	Growth and Population Projections for the Lower Lake Area	27
4.2	Capacity and Infrastructure for Lower Lake County Waterworks District #1	29
4.3	Financial Ability	30
4.4	Opportunities for Shared Facilities	32
4.5	Government Structure and Accountability	33
5	SPHERE OF INFLUENCE (SOI) DETERMINATIONS	36
5.1	Sphere of Influence Requirements	36
5.2	Present and Planned Land Uses in the Lower Lake Area, Including Agricultural and Open Space Lands	36
5.3	Municipal Services—Present and Probable Capacity and Need	40
5.4	The Present Capacity of Public Facilities and Adequacy of Public Services Provided by Lower Lake CWD #1	41
5.5	Social or Economic Communities of Interest	42
	ABBREVIATIONS	44
	DEFINITIONS	46
	REFERENCES	53
	PREPARERS	54
	Maps	55
	Appendix A Local Government Issues	57
	Appendix B Lower Lake County Waterworks District #1 Water Rates	61
	Appendix C Lower Lake County Waterworks District #1 Budgets	63
	Appendix D 2008 Consumer Confidence Report	69

1 INTRODUCTION

This Municipal Service Review is prepared for the Lower Lake County Waterworks District #1 in Lake County. The District provides domestic water service. The Municipal Service Review (MSR) includes the following information:

- LAFCO requirements for MSRs
- Lower Lake Area background
- Description of water service provided by Lower Lake County Waterworks District #1
- Analysis of Lower Lake County Waterworks District #1's capability to serve existing and future residents in the area

1.1 LAFCO's Responsibilities

Local Agency Formation Commissions are quasi-legislative local agencies created in 1963 to assist the State in encouraging the orderly development and formation of local agencies. The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000 et seq.) is the statutory authority for the preparation of an MSR, and periodic updates of the Sphere of Influence of each local agency.

The Governor's Office of Planning and Research (OPR) has issued Guidelines for the preparation of an MSR. This MSR adheres to the procedures set forth in OPR's MSR Guidelines and Lake LAFCO's "Local Procedural Guidelines for Municipal Service Reviews" (January 2008).

A Sphere of Influence is a plan for the probable physical boundaries and service area of a local agency, as determined by the affected Local Agency Formation Commission (Government Code §56076).

Government Code §56425(f) requires that each Sphere of Influence be updated not less than every five years, and §56430 provides that a Municipal Service Review shall be conducted in advance of the Sphere of Influence update.

1.2 Municipal Service Review Requirements

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 as amended by AB1744 and regulations call for a review of the municipal services provided in the county or other appropriate area designated by the LAFCO. The LAFCO is required, as part of the MSR, to prepare a written statement of findings of its determinations with respect to each of the following:

1. *Growth and Population*
2. *Capacity and Infrastructure*
3. *Financial Ability*
4. *Shared Facilities*

5. *Government Structure and Accountability*

1.3 Lake LAFCO Policies and Procedures Related to Municipal Services

The Lake LAFCO adopted policies and procedures related to municipal services on March 20, 2002. There were amended by action of the Lake LAFCO on July 16, 2003 and November 28, 2007.

1.4 Preparation of the MSR

Research for this Municipal Service Review (MSR) was originally conducted during 2009 and 2010. Since that time, extensive revisions have been made to add additional information.

This MSR is intended to support preparation and update of Spheres of Influence, in accordance with the provisions of the Cortese-Knox-Hertzberg Act. The objective of this Municipal Service Review (MSR) is to develop recommendations that will promote more efficient and higher quality service patterns; identify areas for service improvement; and assess the adequacy of service provision as it relates to determination of appropriate sphere boundaries.

While LAFCO prepared the MSR document, LAFCO did not engage the services of experts in engineering, water law, fire protection, accounting and other specialists in related fields, but relied upon existing reports and Lake County and Lower Lake County Waterworks District #1 staff for information. In some cases, upon verification of the facts, changes were made from previous source data.

Therefore, this MSR reflects LAFCO's recommendations, based on available information during the research period and provided by Lake County staff to assist in its determinations related to promoting more efficient and higher quality service patterns; identifying areas for service improvement; and assessing the adequacy of service provision for Lower Lake County Waterworks District #1.

1.5 Description of Public Participation Process

Lake LAFCO is a legislative body authorized by the California Legislature and delegated powers as stated in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (the Act). The LAFCO proceedings are subject to the provisions California's open meeting law, the Ralph M. Brown Act (Government Code Sections 54950 et seq.)

The Brown Act requires advance posting of meeting agendas and contains various other provisions designed to ensure that the public has adequate access to information regarding the proceedings of public boards and commissions. Lake LAFCO complies with the requirements of the Brown Act.

The State MSR Guidelines provide that all LAFCOs should encourage and provide multiple public participation opportunities in the municipal service review process. Local MSR policies have been adopted by the Lake LAFCO.

Lake LAFCO has discussed and considered the MSR process in open session, and has adopted a schedule for completing the various municipal service reviews and sphere of influence updates for Lake County. Each municipal service review will be prepared as a draft, and will be subject to public and agency comment prior to final consideration by the Lake LAFCO.

1.6 California Environmental Quality Act (CEQA)

The Municipal Service Review is a planning study that will be considered by Lake LAFCO in connection with subsequent proceedings regarding the Lake County CSAs and the Spheres of Influence. The Sphere of Influence review or update that will follow has not been approved or adopted by LAFCO.

This MSR is funded in the Lake LAFCO's 2008-2009 Budget. This MSR includes an analysis, to the extent required by Section 15262 of the CEQA Guidelines, of the environmental factors that may be affected by the Municipal Service Review process, but will not include the preparation of an environmental review document.



8200 STATE HWY 29, LOWER LAKE, CA 95457

<http://www.cherifarell.lower-lake-jago-bay-ca-lots-land-acreage.idxre.com/idx/propertymorephotos.cfm?cid=11295&pid=107609&bid=10&pt=LL&actv=0>

2 LOWER LAKE AREA

2.1 Lower Lake Community

Lower Lake is located at the intersection of State Highways 29 and 53 near the south shore of Clear Lake at an elevation of 1,378 feet above sea level. The population, at the time of the 2000 census, was 1,755. The 2007 population was 2,016.¹ According to the Lake County General Plan, “This community contains some of the County’s prime historic structures along its Main Street and other areas within the community.”

One example of the historic structures is the Lower Lake Stone Jail. Lower Lake Stone Jail, claimed to be the smallest jail in the United States, was erected in 1876 of stone locally quarried and reinforced with iron. During the days of the first quicksilver operations of the Sulphur Bank Mine, lasting from 1873 to 1883, rapid town growth and the urgent need for civil order necessitated a jail, and this was built. Stephen Nicolai, one of the first stone masons in Lower Lake, built the jail from local materials with the help of Theodore and John Copsey. The tiny jail is no longer in use, and has been designated California Historical Landmark #429.

The community of Lower Lake is located south of the Anderson Marsh State Historic Park, which has historic structures and over 1,000 acres of natural open space including a 540-acre wildlife sanctuary.

The Community is served by the Konocti Unified School District. The District operates four elementary schools, one middle school, one high school, and three alternative schools. One elementary school and two high schools are located within Lower Lake.



http://www.noehill.com/lake/images/lower_lake_stone_jail_tiny.jpg

¹ Lake County, 2008 General Plan, page 2-6
LAKE LAFCO Adopted MSR and SOI
Lower Lake County Waterworks District #1
Resolution 2011-0001 (MSR) and 2011-0002 (SOI)
May 18th, 2011

2.2 Lower Lake Population Data

As of the US Census of 2000, there were 1,755 people, 716 households, and 458 families residing in the Lower Lake Census Designated Place (CDP).

There were 716 households out of which 25.0% had children under the age of 18 living with them, 48.5% were married couples living together, 10.8% had a female householder with no husband present, and 35.9% were non-families. 27.5% of all households were made up of individuals and 12.2% had someone living alone who was 65 years of age or older. The average household size was 2.45 and the average family size was 2.97 in Lower Lake.

In the Lower Lake CDP the population was spread out in age as follows:

under the age of 18 years	23.2%
18 to 24 years of age	7.9%
25 to 44 years of age	22.3%
45 to 64 years of age	27.2%
65 years of age or older	19.4%

In 2000, the median age was 43 years. For every 100 females there were 100.3 males. For every 100 females age 18 and over, there were 94.0 males in Lower Lake. The median income for a household in the CDP was \$24,974, and the median income for a family was \$29,896.

Males had a median income of \$38,750 versus \$21,250 for females. The per capita income for the Lower Lake CDP was \$13,516. About 9.9% of families and 12.4% of the population were below the poverty line, including 12.0% of those under age 18 and 5.4% of those aged 65 or over.

The median income for a Lake County family of four in 2009 was \$55,800.²

2.3 Lower Lake Population Growth

Continuing high demand for housing in the San Francisco Bay Area (including the North Bay counties of Sonoma, Napa and Solano) together with abnormally high residential housing and land prices in the Bay Area has caused rising land and housing prices in the adjacent San Joaquin and Sacramento Valleys, and also in parts of Lake County. It is reasonable to believe that this trend will continue; however, at a slower rate. Also, Lake County is attractive for retirement housing.

² State of California, Department of Housing and Community Development, Memorandum Official State Income Limits for 2009, April 2, 2009.

The Lower Lake County Waterworks District #1 has sufficient land within the District to accommodate substantial growth. With two percent growth the District would have 1238 connections by 2020 and with three percent growth the District would have 1348 connections by 2020 (compared to 826 in 2003 and 857 in 2009³). The district estimates there are 1302 parcels within the district at this time.

Since Lower Lake is unincorporated, the Lake County Community Development Department processes all development applications. It is important for the District to coordinate with the County to ensure future development will be compatible with the District's water system. Several parcels within the district could potentially be divided in the future.



<http://lakecountyhistory.org/wp-content/uploads/2008/02/lower-lake-school-2.jpg>

³ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 10, 2009

3 LOWER LAKE COUNTY WATERWORKS DISTRICT #1

3.1 Water Supply, Treatment and Distribution Overview

In Lake County, the critical season for water supply occurs in the late summer because demand is higher at this time due to the increased tourist population and supply is lower until the winter rainy season starts again. In 2009, for example, the Peak Month usage was 13.74 million gallons. The Peak day (July 28th, 2009) 901,000 gallons were consumed thereby using 68% of the district's capacity of 1.3 million gallons per day.

Lake County Code requires that water wells be constructed with a continuous seal from ground level down 50 feet. The purpose of the seal is to assure that surface water cannot flow into the well casing and contaminate deeper aquifers that are penetrated by the well.⁴

Small community water treatment has posed an enormous problem for the drinking water regulatory community, drinking water professionals, and the people living in these communities. The Safe Drinking Water Act (SDWA) and subsequent regulations require that all water in the distribution system and at every tap connected to the distribution system comply. Water treatment usually consists of filtration and disinfection.

Water treatment standards essentially mandate central treatment for drinking water prior to entering the distribution system. No water that exceeds a primary standard may be used for drinking water.

Primary Standards have been developed to protect human health and are rigorously enforced by the Department of Health Services. For very small communities, this may be a cost that poses an undue burden. Often it could be a cost that has negative public health implications. For a very low-income family, the money spent on water treatment may not be available for other essentials.

Rather than spend that money, a community may apply for a variance or exemption. Exemptions and variances are intended to be temporary solutions to regulatory compliance. They may, however, extend indefinitely leaving a community with no water that meets the regulation.⁵

Secondary Standards are intended to protect the taste, odor or appearance of drinking water. California Code requires that, if a community water system experiences an exceedance of certain secondary standard, quarterly sampling must be initiated.

⁴ Brejle & Race Consulting Civil Engineers, "Preliminary Engineering Report Bonanza Springs Water System CSA #7 Lake County Special Districts", December 2006, page 6.

⁵ NSF International, "Feasibility of an Economically Sustainable Point-of-Use/Point-of-Entry Decentralized Public Water System Final Report", March 2005, p18. nsf.org/business/.../pdf/GrimesFinalReport_Dec05.pdf

Compliance is then determined based upon the average of four consecutive quarterly samples. Non-compliant water must then be treated to meet the secondary standards.⁶

Water distribution systems carry water for both domestic use and for fire protection. The distribution system should be sized to perform both functions simultaneously, delivering sufficient water volume and pressure. Pipes should be made of durable and corrosion-resistant materials, and alignments located in areas that are easy to access for repairs and maintenance.⁷ Fire hydrants should be placed a maximum of 600 feet apart along the water mains and a maximum of 500 feet from the end of water lines.⁸

Some water loss in the distribution system can be expected. Water loss is the difference between the volume of water pumped from the water supply well and the volume of water sold to users. A loss of water from 10% to 20% is considered acceptable by the American Water Works Association (AWWA).⁹

3.2 *Lower Lake Groundwater Basin*

3.2.1 *Lake County Groundwater Background*

Lake County has 12 groundwater basins and one groundwater source area. Groundwater basins are composed primarily of shallow alluvial deposits and deposits of the Clear Lake Volcanics over the fractured basement rock of the Franciscan Formation. Groundwater levels in the majority of Lake County's groundwater basins are high in the spring and decrease over the summer.¹⁰

The Lower Lake Basin is southeast of Clear Lake in the Shoreline and Lower Lake Inventory Units. The rocks of the Great Valley sequence border the Lower Lake Basin on the south (Rymer 1981), and the Cache Formation and volcanic rock border the basin to the north. The Lower Lake Formation and volcanic rocks occur within this basin. Average-year agricultural groundwater demand in the Lower Lake basin is approximately 17 acre-feet per year.

3.2.2 *Lower Lake Groundwater Basin Water-Bearing Formations Quaternary Alluvium*

Alluvial deposits consist of clay, silt, sand and gravel and are approximately 50 to 75 feet thick. Irrigation wells constructed near the alluvial deposits provide about 400 to 600

⁶ Brelje & Race Consulting Civil Engineers, "Preliminary Engineering Report Bonanza Springs Water System CSA #7 Lake County Special Districts", December 2006, page 8.

⁷ Brelje & Race Consulting Civil Engineers, "Preliminary Engineering Report Bonanza Springs Water System CSA #7 Lake County Special Districts", December 2006, p. 10.

⁸ Brelje & Race Consulting Civil Engineers, "Preliminary Engineering Report Bonanza Springs Water System CSA #7 Lake County Special Districts", December 2006, p. 11

⁹ Mark Dellinger, Special Districts Administrator, 230A Main Street, Lakeport, CA 95453, Ph: (707) 263-0119 F: (707) 263-3826, October 22, 2008.

¹⁰ Lake County Public Works Department, Groundwater Management Plan, March 31, 2006, page 2-3. <http://www.co.lake.ca.us/Assets/WaterResources/IRWMP/GWMP+Section+2a.pdf>, June 9, 2009.

gpm (Upson 1955). The alluvial plain of Herndon Creek likely contains gravelly clay, and is interbedded with gravel layers. Wells in the area (with depths of approximately 75 feet) yield up to 250 gpm with 40 feet of drawdown (Upson 1955).

3.4.3 Lower Lake Formation

The Lower Lake Formation includes conglomerate, sandstone, siltstone, limestone, tuff, and diatomite (Rymer 1981). Younger alluvial deposits are found above the Lower Lake Formation and cover an area almost two-thirds of the basin. Permeability is variable but generally low because the strata are high in clay or silt. The formation thickness is unknown. Well yields are about 150 to 240 gpm (Upson 1955).

3.2.4 Lower Lake Groundwater Hydrogeology

Precipitation and seepage from Herndon Creek and Clear Lake are the main sources of recharge for the Lower Lake Groundwater Basin (Upson 1955). Recharge is also likely from Copsey and Seigler Canyon creeks. Infiltration of rain falling on the outcrop areas is the likely source of groundwater recharge in the Cache Formation (Upson 1955).

DWR monitored three groundwater wells in the Lower Lake Basin but discontinued monitoring by 1995. Monitoring prior to 1995 indicates that groundwater levels fluctuated from an average of 10 feet below ground surface in the spring to an average of 20 feet below ground surface in the fall. There is no information on groundwater movement. The Basin's storage capacity is approximately 3,000 to 4,000 acre-feet (Upson 1955).

Additional storage capacity is available as part of the Lower Lake Formation but thickness and yield are unknown.

3.2.5 Groundwater Quality/Inelastic Land Surface Subsidence

DWR monitors a number of wells for water quality in the Lower Lake Groundwater Basin. Monitoring is not extensive enough to determine trends in groundwater quality or the overall character of groundwater in the basin. Information was not available from DHS for the Lower Lake Basin. Current information regarding inelastic land surface subsidence is unavailable.

3.2.6 Lower Lake Groundwater Basin Groundwater Wells

There are 243 domestic wells and 25 irrigation wells in the Lower Lake Groundwater Basin. Approximately 50 percent of domestic wells are shallower than 50 feet deep, and approximately 50 percent of irrigation wells are shallower than 100 feet deep.¹¹

Average-year agricultural groundwater demand in the Lower Lake Basin is approximately 17 acre-feet per year.¹²

¹¹ Lake County Public Works Department, Groundwater Management Plan, March 31, 2006, pages 2-32, 2-33. <http://www.co.lake.ca.us/Assets/WaterResources/IRWMP/GWMP+Section+2a.pdf>, June 9, 2009.

¹² Lake County Watershed Protection District, "Lake County Groundwater Management Plan", March 31, 2006, P 2-32.

3.3 History of Lower Lake County Waterworks District #1

Lower Lake County Waterworks District #1, (District) serves the unincorporated community of Lower Lake. The greater service area comprises roughly three square miles, of which a large portion is rural not presently receiving District water. Major users of Lower Lake County Waterworks District #1 water include the schools within the Lower Lake community and Lake County office buildings.

The District was organized under the County Water District Law, California Water Code §30000 *et seq.* in 1946, with the first well (#1) constructed in 1948 and a service area including only the immediate town of Lower Lake. The Copsey Creek subdivision (northeast of the town) was added approximately in 1965. Improved piping along Main Street was installed in 1986.

The Rancho Sendero subdivision (one mile south and east of Highway 29) was annexed in 1986 (but running separate facilities), and was connected to the District's supply as a subsystem in 1996. The Twin Lakes area (1.5 miles south and west of Highway 29) was added in 1996, and included an upper zone water storage tank for Twin Lakes. The first water treatment plant (Plant A) was built by the District in the 1980s, and Water Treatment Plant B was added in 1995.

Lower Lake County Waterworks District #1 developed the District's "Draft Master Plan 2003-2020" to address local issues related to infrastructure and service improvements necessary to support expected growth in demand for water. The District has new rates so is now able to add money annually to build up the reserve fund for improvements. Also, the District is looking for funding through USDA.¹³ However, the District's connection fee ordinance has not been amended since the 1960's

As of December 2010 there were 987 connections of which 844 are active connections serving a population of about 2,000 according to the District. The number of connections declined from 886 in 2007 according to the Department of Health services.¹⁴

3.4 Lower Lake County Waterworks District #1 Government

Lower Lake County Waterworks District #1 is governed by a five-member board of Directors. The Board of Directors is appointed by the Lake County Board of Supervisors¹⁵ and serve two-year terms. General Manager, Phillip Spooner, hired in April 2009 oversees daily operations.

The District contact information is as follows:

¹³ Lower Lake County Waterworks District #1, Jo Anne Gaddy, Office Manager, LowerLakeWater@mchsi.com, September 29, 2010.

¹⁴ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 10, 2009

¹⁵ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 9.

Phone: 707-994-6009 Fax: 707-994-7415
Email: lowerlakewater@mchsi.com

Mail: Lower Lake County Waterworks District #1
PO Box 263, Lower Lake CA 95457-0263

The office is located at 16254 Main Street in Lower Lake.

The District has prepared Master Planning documents in 1991 and again in 2003 to address long-term system capacity and distribution issues. The Board of Directors has shown the ability to budget and plan for growth within its system and to meet demands on the system.

The Board of Directors is as follows:¹⁶

Chair	Frank Haas
Vice Chair	Cynthia LeBrun
Director	Frances Ransley
Director	John Spriet
Director	Cynthia Fisher

Although service and record-keeping deficiencies were noted in the Master Plans, the District management has been responsive to the recommended changes. The most recent fee schedule is shown in Appendix B and the 2009-2010 and 2010-2011 Budgets are shown in Appendix C. The management structure appears sufficient for the provision of water service within this system.

Local accountability is attributed to open and publicized meetings, regular elections, and locally available staff. The District publishes Consumer Confidence Reports to show the Department of Health Services' assessments of water quality. This report is included as Appendix D.

3.5 Description of LLCWD#1 Water System

3.5.1 Lower Lake County Waterworks District #1 Water Supply

Water is drawn from a variety of wells, with pumping abilities ranging from 10 to 200 gallons per minute (gpm), per well. There are eight wells in production within the District. According to the district, there are no issues regarding the ability of the aquifer to regenerate. All active wells are listed in either "fair" or "good" condition. The District also has water rights by capture. There is a lack of historical well log data. Common equipment failures were prevalent. However, in the past two years there has been an aggressive maintenance program funded by \$230,000 in reserve funds for that purpose.

¹⁶ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, September 29, 2010.

A goal is to meter each of the wells to determine if there are pumping problems. The ability to filter water results in a lower capacity for the district to deliver water. Another goal of the district is to increase filtering and distribution.

A. Water Well #1

According to the District's 2003 Master Plan and additional updated information:¹⁷

Well #1 is the District's original well, predating the Copsey Creek subdivision, and is located on District-owned property within the Copsey Creek subdivision, near Copsey Creek. It is capable of producing 165 gallons per minute. In 2010 it produced 165 gpm for six to eight hours per day in the spring. In the summer it may be used for sixteen hours per day. It is pumped by a District-owned pump (replaced in 2009) and motor. Well #1 was placed in service in 1948. There is no treatment at Well #1 other than chlorination.

B. Other Water Wells

Two other wells are located within the District in the Rancho Sendero subdivision but were retired from use when the Rancho Sendero subsystem was connected to the District in 1996. These wells were legally abandoned and the easements returned to the original properties.¹⁸

Two wells (wells #4 and #5A) need a filtration and chlorination plant, and are located on District-owned property. Well #4 produced an average 140 gpm in 2010 and well #5A produced an average 109 gpm. These wells are used with Water Treatment Plant A. There are casing problems with well #4 which will be addressed in 2010.

Wells #6 through # 10 also need a filtration and chlorination plant and are located on District-owned property. These wells feed Water Treatment Plant B.

3.5.2 Lower Lake County Waterworks District #1 Water Treatment

A. Water Treatment Plant A

Plant A is located northeast of Well #1, on a northerly extension of Bonham Road, near the confluence of Herndon Creek and Cache Creek. Wells #4 and #5 feed the plant, filling a local ground storage tank, which is pumped into the distribution system and ultimately into the main District Water Storage Tanks. Plant A is capable of pumping water into the system at a rate approaching 300 gallons per minute (filtering capacity is 300 gallons per minute but the plant has a pumping capacity of 550 gallons per minute).¹⁹

¹⁷ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, February 2011.

¹⁸ Lower Lake County Waterworks District #1, Jo Anne Gaddy, Office Manager, LowerLakeWater@mchsi.com, September 29, 2010.

¹⁹ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, September 29, 2010.

B. Water Treatment Plant B

Plant B is located northwest of Lower Lake, on a northerly extension of North Drive behind Jonas Oil. Wells #6 through #10 feed this plant, filling a local ground storage tank, which is pumped into the distribution system and ultimately into the main District Water Storage Tanks. Water Treatment Plant B is capable of pumping into the system at a rate of 550 gallons per minute; however, best operation of the plant is to operate at 450 gpm so that the in-flow and out-flow are as even as possible for the majority of the time. There is only one water transmission line into this Plant and the District plans to upgrade to two lines in the future.²⁰

C. Water Quality

The 2008 Consumer Confidence Report on water quality is included in Appendix C at the end of this report. The water quality for the District is good and meets the less than the Regulatory Action Level (AL) for lead and copper. An incident of turbidity was reported in 2007.²¹

3.5.3 Lower Lake County Waterworks District #1 Water Storage

The District has four booster pumps to provide pressure to its water system, with storage for 1.3 million gallons of water.

A. Main Zone Water Storage Tanks

There are two main zone storage tanks: Tank #4 and Tank #5. These tanks are described in the Master Plan as follows:

Water Storage Tank #4 (Mill Street)

A steel tank of 500,000 gallon capacity was added in 2007 to replace an inadequate redwood tank which was demolished after the new tank was placed into service.²²

Water Storage Tank #5

Tank #5 is a 500,000 gallon welded steel tank (50 feet diameter, 34 feet usable height) with a floor elevation of 1600. This tank was installed in 1983 and is in good condition.

These tanks are filled from the treatment plants by means of two pipelines, (eight inch and twelve inch) under the access road, and feed the distribution system through those same pipelines plus a ten inch pipe line going west, then south to Clayton Creek Road, Rancho Sendero, and Twin Lakes.

²⁰ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, September 29, 2010.

²¹ LLCWD#1, 2008 Consumer Confidence Report.

²² Lower Lake County Waterworks District #1, Jo Anne Gaddy, Office Manager, LowerLakeWater@mchsi.com, September 29, 2010.

The two water storage tanks are connected by undocumented valves between the tanks. The District needs to identify and document the valves so that each tank can be quickly isolated from the system, either tank can be filled independently of the other, and either tank can be connected to the system as a supply while the other tank is being maintained. Normally, both tanks float on the system, providing both flow and pressure when the wells and plants are off.

The main water storage tanks have a rim elevation of 1634 feet above sea level which provides a static head of about 300 feet (132 psi) above the lowest served elevations near Cache Creek. The District has a SCADA system to electronically monitor the storage tanks.²³

B. Rancho Sendero Water Storage Tank

The Rancho Sendero subsystem has one 30,000 gallon redwood water storage tank. This water storage tank is located northeast of the subdivision off a dirt road extension of Sendero Way at an elevation of 1550 feet above sea level. The tank is filled by means of a gravity feed transmission line from the main tanks on Mill Street by way of Clayton Creek Road and Spruce Grove Road. The water transmission line was built in 1996 and connects to the four-inch water line formerly used to fill the tank from the now-abandoned Rancho Sendero wells. This tank was recently repaired to stop a significant leak.

To prevent overflow, the supply is controlled by an altitude valve at the Rancho Sendero tank. Due to this continuous supply the Rancho Sendero tank will normally remain full at all times. The Rancho Sendero water storage tank supplies the Rancho Sendero subsystem by the eight-inch water supply line originally used. The Rancho Sendero subsystem operates as a separate pressure zone with a static gauge pressure of 60 psi. The district is proposing to remove the tank and install a pressure reducing valve and then use the Mill street water tank #5.

C. Twin Lakes Water Storage Tank

The Twin Lakes Tank is steel and has a capacity of 205,000 gallons. This tank has a floor elevation of 1782 feet above sea level and a diameter of 39 feet. The tank was installed in 1996 and is filled by means of a booster pump station location on Candy Lane in the Twin Lakes subdivision. The booster pump feeds the Twin Lakes upper zone distribution system, which in turn fills the tank through an auxiliary chlorinator and top-fill line.

The Twin Lakes water storage tank is capable of supplying the lower zone portion of Twin Lakes as well as supplying the Rancho Sendero tanks in the event that the Clayton Creek line is shut down for maintenance. This back-supply is accomplished by a pressure reducing station co-located with the booster station. Thus, the Twin Lakes tank

²³ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, May 6, 2010.

can contribute to fire reserves for the general system as well as fire reserves for the Twin Lakes area.

3.5.4 Lower Lake County Waterworks District #1 Water Supply Infrastructure

Water mains are typically concrete, ranging from four to 12 inches, with lateral lines to provide for individual connections.

A. Main Zone

The distribution piping provides water from Plants A and B to the main zone tanks and from the tanks to the consumers. These transmission lines were built between 1985 and 1996 using C900 PVC. There are some enhanced lines for both transmission and distribution.

B. Clayton Creek Road Line to Rancho Sendero and Twin Lakes

The southern area is supplied by the Clayton Creek Road transmission line which branches from the twelve inch Mill Street tank line and proceeds westerly and southerly to Clayton Creek Road as a ten inch line. The ten inch line branches into three six inch lines. These lines are all C900 PVC and were built in 1996.

C. Distribution to Specific Areas

1. Original System

Most of the distribution system in the Lower Lake town area is asbestos-cement pipe (AC) which was commonly used until better grades of PVC became available. The water lines are mostly four inch lines or smaller.

2. Copsey Creek Area

The Copsey Creek Ranch subdivision plats are dated 1965 and it is assumed the water system was built as each unit of the subdivision was offered for sale. The water lines are principally four inch AC pipe with six inch lines in a few places and three inch dead-end lines.

3. Cache Creek Area

The Cache Creek area is served by a newer eight inch PVC water line on Lake Street with older four inch lines on the residential streets. Some Bryant Road parcels are served from a branch line north of Winchester and the Bryant Road water line (eight inch C900 PVC) should be extended and connected to the Copsey Creek area to serve these parcels and provide a water line loop to the area.

4. Bell Park Area

Bell Park pipe lines are principally four inch AC and have inadequate cover.

5. Rancho Sendero Area

Rancho Sendero lines are thin-wall PVC, dating from the 1980's and include an eight inch line from the tanks to the residential area, a six inch loop on Spruce Grove and Old Spruce Grove roads and a four inch extension southerly on Spruce Grove Road.

6. Twin Lakes Area

Twin Lakes distribution piping was installed in 1996. Record plans show C900 PVC to have been used throughout, with Class 200 in a few high pressure areas. Sizes are generally six inches with eight inches in the upper zone tank line and four inches on the Strawn Road extension.

3.6 Capacity of LLCWD#1 Water System

3.6.1 Fire Protection

The original system included a number of wharf hydrants with a few dry barrel hydrants. Only dry barrel hydrants have been added recently. In most areas, the frequency of hydrants along streets is normal; but in some areas there are too few hydrants. Flows and pressures at hydrants on six inch or larger water lines are good due to the high prevailing static pressures. Hydrants on small diameter lines will produce substandard flows and residual pressures (under 500 gpm, under 20 psi) despite the high prevailing static pressures.

The California Department of Health Services suggests that a commercial district should have a fire flow of 2,000 gpm for two hours which can be obtained by using two dry barrel hydrants that are on separate small mains, or on the same large main. Lake County requires 750 gpm in urban residential areas and 500 gpm in rural residential areas. These values are not attainable in many areas of the District.

The new (2006) storage tank at the Mill Street location will provide the additional water needed for fire protection.

Considering the rural grassland and woodland nature of the Rancho Sendero and Twin Lakes areas, the proximity of grasslands and woodlands to the town of Lower Lake, maintaining maximum possible fire flows and large fire reserves for property protection in the event of wildfires should be a priority.

3.6.2 Water Use

A. Historical Water Use

The District's treatment plants have a combined capacity of 900 gallons per minute or 1.3 million gallons per day for a total of 101.6 million gallons in 2009. Peak month production (July 2009) was 13.74 million gallons or 68% of treatment plant capacity. Peak day production (July 28, 2009) was 901,000 gallons.

According to the 2008 Financial Statement Management Discussion and Analysis²⁴
District Customers have responded well in conserving water with the requested 15% reduction in water. July average in 2007 was 580,000 gallons per day, July 2008 average, 424,000 gpd. The reduction has spared the district from implementing mandatory water conservation regulations. Rain is needed to recharge the aquifers to past levels.

The difference produced and delivered water represents a twenty percent leakage rate.

B. 2010 Projects

District Manager, Phil Spooner, explains the following

This year's budget (2010-2011) will not allow for any large project from the master plan, but will allow us to maintain the system, repair issues as they arise and to replace equipment that has worn out. The District has applied for USDA Funding which will allow for some of the work from our master plan getting rid of the back lot piping and extending the main to allow the system to loop. Part of this funding will be to replace approximately 900 meters to a modern radio read. Also, we plan to take out an old failing redwood tank in Rancho Sendero and put in a Pressure Reducing Valve and supply it from the Mill St. Tanks. Then part of the funds will go to Plant B replacing a failing contact tank with the old clear well and replace the 30,000 gallon clear well with a larger 83,000 gal clear well to allow the plant to run a little more efficient²⁵

3.7 Projected Future Demand on the LLCWD#1 Water System

The Lower Lake County Waterworks District #1 reported a total of 886 existing active connections in 2007, with 350 additional connections possible. There were 987 Service Connections of which 844 were active as of January 31, 2011.²⁶

The District does not expect the full number of additional approved connections to connect to the system within the time frame of the Master Plan (2003-2020). In its Master Plan, the District has calculated its projected increase in number of connections and overall water demands, based on historical patterns, present land use designations, and local understanding.

The Master Plan growth projections are shown in the table below. However, it appears that growth may be slower than projected due to the 2008-2009 economic recession.

²⁴ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 3.

²⁵ Lower Lake County Waterworks District #1, Phillip Spooner, General.Manager@MCHSI.COM, February 2011.

²⁶ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 10, 2009

Lower Lake County Waterworks District #1, Master Plan Growth Projections				
Year	2005	2010	2015	2020
Active Connections	871	951	1039	1135
Annual Production Million gal.	118	136	157	180
Growth from 2002	8.5%	25.1%	44.4%	65.5%
Max. month Production Million gal.	13.9	15.1	16.5	17.9
Max. Day Production Million gal.	.622	.691	.768	.853

The District indicates July 2009 peak month water use of 13.74 gallons and 901,000 gpd on July 28, 2011²⁷ (912 per connection). In consideration that the 1.3 million gallon capacity water storage tanks are typically kept at maximum level, it may be concluded that the District retains an available reserve supply of about 400,000 gpd to accommodate a maximum of approximately 987 connections to the water system on a peak day.²⁸ However, the District anticipates 350 additional services according to the 2006 Financial Report. Anticipated development within the district may be 131 new connections should the district issue a will serve letter for a Planned Unit development (wells) to serve 127 homes and a 4 unit development (Ellis) currently in progress.

3.8 LLCWD#1 Planned Improvements and Funding

Improvements are needed in all areas of the water system to maintain appropriate water service to the District. According to the 2008 Financial Statement Management Discussion and Analysis²⁹ the recommendation from the Grand Jury Report was as follows:

Radio read meter reading system as well as a new billing program could be added with the necessary financing. The ability to read all the meters in the District in three or four hours vs. two days and to protect the field personnel from possible injury would be a plus. The ability to read all the meters in mid-month to detect high usage or illegal reconnect of off accounts could save both the District and the customer water and money.

²⁷ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 3.

²⁸ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 10, 2009

²⁹ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 4.

The main improvement under consideration in 2009 is to install an inter-tie with Konocti County Water District to supply the District with water on an emergency basis.³⁰

The following six improvements are discussed in the Master Plan:

3.8.1 Improvements for Water Wells

The water wells and the water treatment plants are somewhat unbalanced because Water Treatment Plant A can pump into the system at a higher rate than its wells can produce. Plant B can treat 450 gpm and its Distribution pump can pump 550 gpm so both plants have the same problem.³¹

3.8.2 Improvements for Water Treatment Plants

The water treatment plants are expected to be adequate in capacity for many years into the future because they were only used at 23% capacity in 2002. The use would increase to 44% for the likely 2020 year demand. Applying the maximum day factor increases the 2020 use to 88% on maximum days.

By the year 2020 the plants will be twenty-five years old and will need both technological improvements and capacity increases. The District should plan ahead so that these improvements will be installed by 2020.

3.8.3 Improvements for Water Tanks

A. Emergency Generators

Although electrical outages of long duration are rare, the possibility exists that a major grass or forest fire could cause a prolonged outage (two or more days) with no ability to refill the District's water storage tanks. The existing tanks can store enough water for 4 days at the maximum day demand according to the 2006 Financial Statement.

The stored water could be depleted in even less time if a wildland fire were in or near the District. Residents would be watering combustible vegetation near their homes and fire suppression efforts would quickly consume the fire reserve. (Lack of emergency generators for water supply was a big problem during the Oakland, California fire of 1992.)

³⁰ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 8, 2009

³¹ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, September 29, 2010.

Diesel generators should be purchased or rental agreements made to provide a source of power for the wells, filtration plants, District Office SCADA control system and the Twin Lakes booster station in the event of a power outage lasting longer than 24 hours. Not all of the wells would need to be powered, but a selection of better-producing wells should be prepared for emergency situations.

The General Manager makes the following statement regarding standby power in a letter dated January 5, 2007:

The request for a contract to provide alternative power in the result of an extended power outage is problematic. First all the sites would need to be upgraded with power/alternative power switching isolation devices. The booster pump station in Twin Lakes was constructed with the provisions.

As the District has three pumping sites, two that rewire 480 v ac and 400 amp power, the generators would be large diesel powered units. The District does not have the capability to transport units that size.

Well #1 is smaller and requires 480 v ac but only 100 amps to operate, that is why I would use it in the extended outage. The Mill Street tank site calls for water when the tank drops below 30 feet. The computer is called in the Main Street office and the system calls the plants for needed production. Two more smaller generators are needed.

My estimates for the alternative power panels at each location from \$1,000 to \$4,000. This is determined by size needed and installation.

The proposal I recommended is based on the premise that the customer base water usage would be far lower than normal low demand days. As the customers would be without power, washing machines, and dishwashers and as most of the customers have electric water heaters, the demand for water would be most likely lower.

B. Water Storage Tanks

The water storage tanks, with the exception of the Rancho Sendero tanks, are adequate until water consumption increases 25% over the 2002 production. According to engineering calculations in the Master Plan this could happen between 2004 and 2010. The addition of the 500,000 gallon steel tank in 2006 will solve this problem.

The Rancho Sendero tanks should be replaced or the piping system changed to have the Rancho Sendero zone be directly connected to the main zone by way of the supply lines along Clayton Creek and Spruce Grove roads. Meanwhile, this tank has been repaired and no longer leaks.

If the Twin Lakes area has additional development or annexation, additional water storage in the south area would be prudent.

3.8.4 Improvements for Water Transmission Lines

A. From Water Treatment Plant A

There are two water transmission lines from Plant A to the main water storage tanks as follows:

- a) along Bonham/Morgan Valley Roads (built in 1996), and
- b) from Pebble Road west to Winchester then to Main Street at Mill Street.

The water transmission line from Pebble to Winchester, then to Mill Street is old and difficult to maintain and repair. The replacement transmission line should be installed under Big Bear Road to the highest standard.

B. From Water Treatment Plant B

There is only one transmission line from Treatment Plant B which is a six inch line. A second transmission line from Plant B is needed for safety and for future growth.

C. For Future Developments

Future developments will require additional transmission lines as well as local distribution lines.

3.8.5 Improvements for Water Distribution System

The Lower Lake County Waterworks District #1 Master Plan has detailed information regarding improvements needed for the distribution system. The basic recommendation is that all existing AC piping should be replaced with larger diameter (six inch minimum) C900 PVC pipe.

3.8.6 Improvements for Fire Protection

An immediate benefit of increased water storage would be that the fire reserve would increase from two hours (at 2,000 gallons per minute) to more than five hours.

The District should continue to install only dry barrel hydrants and where redevelopment occurs or where otherwise appropriate wharf hydrants should be replaced with dry barrel hydrants. In some areas additional fire hydrants are needed.

A regular program of hydrant flow and pressure testing should be conducted by the Fire Protection District and the Lower Lake County Waterworks District #1. Blue reflective street markers should be installed and maintained on street centerlines near all hydrants.

3.9 LLCWD#1 Projected Costs and Funding Sources

3.9.1 2001-2005

The District began Fiscal Year 2001-02 with a deficit of \$11,812. Since FY 2001-02, the District has built up substantial reserves, with a beginning year balance in FY 2003-04 of \$322,310. The District had a substantial financial boost in FY 2002-03, when its miscellaneous revenues jumped from \$10,963 to \$611,444. Fiscal Year 2003-04 budgets indicated \$484,200 for improvements to buildings and facilities, compared to less than \$100,000 in the previous two years combined.

3.9.2 2006-2009

The net loss for the year 2005-06 was \$151,559. The 2006-07 Budget is \$763,294. This includes \$380,344 for salaries and benefits and \$141,500 for fixed assets. Revenue for 2006-07 is estimated to be \$555,913. Property taxes generate \$57,240. Monthly charges are \$485,000 and Capacity expansion fees are \$25,000. There are also various other sources of revenue.

On June 30, 2006 the District had a cash balance of \$390,635 and Capital assets of \$1,745,967. The auditor recommended that revenues be increased. The District would like to get a grant for pipeline improvement.

The Fees are shown in Appendix B at the end of this report. The Budget for 2009-2010 is shown in Appendix C at the end of this report. The 2009-2010 Budget of \$755,714 shows a deficit which will be met by the carry-over from the previous year.

3.9.3 2010-2011

The Lower Lake Waterworks District #1 estimates income of \$723,380 for Fiscal Year 2009-2010 and \$795,725 income for Fiscal Year 2010-2011.³² However, the proposed budget has also increased to \$915,005 (as shown in Appendix C) and the deficit will be met by carry-over from the previous year.

3.9.4 2008 Audit

A. Audit

As of June 30, 2008, the District had \$185,488 in cash and a Deficit Balance of \$63,194.³³ The District has invested \$5,909,087 in Capital Assets including land, plant and distribution system, shop and office equipment, autos and trucks.³⁴

³² Lower Lake County Waterworks District #1, "Revenue by Source Fiscal Year 2010-11".

³³ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, pages 11-12.

³⁴ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 11.

B. Loans

The District has a Federal Loan of \$1,143,600 at 5.125% which will mature in 2035 and a State Loan of \$154,323 at 2.4175%.³⁵

C. Retirement System

The District employees are covered by the State of California Public Employee's Retirement System (CALPERS). The plan is part of the Miscellaneous 2% at 60 Risk Pool, a cost-sharing multiple-employer defined benefit plan. District employees' contribution is 7.0 percent of their annual salary to the System. The District pays the employees' contribution.

The District is required to contribute the remaining amounts necessary to fund the benefits for its members, using the actuarial basis recommended by CALPERS. For the year ended June 30, 2008, the District paid total contributions of \$86,134.³⁶

Overall, the District appears financially stable, with sufficient operating revenues to meet service costs. The District's budgetary information is in order, and there is no indication that the District has failed to meet its financial obligations under existing debt services.

³⁵ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 13.

³⁶ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, pages 14-15.

4 MUNICIPAL SERVICE REVIEW

The Municipal Service Review Findings are required by the State Law. The findings serve the purpose of helping LAFCO to understand the special district or city involved in an annexation, detachment or reorganization proposal.

The determinations are not binding proposals for the special district or city. The determinations are subject to change because the jurisdiction involved is constantly changing, improving or growing. The State requires the MSR to be reviewed every five years as part of the SOI update process.

Lake LAFCO is responsible for determining if an agency is reasonably capable of providing needed resources and basic infrastructure to serve areas within its boundaries and, later, within the Sphere of Influence.

LAFCO will do the following:

- 1) Evaluate the present and long-term infrastructure demands and resources available to the District.
- 2) Analyze whether resources and services are, or will be, available at needed levels.
- 3) Determine whether orderly maintenance and expansion of such resources and services are planned to occur in-line with increasing demands.

The Final Municipal Service Review Guidelines prepared by the Governor's Office of Planning and Research recommend issues relevant to the jurisdiction be addressed through written determinations called for in the Cortese-Knox Hertzberg Act.

Determinations are provided for each of the five factors, based on the information provided in this Municipal Service Review.

4.1 Growth and Population Projections for the Lower Lake Area

Purpose:

To evaluate service needs based on existing and anticipated growth patterns and population projections.

4.1.1 Lower Lake Area Population Projections

Lake County population growth from 2000 to 2009 is shown below:³⁷

LAKE COUNTY POPULATION 2000 TO 2009				
Year	Lake County	City of Clearlake	City of Lakeport	Unincorporated Area
2000	58,325	13,147	4820	40,358
2001	59,315	13,273	4878	41,164
2002	60,565	13,452	4971	42,142
2003	61,493	13,574	5024	42,895
2004	62,292	13,729	5053	43,510
2005	62,878	13,727	5079	44,072
2006	63,404	13,767	5071	44,566
2007	63,682	14,018	5054	44,610
2008	63,805	14,189	5024	44,592
2009	64,025	14,390	5146	44,489

The Lower Lake area may experience reduced population growth along with the rest of the unincorporated area in Lake County until the 2008-2009 economic recession is over.

4.1.2 MSR Determinations on Growth and Population Projections for the Lower Lake Area

- 1-1) The Lower Lake County Waterworks District #1 reported a total of 844 existing active connections (there are 987 total connections) in 2011 active connections were reduced from 886 active connections in 2007.³⁸
- 1-2) An additional 400 connections are possible within the District Boundary.³⁹
- 1-3) The District should coordinate requirements for new development with the Lake County Community Development Department.

³⁷ State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2009, with 2000 Benchmark. Sacramento, California, May 2009.

³⁸ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, January 2011

³⁹ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 11, 2009



4.2 Capacity and Infrastructure for Lower Lake County Waterworks District #1

Purpose:

To evaluate the infrastructure needs and deficiencies in terms of supply, capacity, condition of facilities and service quality.

LAFCO is responsible for determining that an agency is reasonably capable of providing needed resources and basic infrastructure to serve areas within its boundaries and later in the Sphere of Influence. It is important that such determinations of infrastructure availability occur when revisions to the Sphere of Influence and annexations occur.

In the case of this Municipal Service Review, it is prudent for Lake LAFCO to evaluate the present and long-term infrastructure demands and resource availability of the District. Further, LAFCO needs to see that resources and services are available at needed levels and orderly maintenance and expansion of such resources and services are made if there are increasing demands.

4.2.1 Lower Lake County Waterworks District #1 Infrastructure

The Lower Lake County Waterworks District #1 maintains adequate water treatment, storage and distribution facilities. These were described in detail earlier in this report. The District has achieved substantial reductions in water use through voluntary conservation efforts to deal with reductions in water supply caused by drought.⁴⁰

4.2.2 MSR Determinations on Infrastructure for the Lower Lake County Waterworks District #1

- 2-1) Lower Lake County Waterworks District #1 developed the District's *Draft Master Plan 2003-2020* to address local issues related to infrastructure and service improvements necessary to support expected growth in demand for water.
- 2-2) The District has new rates so is able to add money annually to build up the reserves for improvements. The District is also looking for funding through USDA.⁴¹ The district should revisit connection fees since it has not done so since the 1960s..
- 2-3) The District provides adequate service with the facilities available but needs to make improvements for the future.
- 2-4) The District gets water from groundwater sources and is considering installing a surface water treatment plan on Cache Creek to augment the supply according to the 2006 Financial Report.
- 2-5) The Lower Lake County Waterworks District #1 meets the California Department of Health Services requirements for water quality.

⁴⁰ Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 3.

⁴¹ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, September 29, 2010.

2-6) The District provides adequate water for fire protection but emergency generators would improve the system.

4.3 Financial Ability

Purpose:

To evaluate factors that affect the financing of needed improvements and to identify practices or opportunities that may help eliminate unnecessary costs without decreasing service levels.

LAFCO should consider the ability of the District to pay for improvements or services associated with annexed sites. This planning can begin at the Sphere of Influence stage by identifying what opportunities there are to identify infrastructure and maintenance needs associated with future annexation and development, and identifying limitations on financing such improvements, as well as the opportunities that exist to construct and maintain those improvements.

LAFCO should consider the relative burden of new annexations to the community when it comes to its ability to provide public safety and administrative services, as well as capital maintenance and replacements required as a result of expanding District boundaries.

Rate restructuring may be forced by shortfalls in funding, but the process may also reflect changing goals and views of economic justice or fairness within the community. LAFCO should evaluate the impact of SOI and Annexation decisions on existing community rates for public water service.

Water rates and rate structures are not subject to regulation by other agencies. Utility providers may increase rates annually, and often do so. Generally, there is no voter approval requirement for rate increases, although notification of utility users is required.

Water providers must maintain an enterprise fund for the respective utility separate from other funds, and may not use revenues to finance unrelated governmental activities.

4.3.1 Financial Considerations for Lower Lake County Waterworks District #1

A. Lower Lake County Waterworks District #1 Budget

The net loss for the year 2005-06 was \$151,559. The 2006-07 Budget was \$763,294. This includes \$380,344 for salaries and benefits and \$141,500 for fixed assets. Revenue for 2006-07 was estimated to be \$555,913. Property taxes generate \$57,240. Monthly charges were \$485,000 and Capacity expansion fees were \$25,000. There were also various other sources of revenue.

On June 30, 2006 the District had a cash balance of \$390,635 and Capital assets of \$1,745,967. The independent auditor recommended that revenues be increased at that time. On June 30, 2008 the District had a cash balance of \$246,442 and Capital assets of \$3,841,980.⁴² The 2009-2010 Budget and the 2010-2011 Budget are shown in Appendix C at the end of this report.

B. Lower Lake County Waterworks District #1 Costs

While the District identified no specific cost avoidance measures currently in place, the financial stability, acceptable rate structure, and use of Master Planning indicate that the District is not participating in activities or practices which add significant cost burden to residents of the District, or otherwise impair the financial prudence of District operations.

C. Lower Lake County Waterworks District #1 Water Rates

District water is metered and the rate structure is developed accordingly. The latest rate revisions are shown in Appendix B at the end of this report. The fees will increase in August 2009 and again in August 2010.

Monthly charges for water usage are based on meter size and range from \$38.25 for a 5/8-inch meter to \$1,712.33 for a six-inch meter for up to 400 cubic feet of water. These rates were effective February 2009 and will increase to \$55.20 and \$2,559.74 in August 2010. Out-of-District connections are double the base rate; however, the District does not serve anyone outside of the District Boundary.⁴³

4.3.2 MSR Determinations on Financing for the Lower Lake County Waterworks District #1

- 3-1) The District is financially stable with sufficient operating revenues to meet service costs.
- 3-2) The District's budgetary information is in order, and there is no indication that the District has failed to meet its financial obligations under existing debt services.
- 3-3) The District needs to ensure that new development pays the cost of the treatment plants, storage tanks and transmission lines as well as the cost for the actual water distribution lines within the development.
- 3-4) Master planning, as is done by the District, provides opportunity to identify and implement Cost-Avoidance Opportunities.

⁴² Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, page 3.

⁴³ LLCWD#1, Jo Anne Gaddy, Office Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, June 11, 2009

- 3-5) The Lower Lake County Waterworks District #1 water delivery occurs through metering and the rate structure is developed accordingly.
- 3-6) The latest District rate revisions were made effective February 23, 2009. Connection fees should be re-examined since they have not been studied since the 1960s.
- 3-7) Lower Lake County Waterworks District #1 monthly charges for water usage are based on meter size and range from \$38.52 for a 5/8-inch meter to \$1,712.33 for a six-inch meter.
- 3-8) Out-of-District connections are double the base rate.
- 3-9) Rates developed for the District are consistent with the average water rate charges in Lake County, and the rates are considered reasonable.

4.4 Opportunities for Shared Facilities

Purpose:

To evaluate the opportunities for a jurisdiction to share facilities and resources to develop more efficient service delivery systems.

In the case of annexing new lands into a district, LAFCO can evaluate whether services or facilities can be provided in a more efficient manner if the district can share them with another agency. In some cases, it may be possible to establish a cooperative approach to facility planning by encouraging agencies to work cooperatively in such efforts.

4.4.1 Lower Lake County Waterworks District #1 Facilities

The Lower Lake County Waterworks District #1 operates water wells, water treatment plants, water storage tanks and the transmission and distribution lines to transport the water to the customers. These facilities are described in detail in the District Master Plan.

The District has plans to establish an inter-tie with the Knocti County Water District for emergency assistance depending on funding from USDA Rural Development. However, the Lower Lake County Waterworks District #1 relies solely on groundwater which requires less treatment than surface water while the Knocti County Water District relies on surface water. The Lower Lake County Waterworks District #1 is not interested in merging with a surface water district since doing so would entail many more water quality mandates by using surface water.⁴⁴

⁴⁴ Lower Lake County Waterworks District #1, Phil Spooner, General Manager, April 26, 2010, May 6, 2010.
LAKE LAFCO Adopted MSR and SOI
Lower Lake County Waterworks District #1
Resolution 2011-0001 (MSR) and 2011-0002 (SOI)
May 18th, 2011

4.4.2 MSR Determinations on Shared Facilities for the Lower Lake County Waterworks District #1

- 4-1) Geography in the Lower Lake area does not lend itself to shared facility opportunities, as joint use of infrastructure and facilities would be cost-prohibitive.
- 4-2) The District has not identified infrastructure or facilities which could feasibly be used by other districts or governmental agencies.
- 4-3) The District has not installed the inter-tie with Konocti County Water District to supply the District with water on an emergency basis but is looking for funding in order to do so.⁴⁵
- 4-4) The District is not interested in combining with any district which relies on surface water since the regulatory environment is more demanding with surface water.

4.5 Government Structure and Accountability

Purpose:

- 1) *To consider the advantages and disadvantages of various government structures that could provide public services.*
- 2) *To evaluate the management capabilities of the organization.*
- 3) *To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management processes.*

One of the most critical components of LAFCO's responsibilities is in setting logical service boundaries for communities based on their capacity to provide services to affected lands.

⁴⁵ LLCWD#1, Phil Spooner, General Manager, Phone: 707-994-6009, Fax: 707-994-7415, Email: lowlakewater@mchsi.com, September 29, 2010.

Lake LAFCO may consider the agency's record of local accountability in its management of community affairs as a measure of the ability to provide adequate services to the Sphere of Influence and potential annexation areas.

4.5.1 Lower Lake County Waterworks District #1 Government Structure

The District structure is adequate for this water service. The local Board and the local office provide the greatest opportunities for communication and service to the rate payers. Conversion to a public utility such as California Water Service would probably increase rates substantially.

A five-member Board of Directors governs the District and its staff. Local accountability is attributed to open and publicized meetings, regular elections, and locally available staff. Directors are appointed by the Lake County Board of Supervisors, and serve two-year terms.

Lower Lake County Waterworks District #1 is overseen by a District Manager. The District has prepared Master Planning documents in 1991 and again in 2003 to address long-term system capacity and distribution issues. The Board of Directors has shown the ability to budget and plan for growth within its system and to meet demands on the system.

4.5.2 MSR Determinations on Local Accountability and Governance for the Lower Lake County Waterworks District #1

- 5-1) The District provides water service within an isolated system and within a geographically distinct area.
- 5-2) The District has been shown to meet water quality standards and has been found to have adequate infrastructure.
- 5-3) There are no community service districts, cities, or other local government agencies in the area which could feasibly be joined with the District to improve service levels to residents of the District.
- 5-4) The Board of Directors has shown the ability to budget and plan for growth within its system and to meet demands on the system.
- 4-5) The Staff of five is paid reasonable salaries and the operators continue to improve and pass additional certification tests.
- 5-6) Local accountability is attributed to open and publicized meetings and locally available staff.

5-7) The District has maintained relationships with the local media and is available to the ratepayers and the public. For increased public outreach and interaction, an online website would be beneficial.

5 SPHERE OF INFLUENCE (SOI) DETERMINATIONS

This Sphere of Influence is prepared for the Lower Lake County Waterworks District #1 in Lake County providing domestic water service. The Municipal Service Review (MSR) analyzes the water service offered by the Lower Lake County Waterworks District #1 and the District's capability to serve existing and future residents in the area. Information contained in this Sphere of Influence is only as of the date of adoption

5.1 Sphere of Influence Requirements

5.1.1 LAFCO's Responsibilities

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000 et seq.) is the statutory authority for the preparation of an MSR, and periodic updates of the Sphere of Influence of each local agency. A Sphere of Influence is a plan for the probable physical boundaries and service area of a local agency, as determined by the affected Local Agency Formation Commission (Government Code §56076). Government Code §56425(f) requires that each Sphere of Influence be updated not less than every five years, and §56430 provides that a Municipal Service Review shall be conducted in advance of the Sphere of Influence update.

5.1.2 Sphere of Influence Determinations

In determining the Sphere of Influence for each local agency, LAFCO must consider and prepare a statement of determinations with respect to each of the following:

1. The present and planned land uses in the area, including agricultural and open space lands;
2. The present and probable need for public facilities and services in the area;
3. The present capacity of public facilities and adequacy of public services which the agency provides, or is authorized to provide; and
4. The existence of any social or economic communities of interest in the area if the commission determines that they are relevant to the agency.

5.1.3 Possible Approaches to the Sphere of Influence

LAFCO may recommend government reorganizations to particular agencies in the county, using the SOIs as the basis for those recommendations. Based on review of the guidelines of Lake LAFCO as well as other LAFCOs in the State, various conceptual approaches have been identified from which to choose in designating an SOI. These seven approaches are explained below:

1) **Coterminous Sphere:**

A Coterminous sphere means that the sphere for a city or special district that is the same as its existing boundaries. This is the recommendation for the Lower Lake County Waterworks District #1.

2) **Annexable Sphere:**

A sphere larger than the agency's boundaries identifies areas the agency is expected to annex. The annexable area is outside its boundaries and inside the sphere.

3) **Detachable Sphere:**

A sphere that is smaller than the agency's boundaries identifies areas the agency is expected to detach. The detachable area is the area within the agency bounds but not within its sphere.

4) **Zero Sphere:**

A zero sphere indicates the affected agency's public service functions should be reassigned to another agency and the agency should be dissolved or combined with one or more other agencies.

5) **Consolidated Sphere:**

A consolidated sphere includes two or more local agencies and indicates the agencies should be consolidated into one agency.

6) **Limited Service Sphere:**

A limited service sphere is the territory included within the SOI of a multi-service provider agency that is also within the boundary of a limited purpose district which provides the same service (e.g., fire protection), but not all needed services. Territory designated as a limited service SOI may be considered for annexation to the limited purpose agency without detachment from the multi-service provider.

This type of SOI is generally adopted when the following conditions exist:

- a) the limited service provider is providing adequate, cost effective and efficient services,
- b) the multi-service agency is the most logical provider of the other services,
- c) there is no feasible or logical SOI alternative, and
- d) inclusion of the territory is in the best interests of local government organization and structure in the area.

Government Code §56001 specifically recognizes that in rural areas it may be appropriate to establish limited purpose agencies to serve an area rather than a single service provider, if multiple limited purpose agencies are better able to provide efficient services to an area rather than one service district.

Moreover, Government Code Section §56425(i), governing sphere determinations, also authorizes a sphere for less than all of the services provided by a district by requiring a district affected by a sphere action to “establish the nature, location, and extent of any functions of classes of services provided by existing districts” recognizing that more than one district may serve an area and that a given district may provide less than its full range of services in an area.

7) Sphere Planning Area:

LAFCO may choose to designate a sphere planning area to signal that it anticipates expanding an agency’s SOI in the future to include territory not yet within its official SOI.

5.1.4 SOI Update Process

LAFCO is required to establish SOIs for all local agencies and enact policies to promote the logical and orderly development of areas within the SOIs. Furthermore, LAFCO must update those SOIs every five years. In updating the SOI, LAFCO is required to conduct a municipal service review (MSR) and adopt related determinations.

This report identifies preliminary SOI policy alternatives and recommends SOI options for the ten CSAs providing water service. Development of actual SOI updates will involve additional steps, including opportunity for public input at a LAFCO public hearing, and consideration and changes made by Commissioners.

LAFCO must notify affected agencies 21 days before holding a public hearing to consider the SOI and may not update the SOI until after that hearing. The LAFCO Executive Officer must issue a report including recommendations on the SOI amendments and updates under consideration at least five days before the public hearing.

5.1.5 SOI Amendments and CEQA

LAFCO has the discretion to limit SOI updates to those that it may process without unnecessarily delaying the SOI update process or without requiring its funding agencies to bear the costs of environmental studies associated with SOI expansions. Any local agency or individual may file a request for an SOI amendment. The request must state the nature of and reasons for the proposed amendment, and provide a map depicting the proposal.

LAFCO may require the requester to pay a fee to cover LAFCO costs, including the costs of appropriate environmental review under CEQA. LAFCO may elect to serve as lead agency for such a review, may designate the proposing agency as lead agency, or both the local agency and LAFCO may serve as co-lead agencies for purposes of an SOI amendment. Local agencies are encouraged to consult with LAFCO staff early in the process regarding the most appropriate approach for the particular SOI amendment under consideration.

Certain types of SOI amendments are likely exempt from CEQA review. Examples are SOI expansions that include territory already within the bounds or service area of an agency, SOI reductions, and zero SOIs. SOI expansions for limited purpose agencies that provide services (e.g., fire protection, levee protection, cemetery, and resource conservation) needed by both rural and urban areas are typically not considered growth-inducing and are likely exempt from CEQA. Similarly, SOI expansions for districts serving rural areas (e.g., irrigation water) are typically not considered growth-inducing.

Remy et al. write

In *City of Agoura Hills v. Local Agency Formation Commission* (2d Dist.1988) 198 Cal.App.3d480, 493-496 [243 Cal.Rptr.740] (*City of Agoura Hills*), the court held that a LAFCO's decision to approve a city's sphere of influence that in most respects was coterminous with the city's existing municipal boundaries was not a "project" because such action did not entail any potential effects on the physical environment.⁴⁶

⁴⁶ Remy, Michael H., Tina A. Thomas, James G. Moose, Whitman F. Manley, Guide to CEQA, Solano Press Books, Point Arena, CA, February 2007, page 111.

5.2 Present and Planned Land Uses in the Area, Including Agricultural and Open Space Lands

5.2.1 Lake County General Plan

The Lake County General Plan 2008 shows a planning area boundary for Lower Lake. This map is included at the end of this report. The County land use designations are also shown at the end of this report.

5.2.2 Lake County Zoning

Lake County adopted a revised Zoning Ordinance in November 1986 pursuant to its authority of Section 65800 of the Government Code. This ordinance contains a zone districting plan and general and specific provisions governing existing and future land uses throughout the unincorporated portions of Lake County.

5.2.3 Present and Planned Land Use

The existing land uses in the Lower Lake Area generally correspond to the land use and zoning designations for the area.

5.2.4 SOI Determinations on Present and Planned Land Use for Lower Lake County Waterworks District #1

- 1-1] The 0-5 year (near term) Sphere of Influence and the 5-20 year (long term) Sphere of Influence will include land which is contiguous to the existing district boundary.
- 1-2] Existing land uses generally correspond to the Area Plan and County planned land uses and zoning.
- 1-3] Land developed within the Lower Lake County Waterworks District #1 can help to preserve agricultural land by accommodating more development on less land.
- 1-4] Public health is better when development is connected to public water systems.
- 1-5] LAFCO shall support appropriate buffer areas separating agricultural lands from lands with densities higher than 1 unit to 5 acres.

5.3 Municipal Services—Present and Probable Capacity and Need

5.3.1 Present and Probable Capacity and Need Background

LAFCO is responsible for determining if an agency is reasonably capable of providing needed infrastructure and services to serve areas within its Sphere of Influence. LAFCO is required to evaluate present and long-term infrastructure demands and resource availability and to evaluate whether the resources and services are available at needed service levels and that orderly maintenance and expansion of such resources and services are made in line with increasing demands.

5.3.2 SOI Determinations on Present and Probable Capacity and Need for LLCWD #1

- 2-1] LAFCO shall encourage the district to act as lead agency for purposes of the California Environmental Quality Act (CEQA) for annexation proposals. When LAFCO is required to act as Lead CEQA agency, LAFCO shall coordinate with both the District and County, as applicable.
- 2-2] LAFCO encourages development of a Capital Improvements Plan. Currently all capital improvements are through the General Fund.
- 2-3] Developers fund all new infrastructure associated with new growth. There is no extra cost imposed on existing customers to fund new development.

5.4 The Present Capacity of Public Facilities and Adequacy of Public Services Provided by the Lower Lake CWD #1

5.4.1 Adequacy of Services Provided by Lower Lake CWD #1

The Lower Lake County Waterworks District #1 provides adequate services. The District will have to increase fees and/or taxes in the future just to provide the same level of service because costs and regulations will probably increase.

5.4.2 SOI Determinations on Adequacy of Services Provided by Lower Lake CWD #1

- 3-1] The Lower Lake County Waterworks District #1 has adequate public facilities to provide services to the residents of the District.
- 3-1] Water service could be extended.
- 3-2] A Sphere of Influence contiguous with district boundaries is adequate for growth in the next five years.

5.5 Social or Economic Communities of Interest

5.5.1 Lower Lake Community Background

Lower Lake is a separate community and is recognized as a Census Designated Place. The community is recognized for historical buildings and adjacent tourist attractions.

The County land use designations and the Area Planning Boundary are shown at the end of this report.

5.5.2 SOI Determinations on Social or Economic Communities of Interest for Lower Lake CWD #1

- 4-1] The Lower Lake County Water District #1 shall be provider of municipal water in the Lower Lake area.
- 4-2] Priority for water service shall remain the existing service area.
- 4-3] The existing area of the District provides adequate area for expected population growth.
- 4-4] LAFCO is charged with overseeing orderly development in an area. The County is charged with Land Use Planning. The Lower Lake community has been established in the Lower Lake Area Plan.

ABBREVIATIONS

AB	Assembly Bill
AC	Asbestos-Cement
Act	Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000
AL	Regulatory Action Level
AWWA	American Water Works Association
CALPERS	California Public Employee's Retirement System
CDP	Census Designated Place
CEQA	California Environmental Quality Act
CFD	Community Facilities District
CKH	Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000
CWD	County Waterworks District
District	Lower Lake County Water District #1
DWR	California Department of Water Resources
ERAF	Education Revenue Augmentation Fund
gpd	gallons per day
gpm	gallons per minute
ISO	Insurance Service Organization (Fire Protection)
LAFCO	Local Agency Formation Commission
LLCWD#1	Lower Lake County Water District #1
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
mgd	million gallons per day
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal

MSR	Municipal Service Review (LAFCO)
ND	not detectable at testing limit
OPR	Governor's Office of Planning and Research
PDWS	Primary Drinking Water Standards
PHG	Public Health Goal
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter (ug/L)
ppt	parts per trillion or nanograms per liter (ng/L)
pCi/L	picocuries per liter (a measure of radiation)
psi	pounds per square inch
SCADA	Supervisory Control and Data Acquisition
SDWA	Safe Drinking Water Act
SDWS	Secondary Drinking Water Standards
SOI	Sphere of Influence (LAFCO)
TT	Treatment Technique
USEPA	U.S. Environmental Protection Agency

DEFINITIONS

Acre Foot: The volume of water that will cover one acre to a depth of one foot, 325,850 U.S. Gallons or 1,233,342 liters (approximately).

Alluvium: A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material, deposited during comparatively recent geologic time by a stream or other body of running water, (1) as sediment in the bed of the stream or on its flood plain or delta, (2) as a cone or fan at the base of a mountain slope; esp., such a deposit of fine-grained texture (silt or silty clay) deposited during time of flood.⁴⁷

Agriculture: Use of land for the production of food and fiber, including the growing of crops and/or the grazing of animals on natural prime or improved pasture land.

Aquifer: An underground, water-bearing layer of earth, porous rock, sand, or gravel, through which water can seep or be held in natural storage. Aquifers generally hold sufficient water to be used as a water supply.

Bond: An interest-bearing promise to pay a stipulated sum of money, with the principal amount due on a specific date. Funds raised through the sale of bonds can be used for various public purposes.

California Environmental Quality Act (CEQA): A State Law requiring State and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for a significant adverse environmental impact, an environmental impact report (EIR) must be prepared and certified as to its adequacy before taking action on the proposed project. Capital Improvements Program (CIP): A program established by the City and reviewed by the Planning Commission, which schedules permanent improvements, usually for a minimum of five years in the future, to fit the projected fiscal capability of the City. The Program generally is reviewed annually, for conformance to and consistency with the General Plan.

Clay The finest-grain particles in a sediment, soil, or rock. Clay is finer than silt, characterized by a grain size of less than approximately 4 micrometers. However, the term clay can also refer to a rock or a deposit containing a large component of clay-size material. Thus clay can be composed of any inorganic materials, such as clay minerals, allophane, quartz, feldspar, zeolites, and iron hydroxides that possess a sufficiently fine grain size. Most clays; however, are composed primarily of clay minerals. Although the composition of clays can vary, clays can share several properties that result from their fine particle size. These properties include plasticity when wet, the ability to form colloidal suspensions when dispersed in water, and the tendency to flocculate (clump together) and settle out in saline water.⁴⁸

Community Facilities District: Under the Mello-Roos Community Facilities Act of 1982 (Section 53311, et seq.) a legislative body may create within its jurisdiction a special tax district that can finance tax-exempt bonds for the planning, design, acquisition, construction, and/or operation of public facilities, as well as public services for district residents. Special taxes levied solely within the district are used to repay the bonds.

⁴⁷ <http://www.maden.hacettepe.edu.tr/dmmrt/index.html>

⁴⁸ <http://www.answers.com/topic/clay>

Community Services District (CSD): A geographic subarea of a county used for planning and delivery of parks, recreation, and other human services based on an assessment of the service needs of the population in that subarea. A CSD is a taxation district with independent administration.

Cretaceous: Applied to the third and final period of the Mesozoic Era. Extensive marine chalk beds were deposited during this period.⁴⁹

Domestic Water Use: Water used for household purposes, such as drinking, food preparation, bathing, washing clothes, dishes, and dogs, flushing toilets, and watering lawns and gardens. About 85% of domestic water is delivered to homes by a public-supply facility, such as a county water department. About 15% of the Nation's population supplies their own water, mainly from wells.⁵⁰

Franciscan Complex: Jurassic to Early Cretaceous rocks, characteristic of the Pacific coastal ranges of California, composed primarily of sandstones, cherts, serpentinites, and glaucophane schists. The Franciscan should not be visualized as a formation or sequence with ordinary physical, spatial, and temporal coherence, but rather as a disorderly assemblage of various characteristic rocks that have undergone unsystematic disturbance; a melange. The formation includes deep-water sediments and mafic marine volcanic material, locally accompanied by masses of serpentinite.⁵¹

Formation: A laterally continuous rock unit with a distinctive set of characteristics that make it possible to recognize and map from one outcrop or well to another. The basic rock unit of stratigraphy.⁵²

Gravity flow: flow of water in a pipe on a descending path.

Groundwater: Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

Groundwater Basin: A groundwater reservoir, defined by an overlying land surface and the underlying aquifers that contain water stored in the reservoir. In some cases, the boundaries of successively deeper aquifers may differ and make it difficult to define the limits of the basin.⁵³

Groundwater Recharge: Groundwater recharge or deep drainage or deep percolation is a hydrologic process where water moves downward from surface water to groundwater. This process usually occurs in the vadose zone below plant roots and is often expressed as a flux to the water table surface. Recharge occurs both naturally (through the water cycle) and anthropologically (i.e., "artificial groundwater recharge"), where rainwater and or reclaimed water is routed to the subsurface.

Groundwater is recharged naturally by rain and snow melt, though this may be impeded somewhat by human activities including paving, development, or logging. These activities can result in enhanced surface runoff and reduction in recharge. Use of groundwater, especially for irrigation, may also lower the water tables. Groundwater recharge is an important process for

⁴⁹ <http://www.webref.org/geology/c/cretaceous.htm>

⁵⁰ <http://ga.water.usgs.gov/edu/dictionary.html>

⁵¹ http://www.webref.org/geology/f/franciscan_complex.htm

⁵² <http://geology.com/dictionary/glossary-f.shtml>

⁵³ <http://rubicon.water.ca.gov/v1cwp/glssry.html>

sustainable groundwater management, since the volume-rate abstracted from an aquifer should be less than or equal to the volume-rate that is recharged.

Recharge can help move excess salts that accumulate in the root zone to deeper soil layers, or into the ground water system. Another environmental issue is the disposal of waste through the water flux such as dairy farms, industrial, and urban runoff.⁵⁴

Impact Fee: A fee, also called a development fee, levied on the developer of a project by a county, or other public agency as compensation for otherwise-unmitigated impacts the project will produce. California Government Code Section 66000, et seq., specifies that development fees shall not exceed the estimated reasonable cost of providing the service for which the fee is charged. To lawfully impose a development fee, the public agency must verify its method of calculation and document proper restrictions on use of the fund.

Infrastructure: Public services and facilities such as sewage-disposal systems, water-supply systems, and other utility systems, schools and roads.

Land Use Classification: A system for classifying and designating the appropriate use of properties.

Leapfrog Development; New development separated from existing development by substantial vacant land.

Local Agency Formation Commission (LAFCO): A five-or seven-member commission within each county that reviews and evaluates all proposals for formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts, and merger of districts with cities. Each county's LAFCO is empowered to approve, disapprove, or conditionally approve such proposals. The LAFCO members generally include two county supervisors, two city council members, and one member representing the general public. Some LAFCOs include two representatives of special districts.

Maximum Contaminant Level (MCL): The designation given by the U.S. Environmental Protection Agency (USEPA) to water-quality standards promulgated under the Safe Drinking Water Act. The MCL is the greatest amount of a contaminant that can be present in drinking water without causing a risk to human health.⁵⁵

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

⁵⁴ http://en.wikipedia.org/wiki/Groundwater_recharge

⁵⁵ <http://ga.water.usgs.gov/edu/dictionary.html>

Mean Sea Level: The average altitude of the sea surface for all tidal stages.

Mello-Roos Bonds: Locally issued bonds that are repaid by a special tax imposed on property owners within a community facilities district established by a governmental entity. The bond proceeds can be used for public improvements and for a limited number of services. These bonds are named after the program's legislative authors.

Municipal Water System: A water system that has at least five service connections or which regularly serves 25 individuals for 60 days; also called a public water system.⁵⁶

Ordinance: A law or regulation set forth and adopted by a governmental authority.

Per Capita Water Use: The water produced by or introduced into the system of a water supplier divided by the total residential population; normally expressed in gallons per capita per day (gpcd).⁵⁷

Percolation: The downward movement of water through the soil or alluvium to a ground water table.⁵⁸

Piezometer: An instrument for measuring pressure head; usually consisting of a small pipe tapped into the side of a closed or open conduit and flush with the inside; connected with a pressure gage, mercury, water column, or other device for indicating head.⁵⁹

Pleistocene Epoch: The first epoch of the Quaternary Period, beginning 2 to 3 million years ago and ending approximately 10,000 years ago.⁶⁰

Potable Water: Water of a quality suitable for drinking.⁶¹

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Proposition 13: (Article XIII A of the California Constitution) Passed in 1978, this proposition enacted sweeping changes to the California property tax system. Under Prop. 13, property taxes cannot exceed 1% of the value of the property and assessed valuations cannot increase by more than 2% per year. Property is subject to reassessment when there is a transfer of ownership or improvements are made.⁶²

Proposition 218: (Article XIII D of the California Constitution) This proposition, named "The Right to Vote on Taxes Act", filled some of the perceived loopholes of Proposition 13. Under Proposition 218, assessments may only increase with a two-thirds majority vote of the qualified voters within the District. In addition to the two-thirds voter approval requirement, Proposition 218 states that effective July 1, 1997, any assessments levied may not be more than the costs necessary to provide the service, proceeds may not be used for any other purpose other than

⁵⁶ <http://ga.water.usgs.gov/edu/dictionary.html>

⁵⁷ <http://rubicon.water.ca.gov/v1cwp/glssry.html>

⁵⁸ <http://rubicon.water.ca.gov/v1cwp/glssry.html>

⁵⁹ http://www.webref.org/geology/f/franciscan_complex.htm

⁶⁰ http://www.webref.org/geology/p/pleistocene_epoch.htm

⁶¹ <http://ga.water.usgs.gov/edu/dictionary.html>

⁶² http://www.californiataxdata.com/A_Free_Resources/glossary_PS.asp#ps_08

providing the services intended, and assessments may only be levied for services that are immediately available to property owners.⁶³

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Quaternary: The second period of the Cenozoic era, following the Tertiary; also, the corresponding system of rocks. It began 2 to 3 million years ago and extends to the present. It consists of two grossly unequal epochs; the Pleistocene, up to about 10,000 years ago, and the Holocene since that time.⁶⁴

Ranchette: A single dwelling unit occupied by a non-farming household on a parcel of 2.5 to 20 acres that has been subdivided from agricultural land.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Sanitary Sewer: A system of subterranean conduits that carries refuse liquids or waste matter to a plant where the sewage is treated, as contrasted with storm drainage systems (that carry surface water) and septic tanks or leach fields (that hold refuse liquids and waste matter on-site).

SCADA: SCADA is acronym for Supervisory Control and Data Acquisition. It is a kind of software application program used for process control and gather real time data from remote locations for exercising this control on equipments and conditions. The SCADA System consists of hardware and software components. The hardware collects and feeds data into a computer with SCADA software installed. The data is then processed by the computer before presenting it in a timely manner. The function of SCADA is recording and logging all events in a file that is stored in a hard disk or sending them to a printer. If conditions become hazardous, SCADA sounds warning alarm.⁶⁵

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Specific Capacity: The specific capacity of a water well depends on hydraulic characteristics of the aquifer and on the construction of the well. Specific capacity is determined by dividing the wells production by the drawdown that occurs during pumping. Higher specific capacities in wells tend to be indicative of higher aquifer production.⁶⁶

Specific Yield: The specific yield for a water well is the percent of space in the ground that will drain by gravity when the water table drops. Specific yield is reported as a percent. Higher specific yields tend to be indicative of higher aquifer production. An example of a good specific yield is 7 percent, which is a typical average specific yield of aquifers in the Sacramento Valley.⁶⁷

⁶³http://www.californiataxdata.com/A_Free_Resources/glossary_PS.asp#ps_08

⁶⁴ <http://www.webref.org/geology/q/quaternary.htm>

⁶⁵ <http://www.scadaworld.net/>, July 3, 2009.

⁶⁶ Lake County Watershed Protection District, "Lake County Groundwater Management Plan", March 31, 2006, P. 2-4.

⁶⁷ Lake County Watershed Protection District, "Lake County Groundwater Management Plan", March 31, 2006, P.2-4.

Sphere of Influence (SOI): The probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission (LAFCO) of the county.

Total Dissolved Solids (TDS): A quantitative measure of the residual minerals dissolved in water that remains after evaporation of a solution. Usually expressed in milligrams per liter. Abbreviation: TDS.⁶⁸

Transmissivity: Transmissivity is a term used to define the ability of an aquifer to convey or transport water, similar to the capacity of a pipeline. Transmissivity is related to hydraulic conductivity and saturated thickness of an aquifer or groundwater basin. Hydraulic conductivity is that rate at which groundwater moves through the aquifer. More porous aquifers, such as sand and gravel aquifers, have high hydraulic conductivities. The saturated thickness is the total depth of groundwater in an aquifer or basin. The term transmissivity combines both these terms so it is a good overall indication of the capacity of a groundwater basin to produce water. Higher transmissivity values tend to be indicative of higher aquifer production. An example of a good transmissivity is 100,000 gallons per day per foot (gpd/ft), which is the average transmissivity of a productive aquifer in the Sacramento Valley.⁶⁹

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Urban: Of, relating to, characteristic of, or constituting a city. Urban areas are generally characterized by moderate and higher density residential development (i.e., three or more dwelling units per acre), commercial development, and industrial development, and the availability of public services required for that development, specifically central water and sewer service, an extensive road network, public transit, and other such services (e.g., safety and emergency response). Development not providing such services may be “non-urban” or “rural”. CEQA defines “urbanized area” as an area that has a population density of at least 1,000 persons per square mile (Public Resources Code Section 21080.14(b)).

Urban Services: Utilities (such as water, gas, electricity, and sewer) and public services (such as police, fire protection, schools, parks, and recreation) provided to an urbanized or urbanizing area.

Urban Sprawl: Haphazard growth or outward extension of a city resulting from uncontrolled or poorly managed development.

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

Volcanic Ash: Sand-sized particles of igneous rock that form when a spray of liquid magma is blown from a volcanic vent by escaping gas.⁷⁰

Water Quality: Used to describe the chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or use.⁷¹

⁶⁸ <http://rubicon.water.ca.gov/v1cwp/glssry.html>

⁶⁹ Lake County Watershed Protection District, “Lake County Groundwater Management Plan”, March 31, 2006, P. 2-4.

⁷⁰ <http://geology.com/dictionary/glossary-v.shtml>

⁷¹ <http://rubicon.water.ca.gov/v1cwp/glssry.html>

Water Year: The Water Year is a continuous 12-month period for which hydrologic records are compiled and summarized. In California, it begins on October 1 and ends September 30 of the following year.⁷²

Zoning: The division of a city by legislative regulations into areas, or zones, that specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the general plan.

⁷² <http://rubicon.water.ca.gov/v1cwp/glssry.html>
LAKE LAFCO Adopted MSR and SOI
Lower Lake County Waterworks District #1
Resolution 2011-0001 (MSR) and 2011-0002 (SOI)
May 18th, 2011

REFERENCES

Brelje & Race Consulting Civil Engineers, "Preliminary Engineering Report Bonanza Springs Water System CSA #7 Lake County Special Districts", December 2006.

http://en.wikipedia.org/wiki/Lower_Lake,_California, January 1, 2007.

http://en.wikipedia.org/wiki/Lower_Lake_Stone_Jail, January 12, 2007.

<http://ga.water.usgs.gov/edu/dictionary.html>

<http://geology.com/dictionary/glossary-v.shtml>

<http://rubicon.water.ca.gov/v1cwp/glssry.html>

<http://www.maden.hacettepe.edu.tr/dmmrt/index.html>

<http://www.webref.org/geology/q/quaternary.htm>

Lake LAFCO, "Lake County Water Services Municipal Service Review", Quad Knopf, July 2005.

Lake County, "General Plan Background Report", February 2003.

Lake County, "Lake County General Plan, Goals & Policies Report, Draft", Matrix Design Group, Mintier & Associates, November 2006.

Lake County Public Works Department, Groundwater Management Plan, March 31, 2006, pages 2-32, 2-33.
<http://www.co.lake.ca.us/Assets/WaterResources/IRWMP/GWMP+Section+2a.pdf>, June 9, 2009.

Lower Lake County Waterworks District #1, "2002 Consumer Confidence Report", April 15, 2003.

Lower Lake County Waterworks District #1, "Lower Lake County Waterworks District #1 Final Draft Master Plan 2003 through 2020", Fuss Greenlaw & Associates, 3062 East Avenue, Livermore, CA 94550, September 19, 2003.

Lower Lake County Waterworks District #1, "Financial Statement and Independent Auditor's Report for the year ended June 30, 2006", September 1, 2006, Robert W. Johnson Certified Public Accountant.

Lower Lake County Waterworks District #1 Financial Statements and independent Auditor's Report for the year ended June 30, 2008, Robert W. Johnson Certified Public Accountant.

Lower Lake County Waterworks District #1, Letter from Allen R. Tubbs, General Manager to Bruce Burton, Department of Health Services, January 5, 2007.

Lower Lake County Waterworks District #1, Memorandum from Jo Anne Gaddy, Secretary, to Pam Cochran, Lake County Auditor-Controller, "Final Budget Fiscal Year 2006-2007", August 23, 2006

Lower Lake County Waterworks District #1, Phillip Spooner, General.Manager@MCHSI.COM, April 26, 2010, May 6, 2010, September 29, 2010.

NSF International, "Feasibility of an Economically Sustainable Point-of-Use/Point-of-Entry Decentralized Public Water System Final Report", March 2005, p18.
nsf.org/business/.../pdf/GrimesFinalReport_Dec05.pdf

Remy, Michael H., Tina A. Thomas, James G. Moose, Whitman F. Manley, "Guide to CEQA," Solano Press Books, Point Arena, CA, February 2007, page 111.

Richerson, Peter J. and Scott O. Richerson, "The Ample Charms of a Well-Fed Lake" 2000.

State of California, Department of Finance, "E-4 Population Estimates for Cities, Counties and the State, 2001-2009, with 2000 Benchmark". Sacramento, California, May 2009.

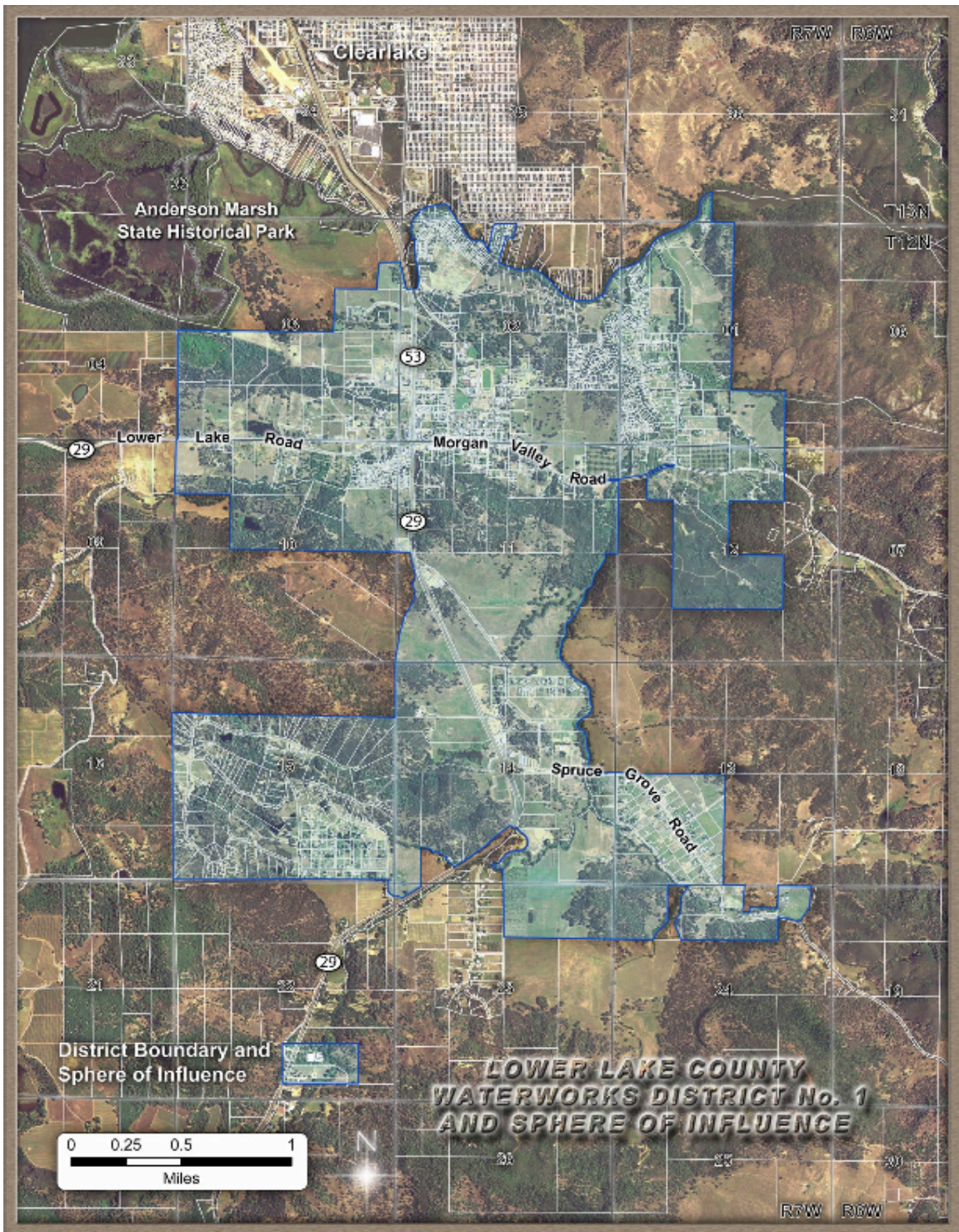
State of California, "General Plan Guidelines 2003", Governor's Office of Planning and Research.

State of California, Department of Health Services, Drinking Water Program, "Water System Status Summary Lower Lake County Water District Water System No 1710010", February 3, 2007.

State of California, Department of Housing and Community Development, Memorandum Official State Income Limits for 2009, April 2, 2009.

PREPARERS

1. John Benoit, Executive Officer LAKE LAFCO
PO Box 2694, Granite Bay CA 95746
Phone: 916-797-6003 johnbenoit@surewest.net
2. Christy Leighton, Planning Consultant
555 East Willow Street, Willows CA 95988
Phone: 530-934-4597 christyleighton@sbcglobal.net



APPENDIX A LOCAL GOVERNMENT ISSUES

1 Municipal Financial Constraints

Municipal service providers are constrained in their capacity to finance services by the inability to increase property taxes, requirements for voter approval for new or increased taxes, and requirements of voter approval for parcel taxes and assessments used to finance services. Municipalities must obtain majority voter approval to increase or impose new general taxes and two-thirds voter approval for special taxes.

Limitations on property tax rates and increases in taxable property values are financing constraints. Property tax revenues are subject to a formulaic allocation and are vulnerable to State budget needs. Agencies formed since the adoption of Proposition 13 in 1978 often lack adequate financing.

1.1 California Local Government Finance Background

The financial ability of the cities and special districts to provide services is affected by financial constraints. Cities and special district service providers rely on a variety of revenue sources to fund city operating costs as follows:

- Property Taxes
- Benefit Assessments
- Special Taxes
- Proposition 172 Funds
- Other contributions from city or general funds.

As a funding source, property taxes are constrained by statewide initiatives that have been passed by voters over the years and special legislation. Seven of these measures are explained below:

A. Proposition 13

Proposition 13 (which California voters approved in 1978) has the following three impacts:

- It limits the ad valorem property tax rate.
- It limits growth of the assessed value of property.
- It requires voter approval of certain local taxes.

Generally, this measure fixes the ad valorem tax at one percent of the value at most recent sale; except for taxes to repay certain voter approved bonded indebtedness. In response to the adoption of Proposition 13, the Legislature enacted Assembly Bill 8 (AB 8) in 1979 to establish property tax allocation formulas.

B. AB 8

AB 8 allocates property tax revenue to the local agencies within each tax rate area based on the proportion each agency received during the three fiscal years preceding adoption of Proposition 13. This allocation formula benefits local agencies which had relatively high tax rates at the time Proposition 13 was enacted (1978).

C. Proposition 98

Proposition 98, which California voters approved in 1988, requires the State to maintain a minimum level of school funding. In 1992 and 1993, the Legislature began shifting billions of local property taxes to schools in response to State budget deficits. Local property taxes were diverted from local governments into the Educational Revenue Augmentation Fund (ERAF) and transferred to school districts and community college districts to reduce the amount paid by the State general fund.

Local agencies throughout the State lost significant property tax revenue due to this shift. Proposition 172 was enacted to help offset property tax revenue losses of cities and counties that were shifted to the ERAF for schools in 1992.

D. Proposition 172

Proposition 172, enacted in 1993, provides the revenue of a half-cent sales tax to counties and cities for public safety purposes, including police, fire, district attorneys, corrections and lifeguards. Proposition 172 also requires cities and counties to continue providing public safety funding at or above the amount provided in FY 92-93.

E. Proposition 218

Proposition 218, which California voters approved in 1996, requires voter- or property owner-approval of increased local taxes, assessments, and property-related fees. A two-thirds affirmative vote is required to impose a Special Tax, for example, a tax for a specific purpose such as a fire district special tax.

However, majority voter approval is required for imposing or increasing general taxes such as business license or utility taxes, which can be used for any governmental purpose. These requirements do not apply to user fees, development impact fees and Mello-Roos districts.

F. Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act of 1982 allows any county, city, special district, school district or joint powers authority to establish a Mello-Roos Community Facilities District (a "CFD") which allows for financing of public improvements and services.

The services and improvements that Mello-Roos CFDs can finance include streets, sewer systems and other basic infrastructure, police protection, fire protection, ambulance services, schools, parks, libraries, museums and other cultural facilities. By law, the CFD is also entitled to recover expenses needed to form the CFD and administer the annual special taxes and bonded debt.

A CFD is created by a sponsoring local government agency. The proposed district will include all properties that will benefit from the improvements to be constructed or the services to be provided. A CFD cannot be formed without a two-thirds majority vote of residents living within the proposed boundaries. Or, if there are fewer than 12 residents, the vote is instead conducted of current landowners.

In many cases, that may be a single owner or developer. Once approved, a Special Tax Lien is placed against each property in the CFD. Property owners then pay a Special Tax each year.

If the project cost is high, municipal bonds will be sold by the CFD to provide the large amount of money initially needed to build the improvements or fund the services.

The Special Tax cannot be directly based on the value of the property. Special Taxes instead are based on mathematical formulas that take into account property characteristics such as use of the property, square footage of the structure and lot size. The formula is defined at the time of formation, and will include a maximum special tax amount and a percentage maximum annual increase.

If bonds were issued by the CFD, special taxes will be charged annually until the bonds are paid off in full. Often, after bonds are paid off, a CFD will continue to charge a reduced fee to maintain the improvements.

G. Development Impact Fees

A county, cities, special districts, school districts, and private utilities may impose development impact fees on new construction for purposes of defraying the cost of putting in place public infrastructure and services to support new development.

To impose development impact fees, a jurisdiction must justify the fees as an offset to the impact of future development on facilities. This usually requires a special financial study. The fees must be committed within five years to the projects for which they were collected, and the district, city or county must keep separate funds for each development impact fee.

1.2 Financing Opportunities that Require Voter Approval

Financing opportunities that require voter approval include the following:

- special taxes such as parcel taxes,
- increases in general taxes such as utility taxes,
- sales and use taxes,
- business license taxes, and
- Transient occupancy taxes.

Communities may elect to form business improvement districts to finance supplemental services, or Mello-Roos districts to finance development-related infrastructure extension. Agencies may finance facilities with voter-approved (general obligation) bonded indebtedness.

1.3 Financing Opportunities that Do Not Require Voter Approval

Financing opportunities that do not require voter approval include imposition of or increases in fees to more fully recover the costs of providing services, including user fees and Development Impact Fees to recover the actual cost of services provided and infrastructure.

Development Impact Fees and user fees must be based on reasonable costs, and may be imposed and increased without voter approval. Development Impact Fees may not be used to subsidize operating costs.

Agencies may also finance many types of facility improvements through bond instruments that do not require voter approval.

Water rates and rate structures are not subject to regulation by other agencies. Utility providers may increase rates annually, and often do so. Generally, there is no voter approval requirement for rate increases, although notification of utility users is required. Water providers must maintain an enterprise fund for the respective utility separate from other funds, and may not use revenues to finance unrelated governmental activities.

2 Public Management Standards

While public sector management standards do vary depending on the size and scope of an organization, there are minimum standards. Well-managed organizations do the following eight activities:

1. Evaluate employees annually.
2. Prepare a budget before the beginning of the fiscal year.
3. Conduct periodic financial audits to safeguard the public trust.
4. Maintain current financial records.
5. Periodically evaluate rates and fees.
6. Plan and budget for capital replacement needs.
7. Conduct advance planning for future growth.
8. Make best efforts to meet regulatory requirements.

Most of the professionally managed and staffed agencies implement many of these best management practices. LAFCO encourages all local agencies to conduct timely financial record-keeping for each city function and make financial information available to the public.

3 Public Participation in Government

The Brown Act (California Government Code Section 54950 et seq.) is intended to insure that public boards shall take their actions openly and that deliberations shall be conducted openly.

The Brown Act establishes requirements for the following:

- Open meetings
- Agendas that describe the business to be conducted at the meeting
- Notice for meetings
- Meaningful opportunity for the public to comment
- Few exceptions for meeting in closed sessions and reports of items discussed in closed sessions.

According to California Government Section 54959

Each member of a legislative body who attends a meeting of that legislative body where action is taken in violation of any provision of this chapter, and where the member intends to deprive the public of information to which the member knows or has reason to know the public is entitled under this chapter, is guilty of a misdemeanor.

Section 54960 states the following:

- (a) *The district attorney or any interested person may commence an action by mandamus, injunction or declaratory relief for the purpose of stopping or preventing violations or threatened violations of this chapter by members of the legislative body of a local agency or to determine the applicability of this chapter to actions or threatened future action of the legislative body,...*

APPENDIX B

(Ordinance 2009-01, February 2009, COLA 2010)
Water Service Monthly Metered

**RATES AND CHARGES FOR CONNECTION
AND SERVICE BY THE
LOWER LAKE COUNTY WATERWORKS
DISTRICT # 1**

Base Charges are determined on meter size. Base rates for 5/8 Meters include an allotment of up to 400 cubic feet of water (2,992 gallons):

In District			
Meter Size	Phase I Effective Feb 23, 2009	Phase II Effective August 24, 2009	Phase III Effective August 24, 2010
5/8 INCH	\$38.25	\$46.70	\$55.20
3/4 INCH	\$51.38	\$65.72	\$76.80
1 INCH	\$85.80	\$109.74	\$128.26
1 1/2 INCH	\$171.08	\$218.84	\$255.74
2 INCH	\$273.83	\$350.27	\$409.34
3 INCH	\$532.76	\$660.95	\$796.42
4 INCH	\$856.42	\$1,095.47	\$1,280.26
6 INCH	\$1,712.33	\$2,190.29	\$2,559.74
OUT OF DISTRICT: DOUBLE THE IN-DISTRICT BASE RATES			

Excess Charges per 100 cubic feet or portion thereof (In addition to the Base Charges the following charges apply to usage.)		
Tier 1	First 1,100 cubic feet of overage	\$1.50
Tier 2	1,101 to 2,600 cubic feet of overage	\$1.85
Tier 3	2,601 to 4,600 cubic feet of overage	\$2.00
Tier 4	4,601 to 7,100 cubic feet of overage	\$2.50
Tier 5	7,101 to 9,600 cubic feet of overage	\$3.00
Tier 6	9,601 cubic feet and up	\$4.00

Private Fire Protection Facilities	
8 inch	\$25.00 per month
6 inch	\$20.00 per month
4 inch	\$15.00 per month

Water Hydrants

Meter Set	\$50.00
Usage	Out of District Base Rate for 2 inch meters plus usage

Miscellaneous Charges

Late Charge	\$ 15.00
Dishonored Check Fee	\$ 30.00
Reconnect/Turn-On Fee	\$ 50.00
Turn-off for Non-payment Charge	\$100.00
After Hours Call-Outs	\$125.00
Transfer Fee	\$ 50.00
Cut-Lock Fee	\$ 75.00
Damaged Services	Time, Materials, Equipment

Water Service Installations

With Stub out (5/8" meters)	\$300.00
New Installations	Time & Materials/Bid
Inspection Fee	\$300.00

Water System Capacity Expansion Fees

5/8 inch Meter	\$2,500
¾ inch Meter	\$3,600
1 inch Meter	\$5,750
1 ½ inch Meter	\$11,000
2 inch Meter	\$15,750
3 inch Meter	\$32,000
4 inch Meter	\$47,500
6 inch Meter	\$90,000

APPENDIX C

Lower Lake County Waterworks District #1 2009-2010 Budget

ESTIMATED EXPENSES	Proposed	Adopted 5/12/09	Proposed 2010- 2011
<u>SALARIES AND EMPLOYEE BENEFITS</u>			
1.11 Salaries & Wages, Permanent		\$224,773	217,000
1.12 Salaries & Wages, Temporary		\$1,000	0
1.13 Overtime/Holiday		\$21,913	15,000
1.14 Salaries & Wages, Other, Term			
2.21 Retirement-FICA District Share		\$18,948	18,000
Total 1.11	\$224,773		
Total 1.12	\$1,000		
Total 1.13	\$21,913		
Total	<u>\$247,686</u>	x FICA rate 7.65%	
2.22 Retirement-PERS, District Share		\$62,159	74,000
3.30 Employee Group Insurance (5 employees @ rate of \$700/month)		\$42,000	48,000
3.31 Unemployment Insurance (\$37,200 X rate of 1.6%)		\$595	3,000
4.00 Worker's Compensation		\$15,000	15,000
<u>TOTAL SALARIES AND EMPLOYEE BENEFITS</u>		<u>\$386,388</u>	<u>\$390,000</u>

Lower Lake County Waterworks District #1

SERVICES AND SUPPLIES

	2009- 2010 Budget	2010- 2011 Budget
11.00 Clothing and Personal Supplies	\$1,000	1,000
<u>Sanitary Articles, Safety Equipment & Clothing, Raingear, Boots & Jackets</u>		
12.00 Communications	\$3,217	3,500
<u>Telephones, Fax, Internet, & Cell Phone</u>		
14.00 Household Expense	\$1,500	3,000
<u>Janitorial Supplies, Garbage Service & Dump Runs</u>		
15.10 Insurance-Other	\$20,000	\$20,000
<u>California Rural Water Risk Management Program</u>		
17.00 Maintenance-Equipment	\$10,000	\$10,000
<u>Office Equipment</u>		
<u>Radios & Cell Phone</u>		
<u>Vehicles & Shop Equipment</u>		
18.00 Maintenance-Buildings & Improvements	\$75,000	110,000
<u>Operating & Maintenance Supplies</u>		
<u>Landscape & Building Maintenance</u>		
19.40 Medical Supplies	\$250	250
<u>First Aid Supplies</u>	\$100	
20.00 Memberships	\$1,000	1500
<u>American Waterworks Association</u>	\$322	
<u>California Rural Water Association</u>	\$370	
<u>Underground Service Alert</u>	\$176	
22.70 Office Supplies	\$5,000	4,000
<u>Stationary & Printing</u>		
<u>General Supplies</u>		
22.71 Postage	\$5,000	5000
<u>Presort & Metered Mail</u>		
<u>Parcel Service/FedEx</u>		
22.72 Books & Periodicals	\$100	500
<u>Reference Books & Manuals</u>	\$250	
23.80 Professional & Specialized Services	\$45,800	50,000
<u>Audit Fees</u>	\$3,800	
<u>Laboratory Services</u>	\$12,000	
<u>Legal & Engineering Services</u>	\$30,000	
24.00 Publications & Legal Notices	\$1,600	1,000
<u>Ordinances, Meetings, Hearings etc.</u>		

25.00	Rents & Leases-Equipment		\$15,000	5,000
	Copier & Postage Meter	\$4,000		
	Tools, Equipment & Boom Truck	\$11,000		
26.00	Rents & Leases-Buildings & Improvements		\$150	150
	Brick Hall	\$150		
	Radio Read Meters	\$0		
27.00	Small Tools & Instruments		\$1,500	5,000
	Miscellaneous Tools			
	Replacement Parts			
28.30	Special Departmental-Supplies & Services		\$1,561	8,000
	DHOS Annual Fee			
	Film & Developing			
29.50	Transportation & Travel		\$10,300	15,000
	Diesel Fuel & Gasoline			
	Director Fees			
	Travel Reimbursement			
	Education			
30.00	Utilities		\$78,000	105,000
	Electricity			
	Kerosene			
38.00	Inventory Items		\$5,000	10,000
	Software			
	Office Fixtures			
<u>TOTAL SERVICES AND SUPPLIES</u>			\$280,978	\$357,900
<u>OTHER</u>				
48.00	Taxes & Assessments		\$250	300
<u>TOTAL OTHER</u>			\$250	\$300

Lower Lake County Waterworks District #1

		2009-2010 Budget	2010-2011 Budget
<u>FIXED ASSETS</u>			
60.00	Land	\$0	0
61.60	Buildings & Improvements-Current	\$25,000	35,000
	New Flow Meters for Wells	\$25,000	
61.69	Buildings & Improvements-Prior	\$20,000	25,000
	Konocti Emergency Intertie	\$10,000	
	System Replacements	\$10,000	
62.71	Equipment-Office	\$0	0
62.72	Equipment-Autos & Light Trucks	\$5,000	0
62.73	Equipment-Shop	\$0	0
	Miscellaneous Equipment		
62.74	Equipment-Other	\$10,000	0
	Double Axle Tilt Trailer		
	Well Transducers	\$10,000	
<u>TOTAL FIXED ASSETS</u>		\$60,000	\$60,000
<u>GRAND TOTAL EXPENSES</u>		\$727,616	\$808,200
100.01	Appropriations for Contingencies	\$28,098	35,790
<u>GRAND TOTAL EXPENSES</u>		\$755,714	\$843,990
	Reserve (General and Equipment)		71,015
<u>Total Recommended requirements</u>			\$915,005

**Lower Lake County Waterworks District #1 2009-2010 Budget
REVENUE BY SOURCE**

1010	Property Taxes-Current Secured	\$76,274
1020	Property Taxes-Current Unsecured	\$2,009
1025	Property Tax-Supp 813-Current	\$0
1035	Property Tax-Supp 813-Prior	\$0
1040	Property Tax-Prior Unsecured	\$0
1045	Property Tax-Augmentation	\$0
4200	Interest	\$3,688
5460	H.O.P.T.R.	\$984
6650	Returned Check Fees	\$350
6920	Photo Copy & Fax Income	\$0
7950	Revenue Applicable Prior Year	\$0
7960	Sale of Fixed Assets	\$0
7970	Other Sales-Miscellaneous	\$0
7990	Other Revenues-Miscellaneous	\$9,928
7992	Insurance Rebates	\$0
8092	Loans Receivable/Payable	\$0
8921	Water Sales & Service	\$616,686
8922	Meter Installations	\$0
8925	Tax Roll Collections	\$200
8926	Transfers & Reconnects	\$3,628
8990	Capacity Expansion Fees	\$0
<u>TOTAL ANTICIPATED REVENUES</u>		<u>\$713,747</u>
BUDGET TOTALS		(\$41,967)
	Estimated Carry Over from prior year	\$71,900
	Less Addition to Reserves (System Replacements)	\$28,500
	Budget Over/Under	\$1,433

APPENDIX D

2008 Consumer Confidence Report

Water System Name: **Lower Lake County Waterworks** Report Date: **5/22/09**

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2008.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Well Water

Name & location of source(s): Well #1 Riverview Dr., Wells 4,5a end of Bonham Rd., Wells 6a,7,8,9,10 are at the end of Schwartz Lane

Drinking Water Source Assessment information: Completed 1999

Time and place of regularly scheduled board meetings for public participation: 2nd Tuesday of the month at 7 p.m. at the district office at 16254 Main St. in Lower Lake Calif.

For more information, contact: Jo Anne Gaddy Phone: (707) 994-6009

TERMS USED IN THIS REPORT:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variations and Exemptions: Department permission to exceed an MCL or not comply with

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

pCi/L: picocuries per liter (a measure of radiation)

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides* that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can, also, come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the state Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 - SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (to be completed only if there was a detection of bacteria)	Highest No. of detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	None	None	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	None	None	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 - SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (to be completed only if there was a detection of lead or copper in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	10	2.6	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	10	.18	0	1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 - SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant

(and reporting units)						
Sodium (ppm)	2008	48	17-140	none	none	Generally found in ground & surface water
Hardness (ppm)	2008	290	94-433.0	none	none	Generally found in ground & surface water

**Any violation of an MCL or AL is marked with an asterisk. Additional information regarding the violation is provided later in this report.*

TABLE 4 - DETECTION OF CONTAMINANTS WITH A <u>PRIMARY</u> DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Turbidity	2007	24 NTU*	.26-24 NTU	5 NTU	N/A	Soil Runoff

TABLE 5 - DETECTION OF CONTAMINANTS WITH A <u>SECONDARY</u> DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant

TABLE 6 - DETECTION OF UNREGULATED CONTAMINANTS				
Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Notification Level	Health Effects Language

*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Summary Information for Contaminants Exceeding an MCL, MRDL, or AL, or a Violation of Any Treatment Technique or Monitoring and Reporting Requirement

Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches

Additional information for district customers

In 2008, Our water system failed to monitor for Disinfection Byproducts drinking water standard at one of the three required locations. Although this is not an emergency, as our customers, you have the right to know what happened, what you should do, and what we are doing to correct this situation.

We routinely monitor for the presence of drinking water contaminants. Testing was required during the summer of 2008 to determine the concentrations of disinfection byproducts in the drinking water, specifically Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHMs). The standard for HAA5 and TTHMs is 60 micrograms per liter and 80 micrograms per liter, respectively. The concentrations of samples analyzed for TTHMs and HAA5s in May 2008, at two locations monitored, were below the required standards

This is not an immediate risk. If it had been, you would have been notified immediately. For the January 2008 through December 2008, the District cannot guarantee the levels of TTHM and HAA5s were below the required federal standards for the portion of the distribution system not tested. However, historical data from this location are below the required standards.

We anticipate sampling for TTHMs and HAA5s in the summer of 2009, as required, to prevent this monitoring violation from occurring in the future.
