

FINAL REPORT

**WATER, WASTEWATER and POWER
MUNICIPAL SERVICES REVIEW**

Prepared for:

**El Dorado County Local Agency Formation Commission
550 Main Street, Suite E
Placerville, California 95667**

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January 2008

RESOLUTION NUMBER L-2008-01

Water, Wastewater and Power Services
Municipal Services Review
LAFCO Project No. 2006-05

WHEREAS, the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 set forth in Government Code Sections 56000 et seq. governs the organization and reorganization of cities and special districts by local agency formation commissions established in each county, as defined and specified in Government Code Sections 56000 et seq. (unless otherwise indicated all statutory references are to the Government Code); and,

WHEREAS, the Commission, pursuant to Government Code §56430, has conducted a service review of water, wastewater and power services in El Dorado County; and

WHEREAS, the service review is consistent with recommendations of the Commission on Local Governance for the 21st Century, the Governor's Office of Planning and Research LAFCO Municipal Services Review Guidelines, the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 and locally adopted policies for municipal service reviews; and

WHEREAS, the Commission has comprehensively reviewed all agencies within the designated geographic area that provide the identified services; and

WHEREAS, on October 24, 2007 the draft Municipal Services Review came on regularly for hearing before the Commission; and

WHEREAS, at that time, an opportunity was given to all interested persons, organizations, and agencies to present oral or written testimony and other information concerning the municipal services review and all related matters; and

WHEREAS, the Commission heard, discussed and considered all oral and written testimony related to this service review; and

WHEREAS, the Commission has made determinations regarding water, wastewater and power services in El Dorado County, and has prepared a written statement of these determinations, attached as Exhibit A of this resolution; and

WHEREAS, the Commission finds the project to be exempt from the provisions of the California Environmental Quality Act under Section §15306 of the CEQA Guidelines.

NOW, THEREFORE BE IT HEREBY RESOLVED, DETERMINED, ORDERED AND FOUND:

Section 1. Each of the foregoing recitals is true and correct.

Section 2. The Executive Officer is directed to file a Notice of Exemption in compliance with the California Environmental Quality Act and local ordinances implementing the same.

Section 3. The El Dorado Local Agency Formation Commission finds that the service review is adequate to fulfill its obligations under Government Code §56430 and makes determinations regarding water, wastewater and power services in El Dorado County.

Section 4. The El Dorado Local Agency Formation Commission adopts the Final Water, Wastewater and Power Services Municipal Services Review as set forth in Exhibit A attached hereto and incorporated herein by this reference.

PASSED AND ADOPTED by the El Dorado Local Agency Formation Commission at a regular meeting of said Commission, held January 30, 2008 by the following vote of said Commission.

Loftis, Long, Hagen, Humphreys, Norris
AYES: Sweeney

NOES: None

ABSTENTIONS: None

ABSENT: Briggs

ATTEST:

Allison Merozo

Clerk to the Commission

Francis Loftis

Chairperson

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ADD	Average Day Demand
AF	acre feet
AF/Yr	acre feet per year
ADWF	average dry weather flow
CC&R	Covenants, Codes and Restrictions
CDS	Community Disposal System
CECSD	Cameron Estates Community Services District
CHWWTF	Camino Heights Wastewater Treatment Facility
CPUC	California Public Utilities Commission
CVP	Central Valley Project (CVP)
CY	Calendar Year
DCWWTP	Deer Creek Wastewater Treatment Plant
EDCWA	El Dorado County Water Agency
EDHCSD	El Dorado Hills Community Services District
EID	El Dorado Irrigation District
EDHWTP	El Dorado Hills Water Treatment Plant
EDHWWTP	El Dorado Hills Wastewater Treatment Plant
EDWPA	El Dorado Water and Power Authority
FAR	Floor Area Ratio
FCC	Facility Capacity Charge
FERC	Federal Energy Regulatory Commission
FY	Fiscal Year
GCCSD	Greenstone Country Community Services District
GDPUD	Georgetown Divide Public Utility District
GFCSD	Grizzly Flat Community Services District
GPM	Gallons per minute
IMS	Irrigation Management System
KMPUD	Kirkwood Meadows Public Utility District
LAFCO	Local Agency Formation Commission
LTWIP	Lake Tahoe Wastewater Infrastructure Partnership
MDD	Maximum Day Demand
MGD	Million gallons per day
MTBE	methyl tertiary butyl ether

MWD	McKinney Water District
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas and Electric
RAD	Regional Analysis District
SACOG	Sacramento Area Council of Governments
SMUD	Sacramento Municipal Utility District
SOI	Sphere of Influence
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
TAZ	Traffic Analysis Zone
TCPUD	Tahoe City Public Utilities District
TRPA	Tahoe Regional Planning Authority
UARP	Upper American River Project
ULL	Urban Limit Line
WER	Water Effects Ratio

SECTION 1.0

EXECUTIVE SUMMARY

1.1 Overview

The *Water, Wastewater, and Power Municipal Services Review* focuses on the cities and special districts providing these services within El Dorado County. California state law authorizes the Local Agency Formation Commission (LAFCO) within each county to establish boundaries and spheres of influence (SOIs) for cities and special districts under their purview, and to authorize the provision of services within the approved service areas. In fulfillment of this responsibility, LAFCO is required to conduct periodic reviews of each service provider, and to adopt determinations with respect to the need for, and adequacy of, current services and each agency's ability to continue to provide adequate services in the future. The agencies included in this review are shown in *Table 1.1*, and their current boundaries are depicted in *Figure 1.1, Service Areas of El Dorado County Public Water Providers*.

Table 1.1
Water, Wastewater, and Power Service

Service Provider	Water Service	Wastewater Service	Power Service
City of Placerville	●	●	
El Dorado Irrigation District	●	●	●
Georgetown Divide Public Utility District	●	●	●
Greenstone Country Community Services District		●	
Grizzly Flats Community Services District	●		
South Tahoe Public Utility District	●	●	

Other agencies providing water and wastewater services in El Dorado County include the following:

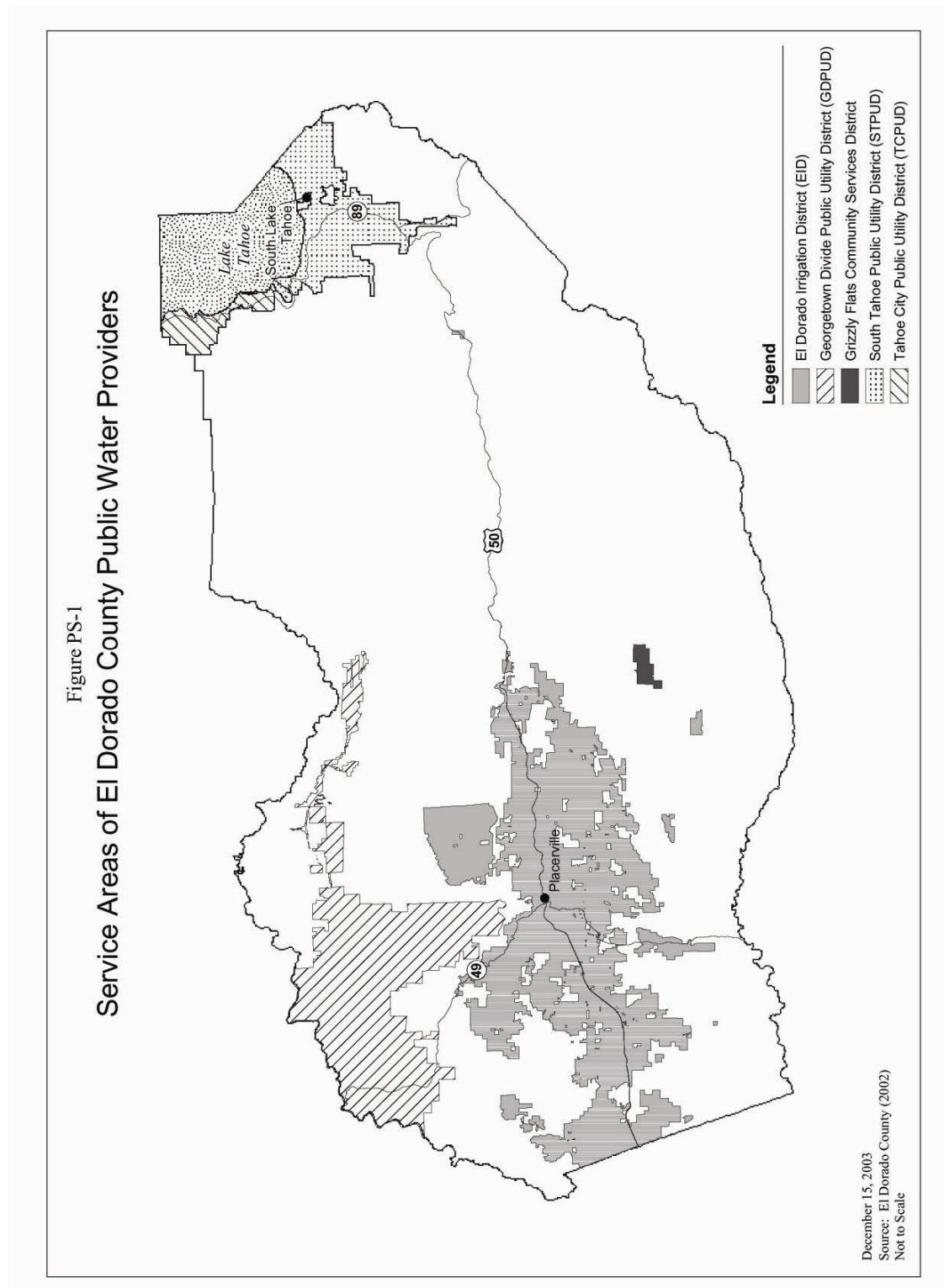
- The Kirkwood Meadows Public Utility District provides water, wastewater, and electric utility services within a 1.1 square mile area that includes lands within El Dorado, Alpine and Amador counties. Alpine LAFCO is the principal LAFCO and is responsible for reviewing the District's services and adopting determinations accordingly.
- The McKinney Water District is providing water service in an 11 square mile area immediately west of Highway 89 near the western shore of Lake Tahoe. The Tahoe City Public Utility District is providing water and wastewater services to a 22 square mile area

that extends from the northern shore of Emerald Bay to Dollar Hill on the western shore of Lake Tahoe. Placer LAFCO is the principal LAFCO and has reviewed these two districts in the *Municipal Services Review for Area 3 Services*.

Within El Dorado County there are a number of private water companies, water mutuals, small shared systems, and private and shared wells providing water service in lieu of a public agency.¹ The type and degree of regulatory oversight for these systems depends on the type of entity and the number of connections served. Private water companies operate under the oversight of the California Public Utilities Commission (CPUC) and are not subject to LAFCO's purview. The CPUC governs the provision of water by private entities, including service area, levels of service, and rates. Mutual water companies or companies owned by homeowner associations are exempt from CPUC regulation if they serve only their stockholders or members. Regardless of size, all of these systems must meet State Department of Public Health and County of El Dorado standards. These facilities are privately owned, and it is beyond the scope of this report to collect and analyze data on these systems. It should be noted that they are providing water service to the County's residents from surface and groundwater resources, and are impacted by the same concerns for supply reliability, water quality, and costs as the public water providers.

Hydroelectric power generation and facility licensing is regulated by the Federal Energy Regulatory Commission (FERC). Within El Dorado County, the El Dorado Irrigation District (EID) and the Georgetown Divide Public Utility District (GDPUD) are the only two public agencies currently providing these services. In October 2006, EID's Project 184 received a 40-year license from FERC. EID sells the power generated on the open market and does not provide any retail electric utility service. GDPUD has entered into a 20-year agreement with a private entity to re-power, operate, and maintain the District's two hydroelectric projects. GDPUD will receive royalties as compensation and has no operational responsibilities or financial obligations associated with this agreement.

¹ A listing of the Small Water Systems within El Dorado County is included in the El Dorado Water Agency Water Resources Development and Management Plan, November 2007 – Appendix C



Source: County of El Dorado General Plan – Public Services and Utilities Element July 2004

Note: Map depicts El Dorado Irrigation District’s service area within El Dorado County only

1.2 Statutory Requirements

In 2000, the California State Legislature broadened the authority of LAFCO by directing the Commission to conduct comprehensive reviews of the delivery of municipal services provided in the county and any other area deemed appropriate by the Commission. Additionally, legislators directed LAFCOs to complete sphere of influence reviews and updates of agencies under LAFCO's jurisdiction not less than every five years.

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review municipal services before updating the spheres of influence, and to prepare a written statement of determinations with respect to each of the following:

1. Infrastructure needs or deficiencies;
2. Growth and population projections for the affected area;
3. Financing constraints and opportunities;
4. Cost avoidance opportunities;
5. Opportunities for rate restructuring;
6. Opportunities for shared facilities;
7. Government structure options, including advantages and disadvantages of consolidation or reorganization of service providers;
8. Evaluation of management efficiencies; and
9. Local accountability and governance.

The Municipal Service Review (MSR) process does not require LAFCO to initiate changes of organization based on service review findings; it only requires that LAFCO make determinations regarding the provision of public services per Government Code Section 56430. MSRs are not subject to the provisions of the California Environmental Quality Act (CEQA) because they are only feasibility or planning studies for possible future action that LAFCO has not approved (California Public Resource Code Section 21150). The ultimate outcome of conducting a service review, however, may result in LAFCO taking discretionary action on a change of organization or reorganization.

1.3 Service Review Process

A collaborative approach has been used throughout the preparation of this Municipal Service Review. The input of the public agencies is highly valued, and multiple opportunities were provided for their involvement. At the outset, a kick-off meeting was held with the agencies to

explain the process and request information. A service review questionnaire was distributed to the agencies for their completion. Agency data was collected and forwarded to the consulting team for review; follow-up discussions were held with agency staff for clarification. The service providers included in this review were provided an opportunity to review the administrative draft of their individual sections to provide clarification and address data gaps. Changes and comments were incorporated as appropriate in preparation for release of the Public Review Draft.

Upon direction from the Commission, this Municipal Service Review was released for public review and comment at the public hearing in October 2007. The comments received were incorporated into the Final Draft, which the Commission will consider at a public hearing prior to adopting the determinations.

1.4 Service Related Issues

The western portion of El Dorado County is experiencing significant growth that places increasing demands on water supplies and necessitates increases in water and wastewater system capacity and other improvements. All of the service providers are dealing with aging infrastructure that requires rehabilitation or replacement. Regulatory requirements are becoming increasingly more stringent, and agencies are challenged to anticipate the changes and ensure that treatment processes and facilities continue to meet standards and are operated cost-effectively.

1.4.1 Growth and Infrastructure Needs

The El Dorado County Water Agency (EDCWA) has prepared the *Water Resources Development and Management Plan* (November 2007) to serve as a countywide planning tool to coordinate water planning activities within El Dorado County and provide a “blueprint for actions and facilities needed to meet the county’s water needs in the future.” The Plan uses the population and land development projections in the El Dorado County 2004 General Plan to estimate water demand projections, using 2025 and buildout² for planning horizons. Housing and employment growth forecasts were prepared for the western slope by Traffic Analysis Zone in conjunction with the 2004 General Plan. The Plan projects that, for the Western Slope, the number of residential units will increase 72.5 percent to 73,469 by 2025, ultimately reaching 117,262 units at capacity. For the Tahoe Basin, the number of residential units is expected to increase by 27 percent to 20,073 by 2025, with capacity reached at 20,146 units.³

² Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

³ El Dorado Water Agency Water Resources Development and Management Plan, November 2007, Tables 4-2 and 4-3

The Sacramento Area Council of Governments (SACOG) has developed population projections through 2035 by Regional Analysis District (RAD) for the planning area within SACOG's purview, which includes the western slope of the Sierras in El Dorado County. El Dorado County has twelve RADs, extending from El Dorado Hills in the west to the El Dorado High Country to the east. The population within these El Dorado County RADs is projected to increase 56 percent by 2035, from approximately 147,000 in 2005 to nearly 230,000 in 2035.

The Tahoe area is under the jurisdiction of the Tahoe Regional Planning Agency (TRPA), a federal bi-state agency with authority to set strict limits to control growth. Little to no growth is anticipated within the service area of the South Tahoe Public Utility District (STPUD).

Funding for water and wastewater service and infrastructure improvements is a challenge, particularly for agencies with limited resources and a small population base. Agencies regularly evaluate rate structures and capital facility fees to ensure that rates and fees are equitable and generate sufficient revenues to pay for adequate, reliable water supplies and infrastructure rehabilitation or replacement where needed. They also ensure that the rates and facility capacity fee structure supports a "growth pays for growth" approach. Those agencies that receive a portion of the base property tax collected by El Dorado County saw this revenue source restored to normal levels in FY 2006/2007 after the two year mandatory diversion to the State's Educational Revenue Augmentation Fund.

The agencies have planned for the projected growth within their respective service areas, including water supply, infrastructure capacity and extension, and regulatory requirements regarding water and wastewater treatment. As noted below, additional water supplies and infrastructure are needed to meet projected water demands for EID, GDPUD, and the Grizzly Flats Community Services District (GFCSD). The growth projected for the western slope will require that the agencies implement incremental system improvements in order to ensure adequate service levels for both existing and new customers.

1.4.2 Water Supply

All of the water service providers on the western slope of the Sierras rely on surface water as their source of supply. Growth, both within El Dorado County and the Central Valley, places increasing pressure on water supplies originating in the Sierras. GDPUD's primary storage is the Stumpy Meadows Reservoir; EID's primary source of supply is Jenkinson Lake. Additional supplies may become available for both EID and GDPUD through a new 40-year contract that the El Dorado County Water Agency (EDCWA) is pursuing with the U.S. Bureau of Reclamation for 15,000 acre-feet per year of Central Valley Project water.

Consistent with the EDCWA *Water Resources Development and Management Plan*, firm yield and safe yield has been noted for the water supplies for the respective agencies. Firm yield is the annual quantity of water than can be made available in most years while imposing water deficiencies during hydrologic drought conditions. Safe yield is the maximum amount of water that can be made available in any year, including the driest year of record (1977 for the American River watershed).

Both EID and GDPUD will need additional sources of water supply in order to meet projected demand. Per EID's adopted *2005 Urban Water Management Plan*, the District will have adequate water supply to meet demands through 2030 under normal conditions as well as single and multiple dry year scenarios, contingent upon EID executing a new water contract for Folsom Lake water, acquiring new water rights for the Sacramento Municipal Utility District (SMUD) Upper American River Project, and the construction of recycled water seasonal storage. Based on GDPUD's firm yield supply of 12,200 AF/Yr, an additional 18,533 AF/Yr will be needed at buildout to meet projected demand, and when safe yield is considered, 20,233 acre feet should be planned for.

Grizzly Flats Community Services District (GFCSD) is dependent on surface water from creeks that are fed by seasonal rainfall and snowmelt and are part of a spring-fed system. The water supply is subject to significant decreases during dry years, and the District needs additional storage capacity to improve reliability during dry periods.

Within the Tahoe Basin, STPUD relies solely on groundwater that must be treated for MTBE contamination in certain areas. The District was forced to take several wells out of service as a result and is in the processing of restoring its groundwater production facilities. The District treats groundwater for MTBE at the wellhead for two wells.

The EDCWA *Water Resources and Development Management Plan* notes that the amount of groundwater on the western slope is limited. In addition, groundwater quality is often marginal. There are large areas throughout the county that are served by domestic wells and small community water systems. These areas may be at risk for adequate water supply during periods of extended drought and/or failing wells. Where feasible, some areas may seek an extension of service from one of the water purveyors. The Plan projects the potential increase in water supply requirements at buildout to serve these areas. Based on the analysis, EID would need an additional 14,910 acre feet and GDPUD 2,162 acre feet, with 366 acre feet for the remaining other county areas not allocated to those two agencies. It should be noted that it is not likely that the municipal water service will be used to meet the entire demand, as there are a number of factors that would determine whether service could be extended, such as land use and zoning designations, water supply availability, proximity to an existing system, facility requirements, and cost.

EID and STPUD are providing recycled water for irrigation use. Within EID's service area, recycled water is used to offset potable demand; in addition to traditional uses for large landscape and golf course irrigation, recycled water is also used for irrigation on single family residential properties in certain communities where recycled water is available. STPUD is required to export all wastewater out of the Tahoe Basin, and the District's treated wastewater is used for fire suppression and agricultural irrigation in Alpine County in an area that has limited water storage capacity.

It is important to note that water supplies are impacted across the state and changing hydrologic and climatic conditions will affect reservoir management and storage both within El Dorado County and in the greater Central Valley Project watershed area. It will also impact local surface and groundwater resources on the western slope. Furthermore, future regulatory changes will impact agencies to varying degrees depending on location and environmental issues.

1.4.3 Water Demand

Given the growth projected for El Dorado County, the agencies are actively engaged in planning to ensure reliable water supplies to meet future demand. In addition to individual planning efforts, the agencies coordinate on this effort through the El Dorado County Water Agency (EDCWA), the El Dorado Water and Power Authority (EDWPA), and the Mountain Counties Water Resources Association.⁴ The EDCWA *Water Resources Development and Management Plan* includes water demand projections for both domestic and agricultural uses based on land uses in the El Dorado County General Plan (2004) and SACOG's projections by Traffic Analysis Zone. Additional demand considerations are also factored in, such as future service to currently unserved areas and the adopted General Plan Amendment that increases the Floor Area Ratio (FAR) for commercial/industrial and research and development land uses. Using the safe yield for each agency's current water supply, the Plan identifies the additional water supply needed to meet demands in 2025 and at build out.

Agricultural water demands are a significant factor within El Dorado County, particularly with the trend towards development of small agricultural operations. For GDPUD, agricultural water use comprises 70 to 80 percent of total water demand. EID's current agricultural water demands are 20 percent of total demand; this is expected to increase to 28 percent by 2030, with the number of agricultural accounts increasing from 389 in 2005 to 5,375 in 2030.⁵ Agricultural

⁴ The El Dorado County Water Agency was formed by a special act of the State Legislature in 1959 and consists of all of the territory within El Dorado County. The El Dorado Water and Power Authority is a Joint Powers Authority with the following participating agencies: County of El Dorado, El Dorado Irrigation District, El Dorado County Water Agency, and Georgetown Divide Public Utility District. The Mountain Counties Water Resources Association is a consortium of public and private interests for the purpose of protecting and enhancing water resources in the Mountain Counties.

⁵ El Dorado Irrigation District Urban Water Management Plan 2005 Update, Tables 3-2 and 3-3

land use generally includes smaller-acreage properties with crops that are suitable for sloped hillsides, including vineyards, Christmas trees, olive and citrus groves, berries, deciduous orchards, and pasture. Unlike seasonal crops that can be fallowed in times of water shortages, most of these agricultural operations are dependent on a reliable source of water supply.

The following *Table 1.2* summarizes the water supply and demand projections from EDCWA's Plan.

Table 1.2
Existing Water Supplies and Projected Water Needs (AF/Yr)

	Existing Safe Yield Supplies	Projected Demand ¹		Additional Water Supply Needs	
		2025 (ac-ft)	Buildout ⁴ (ac-ft)	2025 (ac-ft)	Buildout ⁴ (ac-ft)
El Dorado Irrigation District	58,753	76,237	101,155	17,484	42,402
Favorable Areas		6,845	11,040	6,845	11,040
FAR GP Amendment		--	12,621	--	12,621
EID Total	58,753	83,082	124,816	24,329	66,063
Georgetown Divide PUD	10,500	16,935	28,406	6,435	17,906
Favorable Areas		817	1,318	817	1,318
FAR GP Amendment		0	1,009	0	1,009
GDPUD Total	10,500	17,752	30,733	7,252	20,233
Grizzly Flats CSD²	143	205	1,066	62	923
Other County Areas	9,411	19,707	37,829	10,296	28,418
Less Reallocated Favorable Areas		(7,663)	(12,358)	(7,663)	(12,358)
FAR GP Amendment			239		239
Other County Areas Total	9,411	12,044	25,710	2,633	16,299
WESTERN SLOPE TOTAL	78,807	113,083	182,325	34,276	103,518
Tahoe Basin³	12,495	12,362	12,495	0	0
El Dorado County Total	91,302	125,445	194,820	34,276	103,518

Source: EDCWA Water Resources Development and Management Plan, November 2007

- Note:
1. Totals do not include conservation or reduction of UAW that may result from ditch lining and piping.
 2. Further analysis of actual land use within the GFCSD boundary indicates a buildout demand of 504 acre-feet, which would result in 361 acre-feet of additional water supply needed at buildout.
 3. Tahoe Basin well capacity exceeds buildout demands; therefore maximum demand is used for safe yield.
 4. Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

It should be noted that these demand projections differ from the demand projections included in the agencies' 2005 *Urban Water Management Plans*, primarily due to planning assumptions and the master planning nature of the document. The *Water Resources Development and Management Plan* uses a conservative approach to project water demand based on 2004 General

Plan land use, factoring in projected demand from areas that are not currently served but are considered “favorable” for potential future service, demands resulting from the recently adopted Floor Area Ratio General Plan Amendment, and refined agricultural projections which recognize agro-tourism and the potential of significant demands from the agricultural sector for which expansion is encouraged by General Plan policies. It should be noted that future General Plan Amendments may be adopted that increase water demand, further impacting water supplies. These policies have established agricultural districts, will expand the area considered for inclusion in agricultural districts, require review of non-agricultural uses on agricultural lands, and allow winery and ranch marketing visitor uses on agricultural lands.

However, there are General Plan policies and cost factors that effectively limit the extension of service to properties that are not adjacent to, or in the vicinity of, existing infrastructure. For example, extension of service to property not adjacent to existing facilities typically requires the applicant to pay for infrastructure improvements needed to serve the property, such as the construction of a mainline, pumping facilities, etc.

In addition, extension of service to area outside a city or district’s boundaries would require that the proponent submit an application for annexation and receive written approval from LAFCO. The application includes a Plan for Service that provides detailed information on how the services would be provided, the expected water demand and source of water supply, and the potential impacts to existing customers. When considering approval, the Government Code requires that LAFCO make a determination regarding the timely and available supply of water.

The agencies will continue to pursue development of additional water supplies and promote conservation as a means to enhance water supply reliability. Balancing water supply and water demand will remain a dynamic issue.

1.5 Service Summary

LAFCO is responsible for the orderly provision of services by establishing boundaries and spheres of influence for cities and special districts that reflect the area that the agency is currently serving and those areas the agency plans to serve over the next 5-, 10- or 20-year horizon. The boundaries and SOI must have a nexus with agency resources, including the water supply, infrastructure system, wastewater treatment and discharge capacity, and service demands (both active and latent) from existing customers. The following *Table 1.3, Water Service Summary* and *Table 1.4, Wastewater Service Summary*, summarize key service factors for the agencies included within this service review.

Table 1.3
Water Service Summary

	Service Area (sq mi)	2005 Population	# of Water Service Connections	Water Supply Safe Yield/Firm Yield (AF/Yr)	Demand 2005 / 2025 (AF/Yr, normal conditions)	Treatment Capacity	2007/2008 Budget Revenue/Expenses	Bi-monthly Rate – Single Family Residence
Placerville	3.4	9,610 ¹	3,064	(supplied by EID)	1,666 / 2,400	EID facilities	R = \$1,659,720 E = \$1,204,212	\$75.68
El Dorado Irrigation District	220	92,400	37,677	SY=61,753 ³ FY=66,560 ³	47,782 / 89,342 ²	109.5 MGD	R = \$44,823,500 E = \$45,619,000	\$47.62
Georgetown Divide PUD	112	9,100	3,559	SY=10,500 FY=12,200	11,162 / 18,779	5.0 MGD	R = \$5,331,000 ⁴ E = \$4,304,055	\$59.95
Grizzly Flats CSD	2.7	1,700	600	SY=143 FY=143	130 / 504	(not provided)	R = \$431,658 E = \$425,215	\$74.26 (\$37.13/mo)
South Tahoe PUD	42.2	37,700	13,900	SY=12,495 ⁵ FY=12,495 ⁵	6,796 / 8,226	22.66 MGD	R = \$9,712,001 E = \$8,849,825	\$71.05 (\$426.32 annual chg)

¹2000 US Census

²EID: 2030 demand

³EID: system firm yield; Western/Eastern supply area = 36,000 AF supply based yield, El Dorado Hills supply area = 11,500 AF infrastructure based yield; includes recycled water

⁴GDPUD: Revenue includes non-operating revenues such as property tax

⁵STPUD: Tahoe Basin well capacity exceeds buildout demands; therefore, safe yield reflects maximum demand.

Table 1.4
Wastewater Service Summary

	Service Area (sq mi)	2005 Population	# of Wastewater Service Connections	Avg. Dry Weather Flow	Treatment Capacity	2007/2008 Budget Revenue/Expenses	Bi-monthly Rate – Single Family Residence
Placerville	5.9	9,610 ¹	3,617	1.0 MGD	2.3 MGD	not provided	\$80.50
El Dorado Irrigation District	220	92,400	19,918	6.6 MGD	6.6 MGD	See Table 1.3	\$95.87
Georgetown Divide PUD	Auburn Lake Trails only	NA	134	29,000 gpd	No disinfection – on site disposal	R = 317,000 E = \$370,000	\$45.50
Greenstone Country CSD	3.5	700	347 (septic only)	NA	NA	R = 206,400 E = \$199,700	\$100 per lot per year
South Tahoe PUD	42.2	37,700	17,800	4.2 MGD	7.7 MGD	R = \$12,218,101 E = \$13,791,775	\$54.30

¹2000 US Census

SECTION 2.0

CITY OF PLACERVILLE

WATER AND WASTEWATER SERVICES

2.1 Overview

The City of Placerville was incorporated in 1854 under the general laws of the State of California. The City serves a population of approximately 9,610 in an area of 5.86 square miles. Located in central El Dorado County, the City lies within two watersheds, the South Fork of the American River and the North Fork of the Cosumnes River. The City's Sphere of Influence (SOI) encompasses an additional 3.98 square miles. The City's water service area encompasses a majority of its incorporated area (3.4 square miles) and some parcels outside city boundaries. The El Dorado Irrigation District (EID) serves the remainder of the city and surrounding areas. Placerville's wastewater service area (5.9 square miles) encompasses most of the Hangtown Creek watershed and therefore includes area that is outside city boundaries.

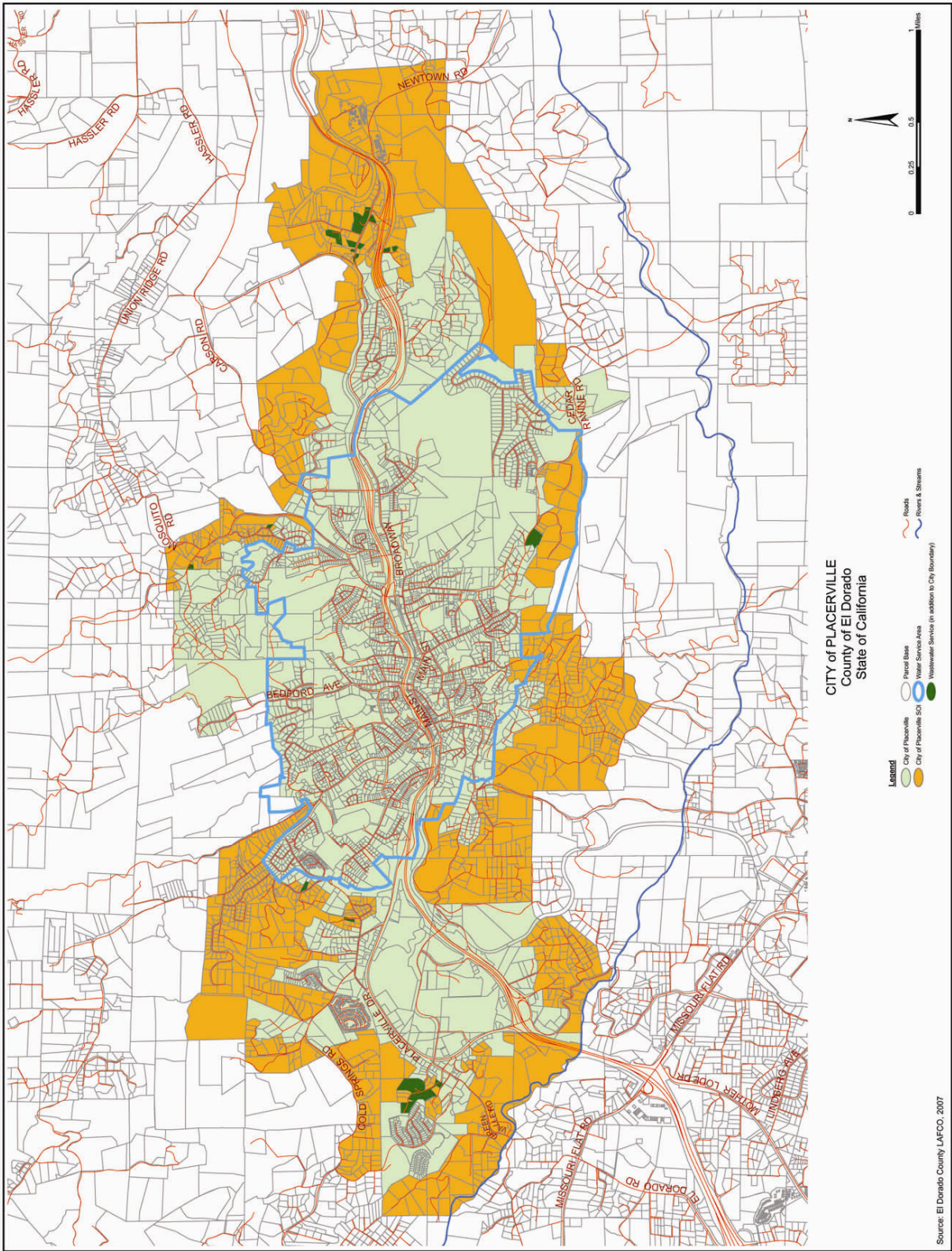
The City of Placerville receives its water supply from EID. EID conveys treated water to the periphery of the City's water service area, and the City then distributes it through a system owned and operated by the City. The City is completing \$47.1 million in improvements to the Hangtown Creek Water Reclamation Facility to meet wastewater service demands and ensure regulatory compliance. A map of the City's boundary and current SOI are shown in *Figure 2.1* along with the boundaries for the water and wastewater service areas. The City's profile for water and wastewater service is shown in *Table 2.1*.

Table 2.1
City of Placerville
Water and Wastewater Service Information

Service Area / Financial Summary	
Public Works Department:	3101 Center Street Placerville, CA 95667 (530) 642-5250 www.cityofplacerville.org
Service Area:	Water: 3.4 square miles; Wastewater: 5.9 square miles
Population:	9,610 (2000 Census) / 13,918 (Year 2030) Average Annual Growth Rate = 4.5% to 2015
Operating Budget (FY 2006-2007):	
Water Enterprise Funds	Revenues / Expenditures: \$1,645,290 / \$1,645,290
Sewer Enterprise Fund	Revenues / Expenditures: \$3,957,717 / \$3,746,417

Table 2.1
City of Placerville
Water and Wastewater Service Information

Net Assets	Water Fund Net Assets 06/30/2006: \$4,006,347 Sewer Fund Net Assets 06/30/2006: \$7,841,900
Water Service Data	
Services	Water Distribution
Number of Service Connections	3,064
Miles of Water Main / Number of Pump Stations	37 miles / 3 pump stations
Average Age of Distribution System	41.9 years
Treatment	EID: Reservoir A Water Treatment Plant – 64 MGD EID: Forebay Water Treatment Plant – 26 MGD
Storage Capacity within City	40,000 gallons for Sierra Service Zone
Average Day Demand / Maximum Day Demand	1,118 GPM / 2,090 GPM
Wastewater Service Data	
Services	Wastewater Collection, Treatment, Discharge
Number of Service Connections	3,617
Miles of Sewer Main / Number of Lift Stations	54 miles / 3 lift stations
Average Age of Collection System	41.9 years
Avg. Dry Weather Flow / Avg. Wet Weather-Storm Flow	1.0 MGD / 1.7 MGD
Treatment / Capacity: Avg Dry Weather / Avg. Wet Weather	Hangtown Creek Water Reclamation Facility - 2.3 mgd / 7.5 mgd with completed improvements
RWQCB Region	Region 5 – Central Valley
Orders	Order No. R5-2001-0045-A01 – NPDES Permit Order No. R5-2001-0046 0 – Cease and Desist Order No. R5-2001-0046-A01 – Waste Discharge Rqmts Order No. 2006-0003 – Statewide General Waste Discharge Rqmts for Sanitary Sewer Systems



2.2 Growth and Population Projections

The City of Placerville has an official US Census year 2000 population of 9,610 residents. The City has identified several development projects within its boundaries that are anticipated to be complete by 2015. If developed as planned, these projects would add an additional 640 single family residential units, 177 senior residential/assisted living units, and 1.3 acres of commercial use. For planning purposes, the City assumes build out within its existing water service area by 2015 with an estimated population of 13,918. This yields an average annual growth rate of 4.5 percent through 2015, with little growth through 2030.

The City provides wastewater services within the Hangtown Creek watershed, which includes some areas that are outside the City's boundaries. The City's *Sewer System Master Plan – Phase I Summary Report* (August 2006) analyzed land use within the City's current SOI and estimates current population at 13,539. For wastewater planning purposes, build out is expected in 2030 with a population of 20,023.

The *Sewer System Master Plan* identifies 1,584 acres of vacant land within the City's corporate area and SOI (1,066 acres within the City). The El Dorado County Assessor's records from 2002 indicate there were 750.1 acres of vacant land (83 parcels) on the periphery of the Placerville city limits. For lands adjacent to Placerville's SOI, the El Dorado County General Plan Land Use Map (July 2004) reflects land uses that would allow for low and medium density residential and some rural residential.

The Sacramento Area Council of Governments (SACOG) has developed population projections through 2035 by Regional Analysis District (RAD) for the Regional Housing Needs Assessment. Placerville lies within three RADs: East Placerville, West Placerville, and South Placerville. The population within these three areas is projected to reach approximately 27,560 by 2035. Although these areas encompass significantly more lands than are within the Placerville boundaries or SOI, the projections provide an indication of the expected growth within this region of the county.

If the planned development projects within Placerville occur by 2015, the City will experience a 36 percent increase in population over the next eight years. Growth may be even more significant if additional projects are implemented within the larger wastewater service area. However, it should be noted that economics is a primary factor of future development and growth may occur at a slower pace than indicated above, given current conditions in the real estate market.

2.3 Infrastructure Needs or Deficiencies

Placerville's water and wastewater infrastructure includes a water distribution system and wastewater collection, treatment and discharge system. The City's water service area does not include the entire city and includes some parcels outside city boundaries. The wastewater service area encompasses a larger area with lands outside city boundaries (see *Figure 2.1*). Due to the City's aging water and wastewater infrastructure, the City has made extensive efforts in recent years to finance several large capital projects to mitigate further deterioration of some of the oldest and costliest components of the water and wastewater systems. The City recently completed its *2005 Urban Water Management Plan, Water Master Plan* (December 2005), and *Sewer System Master Plan – Phase I Summary Report* (August 2006).

2.3.1 Water Supply and Demand

Placerville receives its water supply from the El Dorado Irrigation District (EID) through ten bulk flow meters and four small service meters located on the periphery of the City's water service area. EID provides retail service to the areas surrounding the City's water service area. In April 1999 the City and EID entered into an agreement whereby EID would provide the water supply to the City. Per the terms of the agreement, EID will deliver and sell water to the City, at historical use levels including normal growth increases under normal operating conditions. The City is considered a municipal user and is not subject to any deficiency in water service greater than all other EID customers.

Placerville lies within EID's eastern service region and has two EID service zones: North Placerville (Zone 18) and South Placerville (Zone 28). The eastern region also includes Lotus/Coloma, Swansboro, Camino, Pleasant Valley, Sly Park, and Pollock Pines. Both the western and eastern regions receive gravity water supply from EID's Jenkinson Lake and Project 184 Forebay water supply sources. EID's *2007 Water Resources and Service Reliability Report* states that there is adequate supply to meet projected demands for existing service connections within the western and eastern regions, and there are no infrastructure limitations for delivering the water supply. The supply-based yield of 36,000 acre-feet consists of 15,080 acre-feet from Project 184 and 20,920 acre-feet from Jenkinson Lake. In a critical dry year, annual supply from Jenkinson Lake may be reduced.

Water supply reliability is further demonstrated in EID's *2005 Urban Water Management Plan*. EID's water supply exceeds projected demands for its entire service area through 2030 under normal, single dry year, and multiple dry year conditions. However, demand could be within 96 percent of available water supplies in multiple dry years, and water supply shortages could occur. EID's *Urban Water Management Plan* anticipates an additional 20,000 acre feet of water supply starting in 2020 through a future agreement that would allow EID to store water in the

Sacramento Municipal Utility District (SMUD) reservoirs. With this additional supply, EID would have adequate water supply to meet service demands based on estimated supply reductions of 10 percent in single dry years and 28 percent in multiple dry years. No demand reductions are expected in a single dry year, while 20 percent demand reductions are factored in for the multiple dry year scenario. EID has a four-stage water shortage contingency plan that triggers a first stage alert when there is a probability that water supplies will not meet demands. Jenkinson Lake is the main storage project for EID, and it is monitored monthly to determine when conservation measures should be implemented to reduce water demand.

EDCWA's *Water Resources and Development Management Plan* (November 2007) includes water demand projections for EID of 76,237 AF/Yr in 2025 and 101,155 AF/Yr at buildout¹ based on land uses within the County's 2004 General Plan, growth allocations based on SACOG's Traffic Analysis Zones (TAZ), and agricultural demand projections based on slope and soils. When additional demand considerations are factored in, such as future service to currently unserved areas and the adopted General Plan Amendment that increases the floor area ratio for commercial/industrial and research and development land uses, the projected water demand increases to 83,082 AF/Yr (79,057 AF/Yr with conservation) in 2025 and 124,816 AF/Yr at buildout. The 2025 projection is very close to EID's projection of 81,030 AF/Yr. The *Water Resources and Development Management Plan* concludes that with implementation of a combination of various water supply options as described in *Chapter 3* of this MSR, EID will have adequate water supply to meet projected buildout demand.

The majority of Placerville's water demands are for residential use. In 2006, the City had 3,064 water service accounts of which 85 percent are residential, 14 percent are commercial and multi-family residential, and 1 percent are City connections. This distribution is expected to remain relatively constant through 2030.

The projected water supply and demand through 2030 for Placerville is shown below in *Table 2.2*:

Table 2.2
City of Placerville Projected Water Supply and Demand
(AF/Yr, normal demand conditions)

	2005	2010	2015	2020	2025
Supply:					
EID – Surface Water	1,666	2,123	2,400	2,400	2,400
Total Supply	1,666	2,123	2,400	2,400	2,400
Demand	1,666	2,123	2,400	2,400	2,400
Difference	0	0	0	0	0

Source: Placerville 2005 Urban Water Management Plan

¹ Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

Per the City of Placerville's adopted 2005 *Urban Water Management Plan*, the City should have adequate water supply to meet normal, single and multiple dry years based on available supplies from EID. The City uses EID's water shortage contingency plan and contracts with EID for water conservation services per the terms of its 1999 agreement for water supply. Conservation efforts include implementation of applicable demand management measures prescribed in the California Urban Water Conservation Council *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU). EID is signatory to the MOU, although the City is not.

2.3.2 Water System Infrastructure

Placerville's water system infrastructure includes a distribution system with pumps, pipelines, and one 40,000 gallon storage tank. *Table 2.3* summarizes the existing water system facilities:

Table 2.3
City of Placerville Water System Overview

	Quantity
Water Mains / Pump Stations	37 miles / 3 pump stations
Storage Capacity	40,000 gallons for Sierra Service Zone
Average Age of Distribution System	41.9 years
Treatment / Capacity	EID Facilities: Reservoir A Water Treatment Plant – 64 MGD Forebay Water Treatment Plant – 26 MGD
Average Day Demand / Maximum Day Demand	1,118 GPM / 2,090 GPM

EID conveys treated water to fourteen connections on the periphery of the Placerville water service area. In 2003 EID completed improvements to its potable water storage reservoirs and is in compliance with State Department of Public Health standards; therefore the City is no longer providing treatment and is in the process of decommissioning its Water Treatment Plant and related facilities.

In 2005 Placerville completed its *Water Master Plan* that includes a hydraulic analysis of the City's system to determine existing and future deficiencies based on projected growth and related water demand. There are nine separate service zones within the City's water system, with the Main Plant zone in the central portion of the city covering a majority of the service area. The boundaries of the City's water service area are not expected to change, and EID will serve any new connections that are outside the current service area. The *Water Master Plan* used fire

flows as requested by the El Dorado County Fire District, ranging from 1,000 gallons per minute (GPM) for two hours in residential areas to 4,250 GPM for four hours in certain commercial areas.

The *Water Master Plan* assumes that the City will not need to provide its own storage facilities as the storage capacity needs are incorporated into EID's planning. This assumption is based on a review of EID's *Storage Evaluation for Potable Water System – EID Project No. 01003E* (revised June 2002) which indicates that EID's current and future planning assumes that potable water storage will be provided for all customers, including the City, as the projections are shown for build out conditions. Per the *Water Master Plan*, "The storage capacities assumed by EID do not include City storage facilities (EID does not expect that the City will continue to have its own storage facilities)." Therefore, adequate storage capacity is not a concern; in fact, the *Water Master Plan* recommends that the City bypass the one existing tank in the Sierra Service Zone to improve pressure and fire flow in that area.

The unaccounted-for water system losses average ten percent of total water production per year. These losses include unmetered water use for fire protection and training, system and street flushing, sewer cleaning, and construction, as well as system leaks, meter inaccuracies and use by unauthorized connections.

The *Water Master Plan* identifies several maintenance and capital improvements that will minimize pressure loss, improve fire flow, and correct system deficiencies. The estimated cost in 2005 dollars is \$1.6 million. Recommendations for the near term include the following:

- Implement a systematic program to replace old pipelines and appurtenances
- Increase supplemental flow into the Main Service Zone for adequate fire flow
- Provide supplemental flow into the Sierra Service Zone for adequate fire flow
- Reconfigure the hydro-pneumatic system in the Sierra Service Zone for fire flow
- Provide supplemental flow into the Cedar Ravine Service Zone for adequate fire flow
- Installation of several new or upsized pipelines
- Installation of two additional hydrants, meter upsizing, and two new hydro-pneumatic pump stations to meet fire flow requirements in certain areas

The *Water Master Plan* notes that if the near term recommendations are addressed, additional improvements related to pipelines and valves for the projected 2009 and 2015 system demands will only be needed to accommodate proposed development.

The following is a summary of open projects for the Water Enterprise Fund:

**Open Capital Projects for Water Enterprise
Fund**

Project No.	Project	Budget
40315	Highway 50 Operations Project-Water Line Relocation	\$999,950
40703	Geographical Information System (Water Portion Only)	\$ 25,000
40709	City Facility Backflow Prevention Device Installation Program	\$ 25,300
40721	Online Utility Payment Software Upgrade (Water Portion Only)	\$ 12,892
40724	Alum Pond Restoration Project	\$ 27,425
40725	Urban Water Management Plan	\$ 25,000

The following is a summary of recently completed Water Enterprise Fund projects:

**Recently Completed Capital Projects for
Water Enterprise Fund**

Project No.	Project	Cost
40404	City Water Service Charge Analysis	\$ 28,098
40514	Financial Software Upgrade (Water Portion Only)	\$ 25,800
40602	Upper Main Street Rehabilitation Project (Water Portion Only)	\$ 97,874
49710	Water System Study	\$255,443

2.3.3 Wastewater System Infrastructure

Placerville provides wastewater services within the Hangtown Creek watershed, and therefore its wastewater service area includes lands outside city boundaries. The City's wastewater infrastructure system consists of wastewater collection pipelines, trunk line, a treatment plant, and discharge facilities. *Table 2.4* summarizes the City's existing wastewater system facilities:

Table 2.4
City of Placerville
Wastewater System Overview

	Quantity
Sewer Mains	54 miles
Lift Stations	3
Average Age of Collection System	41.9 years
Average Dry Weather Flow:	1.0 MGD
Average Wet Weather/Storm Flow:	1.7 MGD
Treatment / Capacity: Avg Dry Weather / Avg. Wet Weather	Hangtown Creek Water Reclamation Facility – 2.3 mgd / 7.5 mgd (with completed improvements)

The City's wastewater collection system is primarily designed for gravity flow; however, there are three lift stations and small amount of force mains in the system. In August 2006 the City completed its *Sewer System Master Plan – Phase I Summary Report*. This report is the first phase of an overall Wastewater Collection System Master Plan. The report analyzes the existing system and focuses on key locations in the collection system that will be impacted by proposed developments. The study used three land use scenarios: existing service area with current land use, existing service area at buildout (2030), and a service area that includes the City's SOI at buildout. The current flows are estimated at 1.0 million gallons per day (MGD); this is expected to reach 1.6 MGD at buildout.

The report notes the following deficiencies:

- Under current conditions, there are two segments of the trunk sewer system where flows would exceed capacity during a 20-year storm event.
- Under buildout conditions for the existing service area, there are nine locations where the wastewater will surcharge, with the potential for sanitary sewer overflows (SSO) to occur in several locations. To prevent SSOs, approximately 2,500 feet of trunk sewer will need to be upsized or wet weather/storm related inflow and infiltration will need to be reduced.
- With an expanded service area and buildout conditions, there will be extensive surcharging and SSOs would occur. Up to 16,000 feet of trunk sewer would need to be upsized, rehabilitated or replaced and infiltration and inflow reduced.
- The trunk sewer system between the water reclamation facility and Canal Street is significantly constricted for conveyance.

Infiltration and inflow from wet weather and storm related events significantly impact the capacity of the collection system as well as the Water Reclamation Facility. Wet weather

infiltration is expected to increase from the current 0.7 MGD to over 1.5 MGD at buildout due to expansion of the collection system. Storm related infiltration and inflow is expected to increase from the current 8.0 MGD for a 20-year storm to 11.25 MGD at buildout. The *Sewer System Master Plan – Phase I Summary Report* recommends that area drains and catch basins be tested to determine where they are connected to the sewer system to identify those that are contributing significant storm flow to the system.

Placerville is within the jurisdictional boundaries of the Central Valley Regional Water Quality Control Board (RWQCB) – Region 5. In 2006, the State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WQO No. 2006-003-DWQ) and Placerville (as part of the Central Valley Region) must begin reporting all sewer system overflows to the California Integrated Water Quality System (CIWQS) by September 2, 2007. Currently the database does not show any reported SSOs for Placerville.

In addition, the Order requires that the City prepare a Sewer System Management Plan (SSMP) with completion by August 2009. The SSMP provides a plan and schedule to manage, operate, and maintain all parts of the sanitary sewer system to reduce and prevent SSOs and mitigate any SSOs that do occur. The *Sewer System Master Plan – Phase I Summary Report* is part of that effort.

Wastewater is currently treated at the City's Hangtown Creek Water Reclamation Facility located on Coolwater Creek Road. Treated wastewater is discharged into Hangtown Creek per the City's National Pollutant Discharge Elimination System (NPDES) Permit (Order No. R5-2001-0045-AO1). Hangtown Creek is a tributary to Weber Creek and the South Fork of the American River.

In 1999 the wastewater treatment plant was determined to be out of compliance with the discharge requirements under the City's NPDES permit. Consequently, the Regional Water Quality Control Board issued a Cease and Desist order with the requirement that the City upgrade the treatment plant to bring it into compliance with the discharge requirements. Construction on the upgrades is underway, and project completion is estimated for mid-2009. The overall cost of the project is estimated at \$47.1 million; the City has secured a low interest State Revolving Fund loan for \$35.76 million and also received a \$2 million Small Community Water Quality grant. In February 2006 the City Council authorized a \$17.22 million bond issue to finance the balance and to pay for relocating a sewer line away from Hangtown Creek as well as upgrading aging sewer lines.

Upon completion of the improvements the Hangtown Creek Water Reclamation Facility will have a dry weather capacity of 2.3 mgd; this will be adequate to meet estimated wastewater

flows of 1.6 MGD under buildout conditions. Wastewater will be treated to a tertiary level and disinfected prior to discharge into the creek. High flows during wet weather will be handled through the use of the flow equalization basin. The plant will be in full compliance with current discharge requirements, and the effluent will meet full Title 22 standards for reclaimed water.

The following is a summary of open projects for the Sewer Enterprise Fund:

**Open Capital Projects for Sewer Enterprise
Fund**

Project No.	Project	Budget
40316	Highway 50 Operations Project-Sewer Line Relocation	\$ 4,417,850
40323	Water Reclamation Facility Upgrade	\$47,100,717
40330	Sewer Lift Station Rehabilitation, Phase II	\$ 75,000
40405	Collection System I & I Reduction	\$ 42,308
40406	Tunnel Street Sewer Lining	\$ 125,350
40410	Wastewater Collection System Rehabilitation Strategic Master Plan	\$ 65,000
40508	Wastewater Lift Station Rehabilitation Project, Phase III	\$ 150,000
40614	Sewer Line Master Plan	\$ 100,000
40710	Sanitary Sewer Master Plan	\$ 200,000
40721	Online Utility Payment Software Upgrade (Sewer Portion Only)	\$ 12,892

The following is a summary of recently completed Sewer Enterprise Fund projects:

**Recently Completed Capital Projects for
Sewer Enterprise Fund**

Project No.	Project	Cost
40422	Bennett Drive Sewer Line Repair	\$ 162,174
40514	Financial Software Conversion	\$ 25,800
40602	Upper Main Street Rehabilitation (Sewer Portion Only)	\$ 380,559

2.3.4 Summary

Placerville purchases treated water from EID to serve its customers within the City's water service area. Per the adopted *2005 Urban Water Management Plans* for both Placerville and

EID, water supplies will be adequate to meet projected demands through 2030 under normal conditions as well as single and multiple dry year conditions. However, some water shortages may occur during multiple dry years; EID and Placerville would implement the Water Shortage Contingency Plan to reduce water use.

Placerville has aging water and wastewater infrastructure. Both systems have rehabilitation needs and will need improvements to serve future growth. On October 5, 2005, the City Council adopted a wastewater rate study performed by Economic Planning Systems (EPS) which included an eight-year waste water revenue program that became effective October 16, 2005. The multi-year revenue program addresses both the projected and operating and capital replacement needs from January 2006 to June 30, 2013. The City is in the process of evaluating the present and future operating and capital replacement needs and is updating the City's strategic plan for the wastewater system, including the Water Reclamation Facility and the sewer collection system. The City is also analyzing the Sewer Enterprise Fund's revenue generating capacity and fund balance in preparation for revising the Sewer Facility Capacity Charge.

On August 8, 2006, the City Council adopted new water rates that addressed both projected operating costs and some capital replacement needs for the City's water system in Fiscal Year 2006/2007. The City is in the process of analyzing the current and future operating and capital replacement needs and developing a multi-year water revenue program to address those needs.

With increased funding, the City plans to complete the condition assessment phase for both the Water and Sewer System Master Plans.

2.4 Financing Constraints and Opportunities

The City of Placerville accounts for its water and wastewater utilities through enterprise funds, with services funded through service charges. The water enterprise funds include a Water Lines Fund and Water Acquisition and Delivery Fund. For FY 2005/06, total water operating revenues for the City were \$0.958 million and total water operating expenses were \$1.23 million, including \$0.20 million in depreciation which is a non-cash expense. For the same period wastewater operating revenues were \$2.74 million and operating expenses were \$3.02 million including \$0.50 million in depreciation. *Tables 2.5 and 2.6* summarize the financial history of the water and wastewater enterprise funds.

Table 2.5
City of Placerville
Water Utility Enterprise Funds Consolidated Statement of Revenues, Expenses and Changes in Net Assets

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Projected	FY 2007-2008 Budgeted
Operating Revenues	\$978,410	\$963,022	\$1,510,690	\$1,659,720
Operating Expenses	\$996,274	\$1,023,075	\$1,508,841	\$1,204,212
Depreciation	\$935,444	\$195,931	0	
Net Non-operating Revenues / (Expenses)	\$59,795	(\$11,237)	\$72,269	\$13,300
Transfers In (Out)	(\$75,351)	0	(\$74,118)	
Change in Net Assets	(\$968,864)	(\$267,221)	0	
Beginning Balance	\$5,242,432	\$4,273,568	\$4,006,347	
Net Assets, End of Year	\$4,273,568	\$4,006,347		

The Water Utility Enterprise Fund had an unrestricted net asset balance of (\$770,919) at June 30, 2006.

Table 2.6
City of Placerville
Sewer Enterprise Fund Consolidated Statement of Revenues, Expenses and Changes in Net Assets

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Budget	FY 2007-2008 Budgeted
Operating Revenues	\$1,972,160	\$1,907,517	\$3,800,717	not provided
Operating Expenses	\$2,032,308	\$2,251,462	\$2,813,529	
Depreciation	\$1,389,362	\$494,825		
Net Non-operating Revenues / (Expenses)	(\$224,162)	\$558,389	(\$731,346)	
Transfers In (Out)	(\$75,351)	0	(\$44,542)	
Change in Net Assets	(\$1,749,023)	(\$280,381)	0	
Beginning Balance	\$9,871,304	\$8,122,281	\$7,841,900	
Net Assets, End of Year	\$8,122,281	\$7,841,900		

The Sewer Enterprise Fund had \$7,589,234 in unrestricted net assets at June 30, 2006.

The City has several financing obligations related to its water and wastewater utilities. In 1998, the City received a State Revolving Fund loan; it matures in 2019 and has an interest rate of 2.6 percent. The outstanding balance was \$2,395,036 at June 30, 2006 with annual payments of approximately \$219,482.

In March 2006 the City issued \$17.22 million in Sewer Revenue bonds to fund improvements at the water reclamation facility, relocate a sewer line away from Hangtown Creek, and fund improvements to aging sewer lines. The new Revenue Bonds enabled the City to refund the earlier 1994 Sewer Revenue Bonds that had interest rates ranging from 4 to 7.5 percent. The 2006 Revenue Bonds are triple-A rated. They bear an interest rate of 4 to 5 percent and will mature in 2034. The average annual debt service over the next five years is \$830,658.

As noted above in *Section 2.3*, the City secured a State Revolving Fund loan in the amount of \$35.76 million to fund a majority of the \$47.1 million capital improvements to the Hangtown Creek Water Reclamation Facility. This loan bears an interest rate of one percent and matures in approximately 2029. This type of loan requires that the City maintain adequate wastewater utility revenues to assure repayment of the loan, generate enough revenue to pay for maintenance and operations of the facility, and provide reserves for future improvements.

The City has faced financial constraints with respect to its water and wastewater utilities in the past. Due to inadequate service revenues, the City was unable to provide for adequate infrastructure needs and improvements in the recent past. This situation is being corrected with the multi-year wastewater revenue program adopted in 2005, the water revenue program adopted in 2006, and a potential facility capacity charge increase for new sewer connections (to be discussed in further detail in *Section 2.6* below). The wastewater revenue program was based on a rate study prepared for the City by EPS. The water revenue program was based on a study performed by City staff and its consultants. It is expected that service rates will provide adequate revenue for operations and allow the City to begin to address capital improvement needs. With the completion of the master plans for each utility, the City is able to identify system deficiencies and needs for future growth. This provides a method to prioritize projects accordingly, so that the City can begin implementing projects as funding becomes available.

2.5 Cost Avoidance Opportunities

Placerville is controlling costs for its water utility by utilizing the treatment capacity of EID. The City was able to avoid the cost of upgrading its Water Treatment Plant along with avoiding the staff and process costs associated with the treatment process.

The City contracts with EID for a water conservation program and avoids the cost of developing and implementing a separate program.

For the wastewater utility, the City has specified ultra high efficiency electrical motors and other equipment in the Water Reclamation Facility upgrades to minimize future electrical costs of plant operation. In addition, the City is prioritizing capital improvement projects based on the

recommendations in the *Sewer System Master Plan*; reductions in infiltration and inflow may significantly reduce the extent of areas where pipeline capacity improvements are needed.

2.6 Opportunities for Rate and Fee Restructuring

The City of Placerville revised its rate structure for water in 2006 and wastewater services in 2005. The City had not increased water rates since 1994 or wastewater rates since 1997.

2.6.1 Water Rates and Fees

The new water rate schedule became effective in August 2006. The rates now include a base charge plus a three-tiered consumption charge. The previous rate structure had no base charge and decreasing rates for higher usage. Residential and non-residential accounts pay the same rates but have different tiers; the most expensive tier applies when usage exceeds 20,000 gallons for single family residential accounts and 50,000 gallons for commercial and multi-family accounts.

In March 2006 the City increased its Water Capital Improvement Charge (CIC) that it charges to new customers when a new meter is connected to the system. Per the 1999 agreement with EID, the City is required to incorporate into its CIC a component that is passed through to EID to cover EID's Facility Capacity Charge (FCC) that is attributable to development that occurs within the Placerville service area. EID has increased the FCC rate twice, and the City had increased its CIC accordingly, but had not allowed for an increase in the component that stays with the City to fund water system improvements and capital replacements. EID's FCC is based on service zone and meter size. In 2006 the City Council approved a rate change that increased the CIC from \$5,217 to \$8,088 for a 5/8 to 3/4 inch meter. Furthermore, the new rate structure is now based on meter size, in accordance with EID's rate schedule, and the City-retained component of the CIC will be increased on an annual basis by an amount consistent with the increase in the Caltrans Construction Cost Index. The current rate for a 5/8 inch meter is now \$8,088, of which \$6,360 is forwarded to EID and \$1,728 is directed to the City's water enterprise fund for capital improvements.

2.6.2 Sewer Rates and Fees

The wastewater rate schedule was adjusted effective January 2006. Per the terms of the new Revenue Bond issued discussed in *Section 2.4*, wastewater revenues must be at least equal to 120 percent of debt service. The wastewater rates are now based on actual usage, as opposed to the previous flat rates. Usage is based on the previous year's winter water consumption for the billing period from mid-December to mid-February. Non-residential wastewater bills are

calculated based on actual water consumption for each billing period and factor in wastewater loading. The highest rates are paid by restaurants and fast food services.

The City is currently evaluating its sewer connection fee schedule. The current fee, established in 1989, is \$1,000 per connection plus a \$3,800 capital improvement charge.

2.6.3 Current Service Rates

Placerville's current residential water and wastewater rates are shown in *Table 2.7* below:

Table 2.7
City of Placerville
2007 Single Family Residential Water and Sewer Rates
(Bi-monthly)

Type	All Accounts
Water Charge	
Base Charge (all meter sizes)	\$18.57
Water Consumption Fee	To 2,500 cf - \$1.98 per ccf 2,501 to 20,000 cf - \$2.37 per ccf Over 20,000 - \$2.57 per ccf
Wastewater Charge (effective 06/16/2007)	
Base Charge – first 1,000 cf	\$70.04
Per 100 cf over 1,000 cf	\$2.52

Residential waste water charges are calculated using the previous winter water consumption for the period of December 16th to February 15th. Water charges are calculated using the water consumption for the current two-month billing period. On average, residential customers use 28.21 ccf (hundred cubic feet) of water each bi-monthly billing period. Residential customers use an average of 14.15 ccf of water during the period of December 16th to February 15th. With the rate structure above, a single family residence using 28.21 ccf of water would pay \$75.68 bi-monthly for water service. A single family residence with a winter water consumption of 14.15 ccf would pay \$80.50 bi-monthly for wastewater service.

2.7 Opportunities for Shared Facilities

The City of Placerville shares facilities through use of EID's water supply, treatment and storage system; regional water resource planning; and water conservation programs. This has allowed the City to decommission its Water Treatment Plant, avoid storage facility costs, and deliver a more comprehensive conservation program to its water utility customers.

2.8 Evaluation of Management Efficiencies

The City's water and wastewater utilities are managed within the Public Works Department. The City uses a number of plans to ensure that services are delivered in an efficient, cost-effective manner, including master plans, Sewer System Management Plan (under development), and the annual budget and CIP. The City has emergency response plans for both the water and sewer systems.

The City's Public Works Maintenance Division is currently organized such that all personnel are responsible for the sewer collection system, water distribution system, storm drain system, and city streets. In 2007 the Public Works Department plans to reorganize the Maintenance Division such that a separate unit will be established with primary responsibility for the sewer collection system and water distribution system and another unit will have primary responsibility for the storm drain and street systems. By narrowing the focus of responsibilities, the City intends to have a proactive program for system operation and maintenance.

2.9 Government Structure Options

The City is providing adequate water distribution and wastewater collection, treatment and discharge services. Two government structure options were identified for the City of Placerville:

- Maintain the status quo
- Transfer retail water service from the City to EID

Maintain the Status Quo: The City is currently providing adequate water delivery and wastewater services for its residents and businesses within the respective water service and wastewater service boundaries. Although they have had financial constraints that have limited funding for capital projects, the City is not experiencing infrastructure or financial challenges that would require another agency to take over service to the city. The advantages of this option are continuity of service and economies associated with maintenance staff and programs as well as internal coordination with other city projects for pipelines, street and sidewalk repairs, etc.

Transfer retail water service from the City to EID: The City distributes EID's treated water to customers within the City's water service area. EID provides retail service within the surrounding area. The City's water infrastructure needs and capital improvements are identified in the 2005 *Water Master Plan*. Should Placerville's retail water service transfer to EID, EID would be responsible for maintaining and improving the local distribution system. The advantages of this option are potential economies of scale and improved efficiency due to EID's primary focus on water service. However disadvantages such as loss of local control over the water distribution system and political opposition within the city could outweigh the benefits.

City maintenance staff currently oversees water, wastewater, storm drains, and roads. Removing water service may result in reduction of some staff costs; however, eliminating water could also have the opposite effect: increase net costs for the City through a subsequent decrease in available revenue streams to support staff. Further study would be needed to determine the merits of this option and benefit/costs which would affect ratepayers for both the City of Placerville and EID.

2.10 Local Accountability and Governance

The City of Placerville incorporated in 1854 under the general laws of the State of California. It operates under the oversight and guidance of the five-member City Council. Council members are elected at large; the Mayor and Vice-Mayor are selected from among the Council Members and serve a one-year term.

The City's water and wastewater services are addressed by the City Council, which meets the second and fourth Tuesday of each month at 7:00 PM at Council Chambers located at Town Hall, 549 Main Street, Placerville. Meetings are open and accessible to the public. Meeting notices, agendas, and supporting documentation are posted at least 72 hours in advance at City Hall. A copy is also available on the City's website (www.cityofplacerville.org). The City's website includes information about the water and wastewater utilities.

The current City Council is shown in *Table 2.8*.

Table 2.8
Placerville City Council

Member	Title	Term Expires
Mark Acuna	Mayor	November 2008
Carl Hagen	Vice Mayor	November 2010
Pierre Rivas	Councilmember	November 2010
Roberta Colvin	Councilmember	November 2008
Patty Borelli	Councilmember	November 2010

2.11 Sphere of Influence Recommendations

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review and update the sphere of influence (SOI) for each of the special districts and cities within the county.² The SOI is defined by statute as a “plan for the probable physical

² State of California Government Code Section 56425 et seq.

boundary and service area of a local government agency as determined by the commission” (Government Code §56076).

The City of Placerville’s sphere of influence includes 3.98 square miles surrounding the city. The City’s water service area does not include the entire city, but does include some parcels outside city boundaries. The City’s wastewater service area encompasses a larger area that also includes parcels outside city boundaries. LAFCO will consider Placerville’s SOI based on the full range of services that the City provides. For water and wastewater service, the boundaries of the respective service areas should remain the same. The City does not intend to change its water service area; any new connections outside the service area would be served by EID. For wastewater, the City is using its current SOI for planning purposes.

2.12 Determinations

2.12.1 Growth and Population

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

The City of Placerville has an official US Census year 2000 population of 9,610 residents; this is projected to reach 13,918 by 2015 and then remain stable through 2030. This would yield an average annual growth rate of 4.5 percent through 2015. However, growth may occur at a slower pace and over a longer period due to other factors such as economic conditions.

2.12.2 Infrastructure Needs or Deficiencies

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

Placerville provides retail water service within its water service area. It obtains its treated water supply from EID. Per the adopted 2005 *Urban Water Management Plans* for Placerville and EID, water supplies are adequate to meet expected demand through 2030 in normal years, single dry years, and multiple dry years. However, some water shortages may occur during multiple dry years; EID and Placerville would implement the Water Shortage Contingency Plan to reduce water use.

The City’s water system infrastructure includes a distribution system with pump stations and water lines. The system has some deficiencies for fire flow and pressure, and capacity is impacted by significant inflow and infiltration. The City is evaluating and prioritizing system needs and deficiencies with respect to available funding, benefit, and regulatory compliance.

The City’s wastewater system infrastructure includes a collection system, trunk line, and water reclamation facility. The Hangtown Creek Water Reclamation Facility is currently being

upgraded; when improvements are complete the facility will have a capacity of 2.30 mgd. The City currently has average dry weather flows of 1.0 MGD. Infiltration and inflow from wet weather and storm events significantly impacts the capacity of the system. The City is evaluating and prioritizing system needs and deficiencies with respect to available funding, benefit, and regulatory compliance.

2.12.3 Financing Constraints and Opportunities

Purpose: To evaluate a jurisdiction's capacity to finance needed improvements and services.

The City funds water and wastewater services, including capital improvements, through service charges and connection fees and long-term debt. The City increased water service rates in 2006 and wastewater service rates in 2005, water connection fees in 2006, and is evaluating an increase in wastewater connection fees. The City has financing constraints with respect to its utilities due to revenues that historically did not meet operational expenses or provide adequate funding for capital needs. Placerville has recently taken on significant debt to pay for state-mandated improvements to the wastewater system, including a \$35.76 million low interest state loan and \$17.22 million in Sewer Revenue Bonds.

2.12.4 Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

The City utilizes cost avoidance measures to control costs for its water and wastewater utilities such as using EID's water supply, storage, and treatment facilities to avoid the cost of operating storage and treatment facilities within the city.

2.12.5 Opportunities for Rate and Fee Restructuring

Purpose: To identify opportunities to impact rates positively without decreasing service levels.

The City uses a tiered rate structure for water service, and the sewer service charge is based on water usage. The City should adjust its connection fees for sewer service based on the capital needs identified in the 2005 *Sewer System Master Plan – Phase I Summary Report*, the capital costs to upgrade the wastewater treatment plant, and other applicable studies.

2.12.6 Opportunities for Shared Facilities

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

The City shares facilities with EID for water supply, storage and treatment as well as conservation programs.

2.12.7 Evaluation of Management Efficiencies

Purpose: To evaluate management efficiencies of the jurisdiction.

The City's water and wastewater utilities are managed under the Public Works Department. Maintenance staff are responsible for the water and wastewater systems, storm drain systems, and roads.

2.12.8 Government Structure Options

Purpose: To consider the advantages and disadvantages of various government structures to provide public services.

The City is providing adequate water and wastewater collection services to the residents and businesses within the respective water and wastewater service areas. The City is not experiencing infrastructure or financial challenges to a degree that would require another agency to take over service to the City. Two government structure options were identified for the City of Placerville:

Maintain the Status Quo: The advantages of this option are continuity of service and economies associated with internal coordination with other city projects for water and sewer pipelines, street and sidewalk repairs, etc.

Transfer water service to EID: The City provides retail water service within its 3.4 square mile water service area. EID provides water supply, treatment, storage and conveyance for the City as well as retail water service in adjacent areas. The advantages of this option are potential economies of scale and other efficiencies that might be available due to the focus of EID. Disadvantages include a potential increase in costs, loss of local control for the services and infrastructure management within the city, and political opposition. Further study would be needed to determine the merits of this option and benefit/costs which would affect ratepayers for both the City of Placerville and EID.

2.12.9 Local Accountability and Governance

Purpose: To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management process.

Water and wastewater services provided by the City are addressed by the Placerville City Council. The City Council meetings are open and accessible to the public. Information on the City's water and wastewater services is available on the City's website.

SECTION 3.0

EL DORADO IRRIGATION DISTRICT

WATER, WASTEWATER, AND POWER SERVICES

3.1 Overview

The El Dorado Irrigation District (EID) serves an area of approximately 220 square miles on the western slope of El Dorado County. Formed in 1925, the District serves a population of approximately 92,400 people (as of 2005) in an area that includes the high growth community of El Dorado Hills and the Highway 50 corridor. EID wholesales treated water to the City of Placerville. The District's Sphere of Influence (SOI) encompasses an additional 376 square miles, with the majority located to the northwest and south of the District's current boundaries.

EID provides domestic and agricultural water service throughout its contiguous service area, and treated water to the remote communities of Outingdale and Strawberry. The District's main sources of water supply include the District-owned and operated Jenkinson Lake and Sly Park Dam, Hydroelectric Project 184 at Forebay Reservoir, and Folsom Lake through US Bureau of Reclamation (USBR) service contracts and a State water right Permit No. 21112. EID has five water treatment plants and 36 storage reservoirs.

In addition to water service, EID also provides wastewater collection, conveyance, treatment and disposal services within three wastewater service areas: El Dorado Hills, Deer Creek, and Motherlode. The Deer Creek and El Dorado Hills Wastewater Treatment Plants produce recycled water that meets Title 22 standards and is used at golf courses and for landscape irrigation, as well as single family residential irrigation in communities where recycled water is available.

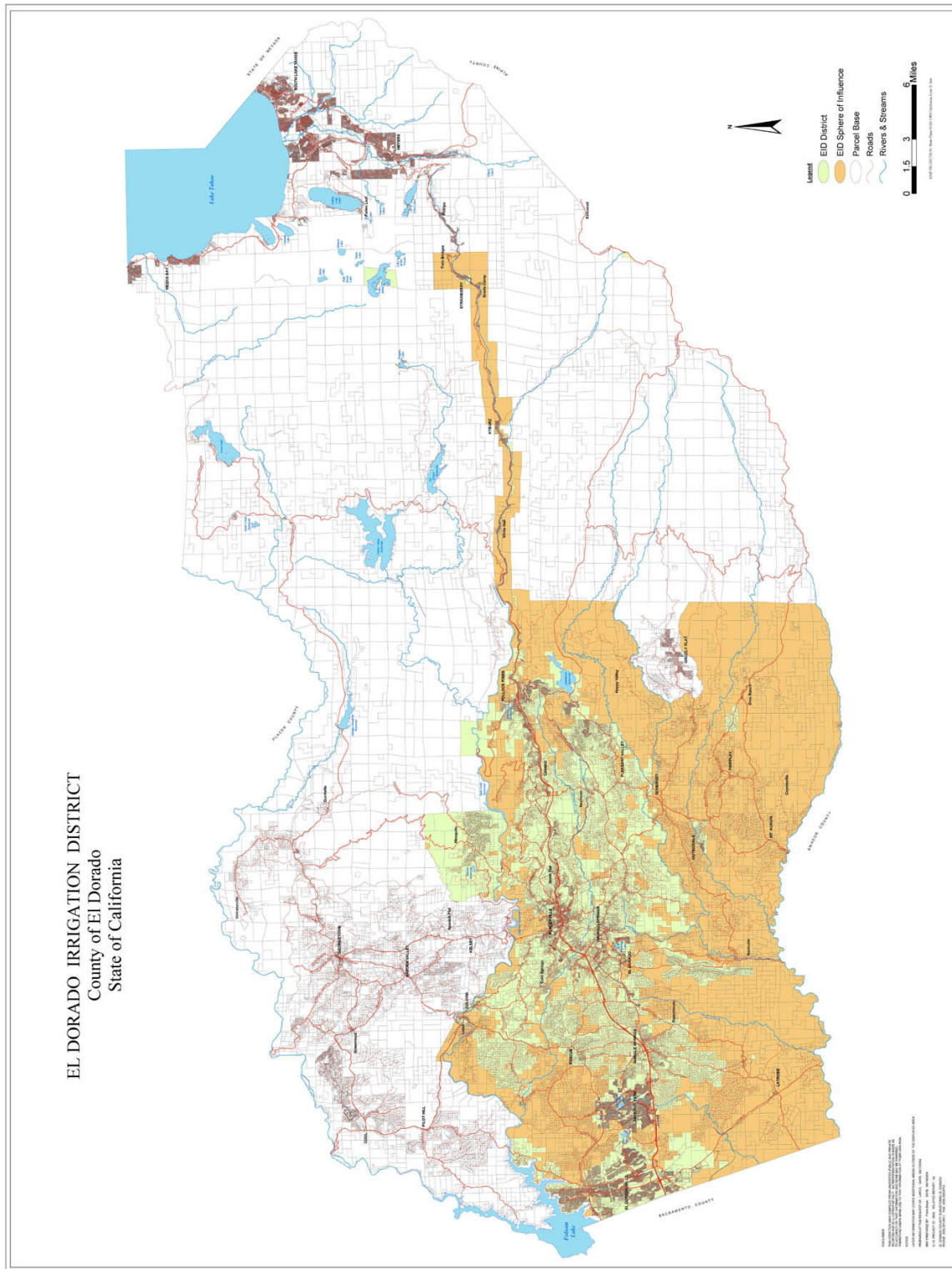
EID's hydroelectric Project 184 was issued a 40-year license by the Federal Energy Regulatory Commission (FERC) on October 18, 2006. The plant is certified as eligible for California's Renewable Portfolio Standard, and the power produced through the 21-megawatt project can be marketed as "renewable."

EID's profile for water and wastewater service is shown in *Table 3.1* and a map of the District's boundary and current SOI within El Dorado County is shown in *Figure 3.1*.

3.0 El Dorado Irrigation District Water, Wastewater, and Power Services

Table 3.1
El Dorado Irrigation District
Water and Wastewater Service Information

Service Area / Financial Summary	
District Office:	2890 Mosquito Road Placerville, CA 95667 (530) 622-4513 www.eid.org
Service Area:	220 square miles
Population:	92,400 (Year 2005) / 142,560 (Year 2030) Average Annual Growth Rate = 2.2%
Operating Budget (2007):	Projected revenues / expenditures: \$44,823,500 / \$45,619,000
Net Assets 12/31/2006:	\$396,794,535
Water Service Data	
Services	Water Storage, Treatment, Distribution
Water Supply	Sly Park Reservoir, Folsom Lake, Forebay-Project 184 Total Supply – 70,200 AF/Yr / System Firm Yield – 60,550 AF/Yr
Number of Service Connections	37,677
Miles of Water Main / Number of Pump Stations	1,289 miles / 38 pump stations
Average Age of Distribution System	20 years
Treatment / Capacity	3 main treatment plants – 109.5 MGD
Average Day Demand / Maximum Day Demand	37.5 MGD / 84 MGD
Storage Capacity	36 tanks / 72.2 mg
Wastewater Service Data	
Services	Wastewater collection, treatment, disposal, recycled water
Number of Service Connections	19,918
Lift Stations / Sewer Line	63 lift stations / 390 miles sewer line
Age of Collection System	Approximately 20 years; varies
Treatment / Capacity	5 treatment facilities – 6.6 MGD dry weather flow
RWQCB Region	Region 5 – Central Valley
Orders	El Dorado Hills WWTP Deer Creek WWTP Master Reclamation Permit Camino Heights WWTF Camino Heights WWTF Rancho Ponderosa Rancho Ponderosa Order No. R5-2001-0135 – Waste Discharge Rqmts Order No. R5-2002-0210 – Waste Discharge Rqmts Order No. R5-2001-0146 – Waste Discharge Rqmts Order No. R5-2001-100 – Waste Discharge Rqmts Order No. R5-2007-0711 – Cleanup and Abatement Order No. R5-1986-236 – Waste Discharge Rqmts Order No. R5-2006-0712 – Cleanup and Abatement Order No. 2006-0003 – Statewide General Waste Discharge Rqmts for Sanitary Sewer Systems



Note: Map does not reflect portion of EID within Sacramento County

3.2 Growth and Population Projections

EID serves a large portion of the western slope of El Dorado County, particularly in areas that are developed or developing such as the City of Placerville and unincorporated communities along the Highway 50 corridor where significant growth is expected. This includes El Dorado Hills, Cameron Park, Shingle Springs, Diamond Springs, and El Dorado. The estimated population within EID's service area was 92,400 in 2005; this is projected to increase to 142,560 by 2030. This yields an average annual growth rate of 2.2 percent, although it should be noted that growth in the areas closer to Sacramento County will be higher than areas in the eastern portion of the District.

EID's service area includes a variety of land uses as shown on the El Dorado County General Plan Land Use Map (July 2004). A majority of the area is designated as residential, including rural, low, medium, and high densities. EID serves the commercial uses along Highway 50 and pockets of industrial uses. There is limited open space and the agricultural lands are generally concentrated on the periphery of the District's boundaries. EID serves several communities designated in the General Plan as Rural Centers; these communities are expected to have higher intensity development than other rural areas.

A vacant land survey was prepared from the El Dorado County Assessor's records in 2002. Within the EID service area the following areas indicate opportunity for significant residential development:

- Cameron Park: 1,199.2 acres / 85 parcels / 3,591 dwelling units
- Camino/Pollock Pines: 2,538.4 acres / 376 parcels / 1,324 dwelling units
- Diamond Springs/El Dorado: 1,201 acres / 154 parcels / 3,986 dwelling units
- El Dorado Hills: 1,019 acres / 100 parcels / 4,303 dwelling units
- Placerville (outside incorporated area): 750.1 acres / 83 parcels / 206 dwelling units
- Rescue: 54 acres / 12 parcels / 55 dwelling units
- Shingle Springs: 808.6 acres / 98 parcels / 1,284 dwelling units
- Strawberry: 9.8 acres / 25 parcels / 71 dwelling units

Based on the maximum capacity allowable per land use, development of these parcels would add an additional 14,820 dwelling units to the region.

As another indication of projected growth, the Sacramento Area Council of Governments (SACOG) has developed population projections through 2035 by Regional Analysis District (RAD) for the Regional Housing Needs Assessment. EID lies within the eight RADs: Pollock

Pines, Diamond Springs, East/West/South Placerville, Coloma-Lotus, Cameron Park-Shingle Springs, and El Dorado Hills. The population within these RADs is projected to reach 190,400 by 2035.

El Dorado County has observed a slowing trend in housing development; for EID single family building permits averaged 1,299 per year from 2000 to 2005 and decreased to 681 in 2006. However, long term projections indicate a continued growth trend for western El Dorado County, particularly within the El Dorado Hills area where nearly half the growth is anticipated. This growth will require services including public water and wastewater systems.

3.3 Infrastructure Needs or Deficiencies

EID provides water for domestic, commercial/industrial, agricultural, and irrigation use. The District's primary sources of water supply include Jenkinson Lake, Project 184 Forebay, Folsom Lake, and pre-1914 ditch water rights. The water system within EID's contiguous service area includes storage, conveyance, treatment and distribution facilities as well as a separate ditch system that serves some agricultural irrigation accounts. The satellite systems that serve Strawberry and Outingdale include water treatment, storage, and distribution facilities. EID currently has water supplies of 70,200 acre feet per year, with a firm yield of 60,550 acre feet and a safe yield of 58,753 acre feet.

EID also provides wastewater services within portions of its service area. The District operates two wastewater treatment plants and three satellite systems, along with the related collection and conveyance systems. The two main treatment plants serve the El Dorado Hills/Cameron Park areas and produce recycled water that meets Title 22 standards. The three local treatment facilities include a septic system that serves Gold Ridge Forest and facilities with primary treatment, ponds, and spray fields that serve Rancho Ponderosa and Camino Heights.

EID's Project 184 is a 21-megawatt hydroelectric plant on the South Fork of the American River. The Project includes four storage reservoirs, diversion dams, conveyance facilities, penstock, a powerhouse with two generators, and a switchyard. EID sells the power generated on the open market and does not provide any retail electric utility service.

3.3.1 Water Supply and Demand

Water Supply

EID holds various pre-1914 water rights and permits to surface waters within El Dorado County and Folsom Lake; this supply is supplemented by a service contract with the US Bureau of Reclamation (USBR) for water supplies from the Central Valley Project (CVP). EID's primary

source of water is Jenkinson Lake that has a maximum capacity of 41,033 acre feet and receives flow from Sly Park, Hazel, and Camp Creeks. In 2003 EID acquired the Jenkinson Lake/Sly Park Dam facility from USBR along with an annual water right of 33,400 acre feet (firm and safe yield). The average annual yield is 23,000 acre feet, with a firm yield of 20,920 acre feet and a safe yield of 18,000 acre feet. This water supply is not shared with any other agency.

For Project 184 Forebay, EID holds a pre-1914 water right that entitles the District to 15,080 acre feet per year (firm and safe yield) with delivery at the Forebay. The full entitlement is available each year and has proven reliable even in the most severe historic dry years.

EID's water supply from Folsom Lake serves the El Dorado Hills region. Water right Permit 21112 authorizes EID to divert 17,000 acre feet per year from Folsom Lake for consumptive use. This permit is not subject to mandatory reductions during dry periods. EID also has a service contract with USBR for 7,550 acre-feet per year of CVP water. Per the terms of the contract, this supply is subject to a maximum reduction of 25 percent in dry years. Nonetheless, the amount of water that can currently be directed (supplied and treated) to the region is limited to 11,500 acre feet per year (AF/Yr) because of infrastructure limitations in the El Dorado Hills Water Treatment Plant (EDHWTP) and the Gold Hill Intertie (see discussion below in *Section 3.3.2*).

EID holds pre-1914 ditch water rights for diversions from Weber Creek, Slab Creek, and Hangtown Creek, and has a licensed water right for Weber Reservoir. This source yields approximately 3,000 acre feet per year and is subject to reductions in dry years. EID takes the diversions for these water rights at Folsom Lake.

The water supply for Outingdale is diverted from the Middle Fork of the Cosumnes River under original water right Permit 4071. The permit allows for diversion of 0.26 cubic feet per second (cfs), not to exceed 104 AF/Yr. The estimated annual demand is currently 42 AF/Yr. The water supply for the Strawberry subdivision is provided from the South Fork of the American River. This is the sole source of water supply for this community; current demand is approximately 50 AF/Yr.

EID is pursuing opportunities to increase water supplies. In September 2006, the El Dorado County Water Agency (EDCWA) initiated the environmental review for a 40-year contract with USBR that would provide 15,000 acre feet of CVP water per year to EDCWA for municipal and industrial use; the water would be made available in the Folsom Reservoir. The water would be allocated equally to EID and the Georgetown Divide Public Utility District. EID would divert the water directly from the Folsom Reservoir. The 2005 Sacramento Municipal Utility District (SMUD)-El Dorado Agreement allows storage of 30,000 AF/Yr by 2025 and 40,000 AF/Yr thereafter, in SMUD Upper American River Project reservoirs under normal year conditions,

10,000 AF/Yr for GDPUD and 30,000 AF/Yr for EID, with an additional 15,000 acre feet available for carryover purposes. This source of supply is projected to be available in 2020.¹ Other means to increase water supply include improvements to the distribution system that would reduce water losses by 2,000 AF/Yr and increasing seasonal storage capacity for recycled water allowing for increased use of this resource in summer months and dry years.

EID uses a system firm yield method to determine that sufficient water supply exists (EID Administrative Regulation 5010.2). Under this methodology, the system firm yield is defined as sufficient water supply being available to meet normal water demands approximately 95 percent of the time. Water shortages may occur in the remaining 5 percent of the time and could result in implementation of voluntary or mandatory conservation measures. Per EID's *2007 Water Resources and Service Reliability Report*, the current system based firm yield is 60,550 acre feet. EDCWA's *Water Resources and Development Management Plan* (November 2007) identifies EID's firm yield at 63,560 acre feet with the inclusion of the District's recycled water deliveries and also identifies the safe yield as shown in *Table 3.2*:

Table 3.2
EID Water Supply Components (acre-feet per year)

Source	Firm Yield	Dry Year Deficiency	Safe Yield
Jenkinson Lake ¹	20,920	2,920	18,000
Folsom USBR ²	7,550	1,888	5,663
Project 184	15,080	0	15,080
Permit 21112	17,000	0	17,000
Recycled Water	3,010	0	3,010
Total Supply	63,560	4,808	58,753

¹Jenkinson Lake – Safe yield from 1993 EDC Water Resources Development and Management Plan (Borcalli)

²Folsom Lake – Dry year deficiencies are based on a maximum of 25% USBR cutbacks in a dry year for municipal and industrial contractors.

EID's western/eastern supply area has a supply based yield of 36,000 acre feet (Jenkinson Lake and Project 184 water). Although the El Dorado Hills supply area has a supply based yield of 24,550 acre feet, this service area is managed per the infrastructure based yield of 11,500 acre feet to account for the capacity limitations of the El Dorado Hills Water Treatment Plant (EDHWTP) and Gold Hill Intertie. By contrast, the EDCWA *Water Resources and Development Management Plan* uses a safe yield method which is more commonly used for long term water needs assessments, while firm yield is used for year to year operational management and meter availability. As shown in *Table 3.2*, the safe yield for EID's water supply (for the entire service area) is estimated at 58,753 acre-feet.

¹ El Dorado Irrigation District Urban Water Management Plan 2005 Update, Tables 4-8 and 4-10

Water Demand

In 2006, EID had 37,677 water service accounts of which 95 percent are residential, 4 percent are commercial/industrial, and one percent are agricultural. The number of service accounts is expected to increase by 70 percent by 2030, with the most notable increase in agricultural accounts (from 389 to 5,375)², reflecting an increase in acreage from 2,371 acres in 2000 to 7,791 acres in 2025. This is consistent with the growth trend for small agricultural operations and “recreational agriculture” observed in the western portion of the county. Agricultural water use comprised 15 percent of total water demand in 2006. By 2030 this is expected to reach 28 percent.

EID is required to implement a conservation program per the terms of its water right permits and service contract with USBR. EID is signatory to the California Urban Water Conservation Council’s Memorandum of Understanding Regarding Urban Water Conservation in California (MOU). The MOU includes 14 best management practices or demand management measures that range from system water audits, leak detection and repair, to conservation incentives and tiered rate structures. Although participation is voluntary, EID is implementing a comprehensive water conservation program that includes the use of new irrigation technologies and other devices.

To address agricultural water demand, EID offers an Irrigation Management Service (IMS) in collaboration with USBR and the federal Natural Resources Conservation Service. Data from soil moisture sensors is collected, and agricultural customers receive customized irrigation schedules based on the crop and soil moisture conditions. Ninety-five of the District’s 215 Agricultural Metered Irrigation customers are currently using IMS. These 95 customers account for 65 to 75 percent of total agricultural irrigated acres within the District’s service area.

Balancing Supply and Demand

The projected water supply and demand through 2030 for EID is shown below in *Table 3.3*. Firm yield is the annual quantity of water than can be made available in most years while imposing water deficiencies during hydrologic drought conditions. Safe yield is the maximum amount of water that can be made available in any year, including the driest year of record (1977 for the American River watershed).

^{2 2} El Dorado Irrigation District Urban Water Management Plan 2005 Update, Tables 3-2 and 3-3

3.0 El Dorado Irrigation District Water, Wastewater, and Power Services

Table 3.3
EID Projected Water Supply and Demand
(AF/Yr, normal demand conditions)
(Water Supply: F = Firm Yield, S= Safe Yield)

	2005	2010	2015	2020	2025	2030
Supply:						
Sly Park	F=20,920 S=18,000	F=20,920 S=18,000	F=20,920 S=18,000	F=20,920 S=18,000	F=20,920 S=18,000	F=20,920 S=18,000
USBR-Folsom Lake Contracts	F=7,550 S=5,663	F=7,550 S=5,663	F=7,550 S=5,663	F=7,550 S=5,663	F=7,550 S=5,663	F=7,550 S=5,663
Project 184 Forebay	F/S=15,080	F/S=15,080	F/S=15,080	F/S=15,080	F/S=15,080	F/S=15,080
Permit 21112 Folsom Lake	F/S=17,000	F/S=17,000	F/S=17,000	F/S=17,000	F/S=17,000	F/S=17,000
Ditch/Weber Reservoir Rights ¹	F/S=3,000	F/S=3,000	F/S=3,000	F/S=3,000	F/S=3,000	F/S=3,000
PL101-514 Folsom Lake	0	F=7,500 S=5,625	F=7,500 S=5,625	F=7,500 S=5,625	F=7,500 S=5,625	F=7,500 S=5,625
SMUD-El Dorado Agmt	0	0	0	S=20,000	S=20,000	S=20,000
Water Loss Reduction	0	2,000	2,000	2,000	2,000	2,000
Recycled Water ²	3,010	5,375	6,672	6,963	6,963	6,963
Total Firm Supply (Safe Yield Difference)	66,560 (4,807)	78,425 (6,682)	79,722 (6,682)	100,013 (6,682)	100,013 (6,682)	100,013 (6,682)
Demand³						
SF Residential	20,816	23,311	25,805	28,300	30,794	33,288
MF Residential	1,399	1,639	1,880	2,120	2,360	2,600
Commercial	3,862	4,882	5,903	6,923	7,944	8,965
Agriculture	9,677	12,783	15,888	18,994	22,100	25,206
Recreational Turf	1,720	1,720	1,720	1,720	1,720	1,720
Ditches	1,212	1,212	1,308	1,404	1,500	1,596
Unaccounted for Water/Beneficial Uses	7,409	7,409	8,260	9,112	9,963	10,814
Latent Demand	3,138	3,138	3,642	4,145	4,679	5,153
Total Demand	47,782	56,094	64,406	72,718	81,030	89,342
Difference – Firm Yield less Demand	18,778	22,331	15,316	27,295	18,983	10,671

Sources: EID 2005 Urban Water Management Plan, EDCWA 2007 Water Resources Development and Management Plan

¹Ditch/Weber Rights included as supply for 2005 per EID 2005 UWMP; not included as Safe Yield Supply in EDCWA Plan (see Table 3.2)

²Recycled water supply of 6,923 AF dependent on full development of seasonal storage

³Savings from future conservation activities are not factored into demand projections

Per the District's adopted *2005 Urban Water Management Plan*, EID will have adequate water supply to meet demands through 2030 under normal conditions as well as single and multiple dry year scenarios, contingent upon EID executing a new water contract for Folsom Lake water, acquiring new water rights for the SMUD UARP, and the construction of recycled water seasonal storage. The projections assume that the District is able to fully use its available water supply and infrastructure limitations in the El Dorado Hills region are not material. However, in

certain multiple dry year scenarios supply only exceeds demand by 4 percent and additional conservation measures would be needed (this assumes reduced water supply of 74,628 acre feet and reduced demand of 71,474 acre feet). EID has a four-stage water shortage contingency plan as well as an emergency response plan in the event of catastrophic supply interruptions. EID is also finalizing a drought preparedness plan in cooperation with the El Dorado County Water Agency.

EDCWA's *Water Resources and Development Management Plan* (November 2007) includes water demand projections for EID of 76,237 AF/Yr in 2025 and 101,155 AF/Yr at buildout³ based on land uses within the County's 2004 General Plan, growth allocations based on SACOG's Traffic Analysis Zones (TAZ), and agricultural demand projections based on slope and soils. When additional demand considerations are factored in, such as future service to currently unserved areas and the adopted General Plan Amendment that increases the floor area ratio for commercial/industrial and research and development land uses, the projected water demand increases to 83,082 AF/Yr (79,057 AF/Yr with conservation) in 2025 and 124,816 AF/Yr at buildout. The 2025 projection is very close to EID's projection of 81,030 AF/Yr. Using the District's projected supply of 100,013 AF/Yr, an additional 24,803 AF/Yr would be needed at buildout to meet projected demand.

In accordance with EID Board Policy 5010 and Administrative Regulation 5010, EID prepares an annual *Water Resources and Service Reliability Report* that factors in the current system firm yield along with water supply and infrastructure capacity, potential demands, and existing commitments; the result is the estimated meter availability for each water supply area. The methodology considers ten years of historical demand and then calculates a three year linear projection so that the analysis is based on future demand. The analysis considers active demand, latent demand (the estimated demand from inactive accounts and uninstalled meters), and other system demands such as water losses, meter inaccuracies, operational flushing and environmental flows. Based on the demand calculations, the unallocated water supply is converted to Equivalent Dwelling Units (EDUs) and meter availability.

Pursuant to the 2007 report, the unallocated water supply for EID's western and eastern service areas was 1,407 acre feet, or 2,426 EDUs or meters. For the El Dorado Hills service area, the unallocated supply was 746 acre feet (based on infrastructure limitations), or 933 EDUs or meters. (District-wide, the current remaining infrastructure-constrained firm yield water supplies are 2,153 acre feet, while unconstrained remaining firm yield supply is 15,203 acre feet.) EID tracks demand that moves from latent to active as well as meters that are approved so that the District service approvals do not exceed firm yield water supplies. It should be noted that EID

³ Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

Board Policy 9020 and Administrative Regulation 9021 outline the process that an applicant must comply with in order to receive service. Service will only be approved when there is adequate water supply and capacity in the system to serve the property.

3.3.2 Water System Infrastructure

EID has three primary water service zones within its contiguous service area. The Eastern Region includes Lotus/Coloma, Swansboro, Camino, Pleasant Valley, Sly Park, Pollock Pines, North Placerville, and South Placerville. The Western Region includes Bass Lake, Cameron Park, Shingle Springs, Logtown, Diamond Springs, and El Dorado. The third zone is the El Dorado Hills service area. EID also has two satellite service areas for Outingdale and Strawberry. The ditch system that serves irrigation customers is separate from the domestic system. The District's water system infrastructure includes storage, conveyance, treatment, and distribution systems for both treated and untreated water. In 2001 EID prepared the *Administrative Draft Water Supply Master Plan* and is scheduled to update the plan in 2008. The District is in the process of developing the El Dorado Hills Water Facilities Master Plan. In 2006, EID completed the conversion of all open treated water storage facilities to covered facilities in accordance with State requirements. *Table 3.4* summarizes the existing water system facilities:

Table 3.4
EID
Water System Overview

	Quantity
Water Mains / Pump Stations	1,289 miles / 38 pump stations
Storage Capacity	36 tanks / 72.2 mg
Average Age of Distribution System	20 years
Treatment / Capacity	El Dorado Hills Water Treatment Plant – 19.5 MGD (7 MGD ADD / 16 MGD MDD)
Avg Day Demand (ADD) / Max Day Demand (MDD)	Forebay Water Treatment Plant – 26 MGD (12 MGD ADD / 25 MGD MDD)
	Reservoir A Water Treatment Plant – 64 MGD (18.6 MGD ADD / 43 MGD MDD)
	Strawberry Water Treatment Plant – 100 GPM (30 GPM ADD / 87 GPM MDD)
	Outingdale Water Treatment Plant – 100 GPM (34 GPM ADD / 90 GPM MDD)

Forebay and Jenkinson Lake Subsystems

The Forebay subsystem receives water from Project 184. The water is treated at the Forebay (Reservoir 1) Water Treatment Plant in Pollock Pines; the plant has a treatment capacity of 26 MGD. Water is delivered to Pollock Pines, Camino, Placerville, Gold Hill, and Cameron Park.

The Jenkinson Lake Subsystem receives water from Jenkinson Lake. The water is treated at the Sly Park (Reservoir A) Water Treatment Plant that has a capacity of 64 MGD. Water is primarily delivered to Sly Park, Pleasant Valley, Diamond Springs/El Dorado, Logtown, Shingle Springs, and Cameron Park. Several interties connect the Forebay subsystem with the Jenkinson Lake subsystem and the two treatment plants combine to serve the entire gravity portion of EID's Eastern and Western service areas. Treated water storage capacity in this system is 65 mg. Average day demand for this system is approximately 31 MGD.

Folsom Lake Subsystem

The Folsom Lake Subsystem receives water from Folsom Lake. The water is treated at the El Dorado Hills Water Treatment Plant (EDHWTP). Water is conveyed to two primary pressure zones in the El Dorado Hills service zone. The EDHWTP has a current capacity of 19.5 MGD, and current average day demand is approximately 7 MGD. EID is planning to expand the plant to 31.5 MGD in two phases. The first phase would bring the capacity to 25 MGD; the expansion is expected to be operational in 2008. The second phase would bring the plant to 31.5 MGD; this phase is currently planned for implementation in 2011-2012. In May 2007, EID completed the environmental review for the project. The cost for Phase I is estimated at \$20 million, and the second phase is estimated at \$35 million.

Satellite Systems

EID operates two water treatment plants that serve the Outingdale and Strawberry communities. Each plant has a capacity of 100 GPM. Strawberry has a 200,000 gallon storage tank and Outingdale has two tanks with 60,000 and 80,000 gallons storage capacity, respectively. EID has planned for \$550,000 in capital improvements to these systems in 2008 to ensure compliance with more stringent regulatory requirements for surface water treatment.

Ditch System

EID has approximately 27 miles of ditches used to deliver water to irrigation customers. The ditch system is a separate delivery system and not connected to the contiguous piped system. In 2005 EID served 51 accounts through the ditch system delivering an estimated 1,115 af; this is projected to increase to 73 accounts by 2030 with annual demand of 1,596 af. There are nine ditch systems, some of which are no longer operational. In 2004 the District completed a Ditch

System Master Plan that identifies capital needs, such as pipeline conversion in areas prone to failure and to reduce water theft as well as water loss. Earthen ditches can have loss rates of 40 to 60 percent or more.

Water System Infrastructure Needs

EID has planned for water system infrastructure needs through its master plans, annual *Water Resources and Service Reliability* analysis, and *Urban Water Management Plan*. The District has a five year Capital Improvement Program (2007-2011) that includes \$124.8 million in water system projects. The notable projects include the following:

- Folsom Lake Temperature Control Device: \$25.3 million
- El Dorado Hills Water Treatment Plant Expansion to 25 MGD: \$20 million
- El Dorado Hills Water Treatment Plant Expansion to 31.5 MGD: \$35 million
- Lake Hills Transmission Main: \$9.5 million
- Folsom Lake Raw Water Transmission Main: \$4.7 million
- Sly Park Intertie Lining: \$4.9 million

These projects will be funded through a combination of District revenues and long-term financing.

EDCWA's *Water Resources and Development Management Plan* (November 2007) estimates the cost for the buildout capacity of water supply alternatives for EID at \$457.7 million⁴, including the following:

- Treatment Capacity – \$79.5 million
- Reservoir Improvements - \$142.1 million
- Transmission and Distribution System - \$125.2 million
- Conservation - \$3.0 million
- Additional Projects (including SMUD UARP Whiterock Diversion) - \$108.0 million

3.3.3 Wastewater System Infrastructure

EID has two wastewater treatment plants that serve the El Dorado Hills/Cameron Park areas and provide recycled water that meets Title 22 standards. Satellite wastewater treatment facilities that serve the Camino Heights area and Rancho Ponderosa (near Rescue) provide primary treatment. EID also owns and operates the septic system that serves the Gold Ridge Forest community near Pollock Pines. In 2001 EID completed the *Wastewater Master Plan Update* and

⁴ EDCWA Water Resources Development and Management Plan, November 2007. Table 5-8

in 2002 prepared a *Recycled Water Master Plan*. Table 3.5 summarizes the District's existing wastewater system facilities:

Table 3.5
EID
Wastewater System Overview

	Quantity
Lift Stations / Sewer Line	63 lift stations / 390 miles sewer line
Average Age of Collection System	20 years
Treatment / Flows	El Dorado Hills Wastewater Treatment Plant: 3.0 MGD ADWF / 7.6 MGD wet weather
	Deer Creek Wastewater Treatment Plant: 3.6 MGD ADWF / 9.1 MGD wet weather
	Gold Ridge Forest Septic Tank 12,500 gpd
	Camino Heights Wastewater Treatment Facility 60,000 gpd ADWF / 76,000 gpd wet weather
	Rancho Ponderosa Wastewater Treatment Facility: 35,000 gpd ADWF

Wastewater Collection

EID's wastewater collection system includes lift stations, force mains, and gravity mains that collect wastewater from three drainage basins: El Dorado Hills, Deer Creek, and Motherlode. Per the *2001 Wastewater Master Plan Update*, a number of lift stations and pipelines are reaching the end of their useful life and will need to be replaced. Within EID's system there were 26 sanitary sewer overflows (SSOs) over 100 gallons in 2006 and 11 in 2007. EID initiated a pipeline rehabilitation program in 1996. The *Wastewater Master Plan* identifies three lift stations that will need to be rebuilt by 2013 in the El Dorado Hills area. Within the Deer Creek/Motherlode areas, the *Master Plan* identifies 13 lift stations that will need to be rebuilt by 2021. Future growth will require that some lift stations and pipelines in the El Dorado Hills and Deer Creek service areas be expanded to handle increased flows.

EID is within the jurisdictional boundaries of the Central Valley Regional Water Quality Control Board (RWQCB) – Region 5. In 2006, the State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WQO No. 2006-003-DWQ) and EID (as part of the Central Valley Region) has begun reporting all sanitary sewer overflows (SSOs) to the California Integrated Water Quality System (CIWQS) as of September 2, 2007.

In addition, the Order requires that the District prepare a Sewer System Management Plan (SSMP) with completion by August 2009. The SSMP provides a plan and schedule to manage, operate, and maintain all parts of the sanitary sewer system to reduce and prevent SSOs and mitigate any SSOs that do occur. EID is currently preparing the SSMP.

Wastewater Treatment and Disposal

The El Dorado Hills Wastewater Treatment Plant (EDHWWTP) is located along the east side of Latrobe Road, south of Highway 50. The plant serves a 30 square mile area that extends from the El Dorado County line east to Bass Lake Road, north to Folsom Lake, and three miles south of Highway 50. The plant has a design capacity of 3.0 MGD average dry weather flow (ADWF) and produces Title 22 full body contact recycled water. Treated wastewater that is not used for recycled water is discharged to the adjacent Carson Creek, a tributary to the Cosumnes River.

Current average dry weather flows to the EDHWWTP are 2.67 MGD. EID is planning to expand the capacity to 5.4 MGD ADWF in two phases. The environmental review was completed in June 2007 and the District expects the expansion to be operational by December, 2009. The estimated cost is \$44 million; this will be funded through Facility Capacity Charges (FCC's) and long-term financing.

The Deer Creek Wastewater Treatment Plant (DCWWTP) is located in the vicinity of Cameron Park and receives flows from a 24 square mile area that includes Diamond Springs, El Dorado, Shingle Springs, and Cameron Park. The plant has a permitted capacity of 3.6 MGD ADWF and produces Title 22 full body contact recycled water. Current average dry weather flows are 2.7 MGD. The plant discharges treated wastewater to Deer Creek, a tributary to the Cosumnes River. EID's discharge permit requires that a minimum of one million gallons per day be discharged to Deer Creek year round. Recycled water is used for golf course and large landscape irrigation, as well as irrigation for single family residences in the Serrano, Creekside Greens, Euer Ranch and other developments.

In January 2007, EID and the Central Valley Regional Water Quality Control Board reached an agreement for the DCWWTP regarding copper levels in treated wastewater discharge through a water effects ratio (WER) study for copper. The agreement conditions ensure that the plant remains in compliance with regulatory requirements without extensive capital upgrades. As part of this effort EID also worked with several regulatory agencies to acquire a Basin Plan Amendment for temperature, pH, and turbidity based on site-specific conditions for Deer Creek so that the water quality objectives would be met without extensive infrastructure changes at the plant. The result of these efforts is a savings of several million dollars to the District and its rate payers in facility construction that otherwise would have been necessary if the WER and Basin Plan Amendment had not been approved.

EID's recycled water supply is limited by seasonal storage capacity. The EDHWWTP has a 66 mg storage reservoir, but it is filled each winter and excess treated wastewater is discharged to Carson Creek. Recycled water demand exceeds supply, particularly during dry years. The District is currently using Bass Lake to store potable water for summer supplementation to the recycled water system and is pursuing opportunities to increase seasonal storage so that winter wastewater flows could be treated and stored for use in summer months. EID has budgeted \$6 million in the five year CIP for a new seasonal reservoir. EID is currently planning to construct a seasonal storage reservoir of up to 2,500 acre-feet in capacity.⁵ The reservoir will likely be constructed in phases. This volume of recycled water will offset the demand for potable water in the recycled water service area.

With respect to the satellite systems, the Gold Ridge Forest septic system serves the Gold Ridge Forest community with capacity for 50 parcels. This facility is not regulated by the Regional Water Quality Control Board. No infrastructure issues were noted.

The Camino Heights Wastewater Treatment Facility is permitted for the treatment and disposal of up to 60,000 gallons per day of domestic wastewater. Current ADWF's are 14,700 gallons per day. The system includes sewer collection lines, primary treatment, storage ponds, and a 15-acre spray field. The treatment facility and ponds are subject to infiltration and inflow during wet weather and storm events. The District has had compliance issues with the storage ponds and irrigation system, and in May 2007 the Regional Board issued a Cleanup and Abatement Order (No. R5-2007-0711) requiring verification that long-term improvements to the spray field are completed by June 1, 2008. EID has budgeted \$450,000 in the five year CIP for upgrades to this facility.

The Rancho Ponderosa Wastewater Treatment Facility, near Rescue, is permitted for the treatment and disposal of up to 35,000 gallons per day. Current ADWF's are estimated at 19,000 gallons per day. The facility includes a collection system and two ponds, with disposal by percolation and evaporation. The facility is located adjacent to Kelly Creek and there have been compliance issues with seepage from the ponds. In May 2006 the Regional Board issued a Cleanup and Abatement Order (No. R5-2006-0712) requiring verification of long-term action to eliminate seepage. EID has budgeted \$2,000,000 in the five year CIP to decommission the facility and replace it with piped sewer service to the Deer Creek Wastewater Treatment Plant. .

Wastewater System Infrastructure Needs

EID has planned for wastewater system infrastructure needs through its master plans for wastewater and recycled water. The District has a five year CIP (2007-2011) that includes \$59.9

⁵ EID's Recycled Water Master Plan (December 2002 Draft) notes that recycled water storage of 5,000 AF is needed at buildout.

million in wastewater projects and \$11.1 million in recycled water projects. The notable projects include the following:

- Parallel Silva Valley Sewer Line Phases II and III: \$2.1 million
- Motherlode Force Main Repairs Phases II and III: \$2.0 million
- El Dorado Hills Wastewater Treatment Plant Expansion Phase III: \$44 million
- Rancho Ponderosa Improvements: \$4 million
- Pre-design, design and environmental work for Deer Creek and El Dorado Hills Seasonal Storage Reservoir for recycled water: \$6 million
- Tank (No. 800) and Pipeline, Tank Replacement (No. 940) for recycled water: \$7.2 million

3.3.4 Hydroelectric Infrastructure

EID's Project 184 is a 21-megawatt hydroelectric plant located on the South Fork of the American River. The Federal Energy Regulatory Commission (FERC) issued the original license for the plant to PG&E in 1922. That license expired in 1972 and was reissued in 1980. By order of FERC, the license was transferred to EID on April 2, 1999 and it expired in 2002. The District has operated the project under annual license pending the outcome of its license application. On October 18, 2006, FERC issued a new license to EID to operate and maintain El Dorado Hydroelectric Project No. 184 for a forty year term (117 FERC §62,044).

Project 184 stores water from the Truckee and American River basins, and therefore includes lands in El Dorado, Alpine, and Amador counties. The project's infrastructure includes four storage reservoirs (Echo, Aloha, Caples, and Silver Lakes); a main diversion dam and four smaller diversions; water conveyance facilities consisting of canals, flumes and tunnels; the Forebay reservoir near Pollock Pines; a penstock and the powerhouse that has two generators; and a switchyard. The project does not include any transmission lines. The powerhouse was badly damaged in the 1997 floods; EID completed repairs and in 2003 the District started generating power from the project. As noted above in *Section 3.3.1*, Project 184 is a primary source of water supply for the District.

EID sells the power generated on the open market and does not have any wholesale or retail power customers. In September 2007 Project 184 was certified as eligible for California's Renewable Portfolio Standard, which means that EID can market all power generated by the system as "renewable." EID is eligible to receive an estimated annual premium of \$100,000 depending on market price and how much power is generated. EID uses revenues from the sale of power to offset operation, maintenance, and capital costs associated with the project and to augment revenues for other District services. Per the terms of the license, EID has legal

obligations with respect to maintaining a reliable water supply, water quality, in stream flows, and other environmental concerns as well as reporting requirements. In October 2006 EID's Board of Directors adopted policies related to the operation and maintenance of the project that address EID's responsibility to provide a reliable water supply. The District is in the process of developing an emergency response plan for Project 184.

EID's five year CIP (2007-2011) includes several hydroelectric projects totaling \$20.1 million. Projects include bridge upgrades and replacement, flume replacement, and ditch remediation. Projects would be funded out of the revenues generated from power sales and Facility Capacity Charge fees.

3.3.5 Summary

EID has numerous pre-1914 water rights, permits, and a service contract with USBR for CVP water. The District's primary sources of supply are Jenkinson Lake, Project 184, and Folsom Lake. Per EID's adopted *2005 Urban Water Management Plan*, water supplies will be adequate to meet projected demands through 2030 under normal conditions as well as single and multiple dry year conditions, contingent upon EID executing a new water contract for Folsom Lake water, acquiring new water rights for the SMUD UARP, and the construction of recycled water seasonal storage. EID prepares an annual *Water Resources and Service Reliability Report* that analyzes the firm yield of water supplies with service commitments, latent demand, and other factors. The 2007 report indicates that current remaining infrastructure-constrained firm yield water supplies (District-wide) are 2,153 acre feet while unconstrained remaining firm yield supply is 15,203 acre feet. EID has adopted Board Policies and Administrative Regulations that govern the extension of service to new customers. The District implements a comprehensive conservation program for municipal, industrial, and agricultural customers and has an adopted water shortage contingency plan.

EDCWA's *Water Resources and Development Management Plan* (November 2007) estimates the cost for the buildout capacity of water supply alternatives for EID at \$457.7 million. This includes three water treatment plants, reservoir improvements, improvements to the potable and raw and recycled water systems, main ditch lining, and other water supply projects. The Plan notes that, "The timing and capacity of new water supply improvements will be subject to many factors, including actual demands, the provision of water service to Other County Areas and additional irrigation demands." Other factors that may affect implementation include institutional and regulatory requirements, environmental considerations, and cost.

EID operates water and wastewater systems, and the Project 184 hydroelectric plant. The District has planned for the infrastructure needs for these services, and is planning to increase capacity at both the water and wastewater treatment plants that serve El Dorado Hills. The

District is pursuing additional water supply options and is addressing capital needs through its five-year CIP.

3.4 Financing Constraints and Opportunities

EID uses a two year operating budget and accounts for its operations through enterprise funds, whereby the cost of providing the service is expected to be recovered through user charges. Non-operating revenues include surcharges, voter-approved taxes, property taxes, as well as interest income and flood damage reimbursements. Capital contributions are derived from Facility Capacity Charges and developer contributions. EID has been successful in pursuing funding through federal authorizations and appropriations and grants. Since 2003 the District has received \$44.25 million in authorizations and appropriations and \$11.6 million in federal, state, and local grants.

For the year ending December 31, 2006, total revenues for the District were \$59.4 million and total expenses were \$65.8 million. *Table 3.6* summarizes the financial history of the District.

Table 3.6
EID
Financial Summary

	CY 2004 Actual	CY 2005 Actual	CY 2006 Actual	CY 2007 Budget
Operating Revenues	\$28,708,369	\$34,221,768	\$35,479,322	\$44,823,500
Operating Expenses	\$36,135,056	\$39,750,264	\$42,206,337	\$45,619,000
Depreciation	\$10,414,014	\$11,258,749	\$11,914,105	
Net Non-operating Revenues / (Expenses)	(\$763,197)	\$9,173,972	\$12,191,058	\$1,204,000
Capital Contributions	\$26,564,224	\$22,823,086	\$27,029,996	\$14,072,000
Change in Net Assets	\$7,960,326	\$15,209,813	\$20,579,934	
Beginning Balance	\$353,044,462	\$361,004,788	\$376,214,601	\$396,794,535
Net Assets, End of Year	\$361,004,788	\$376,214,601	\$396,794,535	
Total Revenues, excluding interest earnings and developer contributions	\$46,592,551	\$59,121,785	\$79,076,642	
Total Expenses, excluding depreciation and interest expense	\$36,280,570	\$40,543,436	\$42,792,889	
Net Revenues	\$10,311,981	\$18,578,349	\$36,283,753	

At December 31, 2006, EID had net assets of \$37.8 million restricted for new facilities, \$7.9 million restricted for debt service, and \$71.5 million unrestricted.

EID uses a pay-as-you-go approach for smaller capital projects and obtains financing for larger projects. At December 31, 2006 the District had long-term debt of \$263.7 million consisting of State loans, revenue Certificates of Participation, General Obligation Bonds, and a note to the County of El Dorado for the Texas Hill property. For the Certificates of Participation, the District is required to collect rates and charges from the facilities that were funded sufficient to yield net revenues equal to 125 percent of debt service payments. The debt service coverage exceeds this amount. Average annual debt service through 2011 is approximately \$19.1 million.

As of December 31, 2006, EID had nine low interest State Revolving Fund loans used to finance the lining and covering of reservoirs per the mandate of the State Department of Health Services. The District imposed two water rate surcharges to cover debt service payments on these loans. The principal balance at the end of 2006 was \$5.9 million. The loans have 20-year terms and mature through 2027.

In 2003, the District issued \$6 million in General Obligation Refunding Bonds to prepay a portion of the Sly Park Facilities contract between EID and USBR. The bonds are to be repaid from a property tax assessment on property within the District's boundaries.

EID has the financial resources to maintain adequate service levels and provide for capital needs. The District is completing an analysis of water and wastewater rates and Facility Capital Charges, as well as developing a financing plan for the five-year CIP. As noted above, at June 30, 2006, the District had \$37.8 million in restricted net assets for new facilities, with \$59.8 million in unrestricted net assets designated for construction and capital replacement. The District has successfully pursued alternate funding sources and leverages the use of long term financing for major projects. The planned expansions to the water and wastewater treatment plants in El Dorado Hills and temperature control for Folsom Lake are estimated to cost \$124.3 million; these will be funded by issuing additional long-term debt.

3.5 Cost Avoidance Opportunities

EID uses a variety of means to avoid or control costs for operations and capital facilities. Notably, EID recently received approval from the Regional Water Quality Control Board regarding treatment processes and water quality standards that are specific to the Deer Creek Wastewater Treatment Plant. Through this seven year effort the District was able to avoid an estimated \$22 million in capital costs.

EID voluntarily participates in PG&E's demand reduction programs. The District estimates it saved more than \$230,000 in electricity costs during 2006. EID's solar photovoltaic power generation system came on line in May 2006, saving the District \$170,000 in electricity costs at

the El Dorado Hills Wastewater Treatment Plant. This is expected to increase to \$270,000 in 2007 and beyond.

EID uses a Supervisory Control and Data Acquisition System (SCADA) to monitor system performance for both water and wastewater systems and to avoid costly outages and sewer system overflows. The District also tracks maintenance and replacement needs to maximize the life of capital assets.

3.6 Opportunities for Rate and Fee Restructuring

EID regularly reviews its rate structure for water and wastewater services. In addition to service charges, the District receives 2.667 percent of the one percent property tax base assessed on parcels within its boundaries. EID also collects surcharges for the State Revolving Fund loans and improvements to the Strawberry and Outingdale systems as well as assessments to repay the General Obligation Refunding Bonds (see *Section 3.4*).

3.6.1 Water Rates

EID's current water rate structure became effective January 1, 2007. Previous rate adjustments were effective January 1st of 2005 and 2006. The rates for most services include a base charge plus a three-tiered consumption charge. Residential and commercial accounts pay the same basic rate but have different tier structures. The rate structure also includes rates for multi-family, small farms, ditches, agricultural metered irrigation, domestic irrigation, recreational turf services, recycled water, and fire hydrant service. Rates within service zones that require pumping are slightly higher than gravity zones due to the additional cost to deliver water in those areas.

In 1999 and 2001, the Board adopted surcharges to cover the debt service for reservoir lining and covering. The surcharge applies to all accounts and is nominal; a single family residence pays an additional \$1.96 per month. The surcharge is expected to remain in place for the life of the 20 year loans.

In March 2005 the Board adopted a temporary 4.3 percent water rate surcharge to help cover the loss of property tax revenues due to the tax shift authorized by the Governor. The surcharge averages \$1.13 per month for residential customers, \$2.07 for agricultural water customers and \$2.69 per month for commercial/industrial customers. The surcharge will sunset in early 2008.

3.6.2 Sewer Rates

EID wastewater rates include a basic charge and commodity charge based on monthly water usage. Commercial and industrial accounts have a lower basic charge but pay higher commodity charges based on wastewater loading. The highest rate is for restaurants at \$7.312 per hundred cubic feet (ccf).

In 1996, the Board adopted a wastewater surcharge to finance the issuance of the 1996 revenue bonds. The amount is based on the meter size and EDUs and applies to all wastewater accounts. A single family residence pays an additional \$5 per month.

3.6.3 Current Service Rates

EID's current water and wastewater rates for a single family residence in a pumped service zone are shown in *Table 3.7* below:

Table 3.7
EID
2008 Single Family Residential Water and Wastewater Rates
(Bi-monthly – Pumped Water Service)

Type	All Accounts
Water Charge	
Base Charge (3/4-5/8" meter)	\$30.74
Water Consumption Fee	0 to 1,500 cf - \$0.844 per ccf 1,501 to 20,000 cf - \$0.912 per ccf Over 20,000 cf - \$1.075 per ccf
Reservoir Line and Cover Surcharge	\$1.96
Property Tax Loss Surcharge	4.3%
Wastewater Charge	
Basic Charge	\$54.79
Commodity Charge	\$2.054 per ccf
Wastewater Surcharge	\$10.00

With the rate structure above, a single family residence in a pumped service zone using 20 ccf (hundred cubic feet) of water would pay \$47.62 bi-monthly for water service and \$95.87 for sewer service.

Any services provided outside the District's boundaries are charged at 1.5 times the standard rates.

3.6.4 Facility Capacity Charge Fees

The Facility Capacity Charge (FCC) for water includes fees to buy in to the water facilities and water supply, environmental mitigation fees for the Gabbro soils rare plant preserve program, and fees related to lining and covering reservoirs. The fees vary depending on service area, the use of dual plumbing, and developer agreements for water supply development. A single family residence within the general district would pay \$8,517 for a water connection (\$6,782 if dual plumbed for recycled water). Within the El Dorado Hills service area, the fee is \$12,518.

Wastewater FCC fees vary by service area. A single family residence would pay \$5,830 for a wastewater connection in Cameron Park. Within the El Dorado Hills service area, the fee is \$9,855.

EID will consider updating the FCC fees in early 2008, pursuant to a rate study.

3.7 Opportunities for Shared Facilities

EID shares facilities and resources with other regional agencies through water resource planning and water supply development. The District is one of the four agency members of the El Dorado Water and Power Authority, and coordinates with the El Dorado County Water Agency and the Mountain Counties Water Resources Association on water supply planning. EID is also participating in the Integrated Regional Water Management Plan for the Cosumnes, American, Bear, and Yuba (CABY) River watersheds.

EID is providing treated water to the City of Placerville, which leverages use of capacity within the EID system and enables the City to avoid duplication of storage and treatment facilities.

3.8 Evaluation of Management Efficiencies

EID operates under the direction of the elected Board of Directors. The District's General Manager directs district operations. In 2006 the District completed an in-depth review of the Board Policies and Administrative Regulations, and updated policies and regulations were adopted. These policies and regulations provide a framework for District activities and decision making. EID has master plans for Water Supply, the Ditch System, the Wastewater Collection System, and the Recycled Water System, and is in the process of preparing the El Dorado Hills Master Water Facilities Plan. EID uses workforce succession planning to ensure that trained, experienced staff is available.

3.9 Government Structure Options

EID serves a significant portion of the western slope of El Dorado County, including the City of Placerville and the unincorporated communities of El Dorado Hills, Camino, Pleasant Valley, Sly Park, Pollock Pines, Bass Lake, Cameron Park, Shingle Springs, Logtown, Diamond Springs, and El Dorado. The District is providing adequate service and has planned for water supply as well as operational and capital needs for the water and wastewater systems and the hydroelectric plant. No other agency was identified that could cost-effectively provide the services the District is providing to the community.

There are a number of islands within EID's boundaries, representing parcels that have not opted to use water and/or wastewater services available from EID. Should any of these parcels request annexation, they would have to follow EID's adopted procedures for new service and would be subject to the same evaluation as other properties requesting services with respect to adequacy of supply, system capacity, and meter availability. Accordingly, EID does not reserve water supply or system capacity to serve properties that are not within District boundaries. EID is serving a few parcels outside district boundaries and should work with LAFCO to clean up boundary issues. No other government structure options were identified.

3.10 Local Accountability and Governance

EID is governed by a five-member Board of Directors with each Director elected by the voters within the respective division. The last contested election was in 2005. As noted above in *Section 3.8*, the Board of Directors completed an in-depth review of the Board Policies and Administrative Regulations in 2006. Updates were adopted to ensure that the policies and regulations support the District's mission and goals and are consistent with current programs, regulatory requirements, etc. EID's governance is summarized in *Table 3.8*.

Table 3.8
El Dorado Irrigation District

Date Formed:		October 1925	
Statutory Authorization:		Irrigation District Law (Water Code §20500)	
Board Meetings:		District Office, 2890 Mosquito Road, Placerville	
		2nd and 4th Mondays of each month at 9 am	
Member	Title	Term Expires	Compensation*
George W. Osborne	President, Division I	December 2011	\$15,000 annually
George A. Wheeldon	Vice President, Division IV	December 2009	\$15,000 annually
Bill George	Director, Division III	December 2011	\$15,000 annually
John P. Fraser	Director, Division II	December 2009	\$15,000 annually
Harry J. Norris	Director, Division V	December 2011	\$15,000 annually

** Directors are also offered health, dental, vision, life, and EAP services and are reimbursed for qualifying expenses.*

EID's website (www.eid.org) includes extensive information about the District including services, finances, rates, and information regarding recent events, achievements, and upcoming meetings. District meetings are open and accessible to the public and meeting notices and Board agendas are posted at the District office and on the District's website. The District provides opportunity for public involvement along with outreach programs. EID distributes newsletters in every billing cycle and an annual consumer confidence report to all customers. The District encourages public awareness and interest in its activities and programs.

3.11 Sphere of Influence Recommendations

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review and update the sphere of influence (SOI) for each of the special districts and cities within the county.⁶ The SOI is defined by statute as a "plan for the probable physical boundary and service area of a local government agency as determined by the commission" (Government Code §56076).

EID's sphere of influence includes 376 square miles and contains area northwest of the District as well as all lands south of the District to the El Dorado County line. Per the County's 2004 General Plan Land Use Element and Land Use map, a majority of this area is outside the Community Region boundaries and therefore is considered a Rural Region with land uses for rural residential, agricultural, and open space. Land Use Element Objective 2.1.3 states that rural regions will have "limited availability of infrastructure and public services". The majority of this area is not designated as being potential irrigable land in the EDCWA 2007 *Water Resources Development and Management Plan (Figure 4-1)*. Potential irrigable lands were determined by the presence of parcel sizes of 10 acres or more, soils suitable for agricultural production, slopes of less than 50 percent, and located at an elevation of 3,000 feet or less outside of the Community Regions.

New development and services bear the capital and operating cost of service extensions. Due to the cost of increasing water treatment capacity and the infrastructure requirements to extend service, much of the area to the south of the current District boundaries will not likely seek service from EID in the foreseeable future. Areas considered likely for annexation due to proximity to the District boundary and infrastructure availability are identified in the 2007 *Water Resources Development and Management Plan*. The lands that the District would not likely serve for domestic or agricultural purposes should be removed from the District's SOI. Given current water supplies, resident demand and growth within the Folsom Lake water subsystem service area, careful consideration should also be given to the northwestern portion of the SOI

⁶ State of California Government Code Section 56425 et seq.

since these areas are slated in the County's General Plan for development and would rely on some of the same water supplies and infrastructure.

EID plans to update the Water Supply Master Plan in 2008. EID should coordinate with LAFCO regarding potential future boundary changes and growth and demand assumptions used for plan development.

3.12 Determinations

3.12.1 Growth and Population

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

EID serves a large portion of western El Dorado County, including the City of Placerville and the high growth area of El Dorado Hills. The 2005 population within EID's service area is estimated at 92,400 residents; this is expected to increase to 142,560 by 2030. Long term projections indicate a continued growth trend for the western slope of El Dorado County, particularly within the El Dorado Hills area where nearly half the growth is anticipated.

3.12.2 Infrastructure Needs or Deficiencies

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

EID provides treated and untreated water service within its water service area. The District's primary water sources are Jenkinson Lake and the Sly Park Dam, Project 184 Forebay, and Folsom Lake. Per EID's adopted *2005 Urban Water Management Plan*, the District will have adequate water supplies to meet demands through 2030 in normal conditions as well as single and multiple dry years, contingent upon EID executing a new water contract for Folsom Lake water, acquiring new water rights for the SMUD UARP, and the construction of recycled water seasonal storage. In accordance with EID Board Policy, the District further assures adequate water supplies and service reliability through the analysis completed for EID's annual *Water Resources and Service Reliability* report. The 2007 report indicates that current remaining infrastructure-constrained firm yield water supplies (District-wide) are 2,153 acre feet, while unconstrained remaining firm yield supply is 15,203 acre feet.

EID operates both water and wastewater systems, as well as the Project 184 hydroelectric plant. The District has planned for the infrastructure needs for these systems and is addressing capital needs through its five-year CIP. EID is planning to increase capacity at the El Dorado Hills Water Treatment Plant and the El Dorado Hills Wastewater Treatment Plant to meet future

demand. EID is pursuing new water supply options, including a contract that would allow EID to use an additional 7,500 acre feet per year of CVP water in Folsom Lake.

EID's Project 184 received a new 40-year operating license from the Federal Energy Regulatory Commission in October 2006. EID is responsible to maintain and operate the facility according to the terms of the license. EID considers the infrastructure needs for the project within its five-year Capital Improvement Plan and will fund projects through the revenues from power generation and Facility Capacity Charges.

3.12.3 Financing Constraints and Opportunities

Purpose: To evaluate a jurisdiction's capacity to finance needed improvements and services.

EID receives revenue through user charges as well as surcharges, property taxes, and Facility Capacity Charges among others. The District has the financial resources to maintain adequate service levels and provide for capital needs in accordance with projected growth. The District has successfully pursued alternate funding sources and leverages the use of long term financing for major projects. The planned expansions to the water and wastewater treatment plants and temperature control for Folsom Lake are estimated to cost \$124.3 million; these will be funded through additional long-term debt.

EDCWA's *Water Resources and Development Management Plan* (November 2007) estimates the cost for the buildout capacity of water supply alternatives for EID at \$457.7 million. This includes three water treatment plants, reservoir improvements, improvements to the potable and raw and recycled water systems, main ditch lining, and other water supply projects. The Plan notes that, "The timing and capacity of new water supply improvements will be subject to many factors, including actual demands, the provision of water service to Other County Areas and additional irrigation demands." Other factors that may affect implementation include institutional and regulatory requirements, environmental considerations, and cost.

3.12.4 Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

EID has avoided significant infrastructure costs related to water quality and the treatment process for the Deer Creek Wastewater Treatment Plant by working with the Regional Water Quality Control Board to develop water quality standards specific to Deer Creek.

EID has leveraged PG&E programs to reduce demand during peak periods and to develop solar photovoltaic power for the El Dorado Hills Wastewater Treatment Plant. Both initiatives result in significant reductions in electricity costs.

3.12.5 Opportunities for Rate and Fee Restructuring

Purpose: To identify opportunities to impact rates positively without decreasing service levels.

The District updated its water and wastewater rates in January 2007 and is in the process of updating the water and wastewater Facility Capacity Charges. The District uses a tiered rate structure for water service and commodity charge for wastewater service.

3.12.6 Opportunities for Shared Facilities

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

EID collaborates with other agencies for regional water supply development and planning, including the El Dorado County Water Agency, the El Dorado Water and Power Authority, the Mountain Counties Water Resources Association, and the Sacramento Municipal Utilities District.

EID provides treated water to the City of Placerville, leveraging the use of the District's storage and treatment facilities and avoiding duplicate infrastructure and services in the city.

3.12.7 Evaluation of Management Efficiencies

Purpose: To evaluate management efficiencies of the jurisdiction.

EID's General Manager manages the District under the direction of the elected Board of Directors. The District has adopted Board Policies and Administrative Regulations to guide District operations. EID uses the system master plans, annual Water Resources and Service Reliability report, two-year budget, and five year CIP to plan for and carry out operations and capital programs.

3.12.8 Government Structure Options

Purpose: To consider the advantages and disadvantages of various government structures to provide public services.

EID is providing adequate service and has planned for future water supply, operational and capital needs. There are no other service providers in the area that could provide cost-effective services to the residents and agricultural customers within the area.

3.12.9 Local Accountability and Governance

Purpose: To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management process.

EID is governed by an elected Board of Directors representing five divisions in accordance with Irrigation District Law (California Water Code §20500 et seq.). Meetings are noticed through posting in the District's office and on the District's website. The meetings are open and accessible to the public. EID encourages public participation and interest in programs through outreach programs, newsletters, and other district communications.

SECTION 4.0

GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

WATER, WASTEWATER, AND POWER SERVICES

4.1 Overview

The Georgetown Divide Public Utility District (GDPUD) was formed in 1946 to establish a public water agency to serve the Georgetown Divide area, which had historically been served by a succession of private water companies. GDPUD is located in the northwest portion of El Dorado County and is roughly bounded on the north and west by the Middle Fork of the American River and on the east and south by the South Fork of the American River. The District serves a population of approximately 9,100 in an area of 118 square miles. The District's Sphere of Influence (SOI) encompasses an additional 177 square miles with a majority of that area to the east of the District's boundary.

GDPUD provides domestic and agricultural water service within its boundaries, and also provides wastewater services for the on-site septic systems and Community Disposal System (CDS) within the Auburn Lake Trails community. The District obtains its raw water supply from Stumpy Meadows Reservoir located 17 miles east of the district. Raw water is conveyed through open ditches and pipelines to the Walton Lake Water Treatment Plant and then further on to the Auburn Lake Trails Water Treatment Plant. The District provides agricultural water to some properties outside the District's boundaries. GDPUD's profile for water and wastewater service is shown in *Table 4.1* and a map of the District's boundary and current SOI is shown in *Figure 4.1*.

Table 4.1
Georgetown Divide Public Utility District
Water and Wastewater Service Information

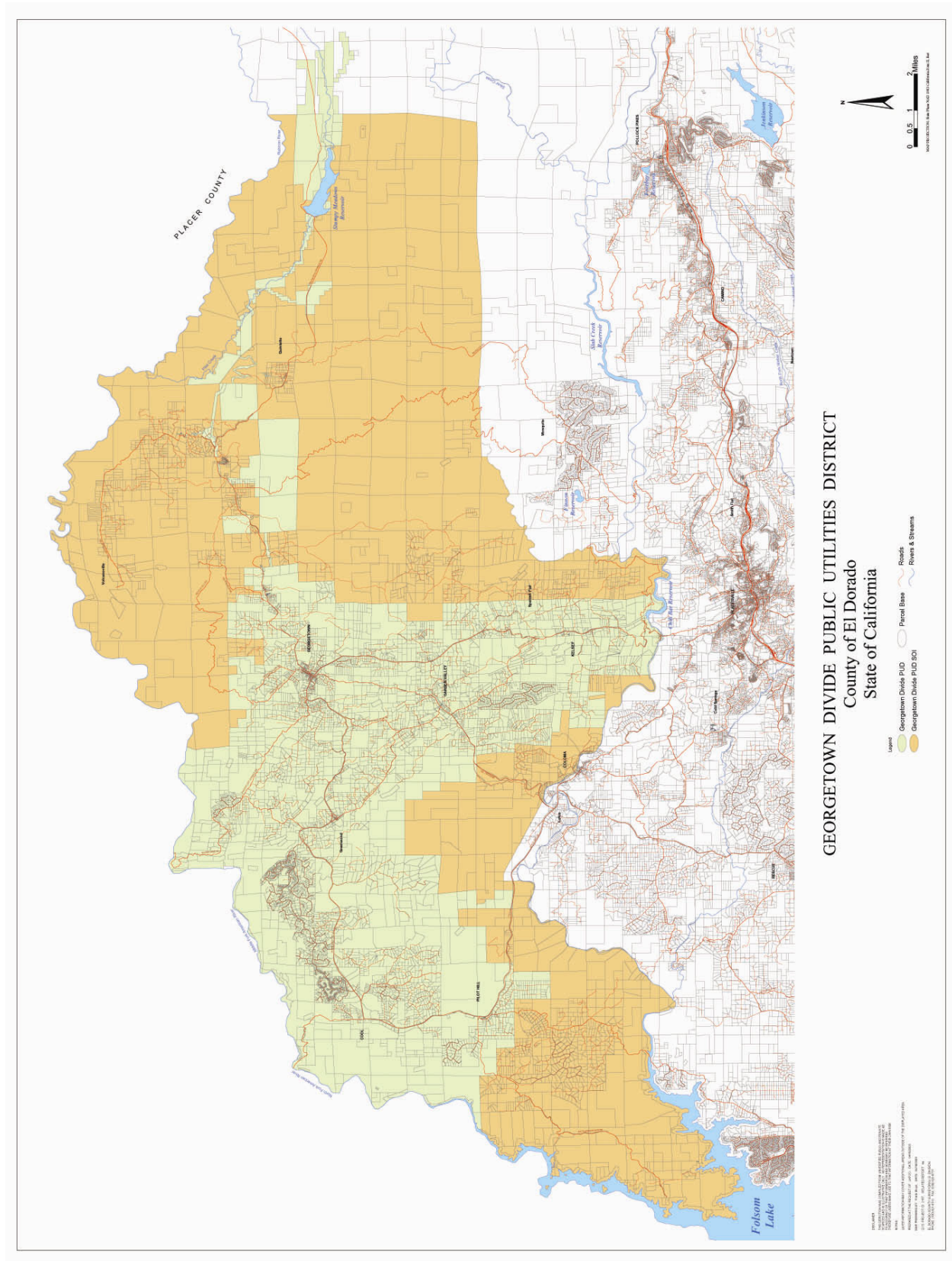
Service Area / Financial Summary	
District Office:	6425 Main Street – PO Box 4240 Georgetown, CA 95634 (530) 333-4356 www.gd-pud.org
Service Area:	112 square miles
Population:	9,100 (Year 2007) / 13,404 (Year 2030) Average Annual Growth Rate = 2.4%
Budget (FY 2007-2008):	Revenues / Expenditures:\$5,725,000 / \$4,381,055
Net Assets at 06/30/2006	\$20,867,844

4.0 Georgetown Divide Public Utility District Water, Wastewater, and Power Services

Table 4.1
Georgetown Divide Public Utility District
Water and Wastewater Service Information

Water Service Data	
Services	Water Storage, Treatment, Distribution
Water Supply	Stumpy Meadows Reservoir – 20,000 af
Number of Service Connections	3,559
Miles of Water Main / Number of Pump Stations	225 miles / 7 pump stations
Average Age of Distribution System	20 years
Treatment	Walton Lake Water Treatment Plant – 2.7 MGD Auburn Lake Trails Water Treatment Plant – 2.3 MGD
Average Day Demand / Maximum Day Demand	2.0 MGD / 4.6 MGD
Storage Capacity	12 tanks / 3.3 mg
Wastewater Service Data	
Services	Wastewater collection and disposal for Auburn Lake Trails
Number of Service Connections	134 connected to system / 970 on-site septic systems
Lift Station / Force Main / Collection Line	1 lift station / 1,800 feet / 11,000 feet
Age of Community Disposal System	35 years
Avg. Dry Weather Flow	29,000 gpd
Treatment / Capacity	No disinfection – discharged to leach fields
RWQCB Region	Region 5 – Central Valley
Orders	Order No. R5-2002-031 – Waste Discharge Rqmts

4.0 Georgetown Divide Public Utility District Water, Wastewater, and Power Services



4.2 Growth and Population Projections

GDPUD serves a number of unincorporated communities in the northwest portion of El Dorado County, including Georgetown, Garden Valley, Kelsey, Greenwood, Cool, and Pilot Hill. The estimated population is 9,100 residents; this is projected to increase to 13,404 by 2025. The planning purposes the District assumes an average annual growth rate of 2.3 percent through 2010 and 1.9 percent through 2025.

Land uses are mixed within the District's boundaries but are primarily designated as rural residential and low density residential with some agricultural lands per the El Dorado County General Plan Land Use Map (July 2004). The General Plan Land Use Element designates the following communities as Rural Centers that are expected to have higher intensity development than other rural areas: Cool, Garden Valley, Greenwood, Georgetown, Kelsey, and Pilot Hill. A vacant land survey prepared from the El Dorado County Assessor's records in 2002 lists the following within the GDPUD service area: 420.1 acres/51 parcels in Cool; 61 acres/49 parcels in Garden Valley; 2,214.3 acres/231 parcels in Georgetown; 62.2 acres/14 parcels in Greenwood; 5 acres/2 parcels in Kelsey; and 105.2 acres/22 parcels in Pilot Hill. Based on the maximum capacity per land use, development of these parcels would add an additional 1,653 dwelling units to the region.

The Sacramento Area Council of Governments (SACOG) has developed population projections through 2035 by Regional Analysis District (RAD) for use in the Regional Housing Needs Assessment. GDPUD lies within the Georgetown and Pilot Hill RADs. The population for these two areas is projected to reach approximately 15,800 by 2035.

Moderate growth is expected to occur within the GDPUD service area through 2010, with somewhat slower growth thereafter. However, future development and growth may occur at a slower pace over a longer timeframe than indicated above given current economic conditions.

4.3 Infrastructure Needs or Deficiencies

GDPUD's primary source of water supply is the Stumpy Meadows Reservoir which receives runoff from a 15.1 square mile area in the Pilot Creek Basin watershed. The District's water infrastructure includes storage facilities, a conveyance system, treatment plants, and distribution systems for both treated and untreated water. Untreated water is delivered to agricultural properties through open ditches and pipelines.

The wastewater facilities serve only the Auburn Lake Trails community and include a Community Disposal System (CDS) for wastewater collection, conveyance, and discharge to

leach fields. Primary wastewater treatment is provided in privately owned septic tanks; the system does not provide additional treatment.

The District has entered into an agreement that allows a private entity to re-power, operate and maintain the District's Buckeye and Tunnel Hill hydroelectric projects with GDPUD receiving a royalty on the gross revenue from the sale of power to Pacific Gas and Electric (PG&E).

4.3.1 Water Supply and Demand

GDPUD holds several pre-1914 water rights and four post-1914 appropriative rights to divert and store water from Pilot Creek, Mutton Canyon, Bacon Canyon, Deep Canyon, unnamed tributaries to Pilot Creek, Otter Creek, and Onion Creek in the northern portion of El Dorado County. The Stumpy Meadows Reservoir, constructed in 1962, receives average annual runoff of 22,370 acre-feet. The Reservoir has a capacity of 20,000 acre feet with usable storage of 18,800 acre feet. The District has adopted a firm yield of 12,200 acre feet based on an analysis of historic hydrologic conditions. The estimated safe yield is 10,500 acre feet.

Several projects have been identified that could increase GDPUD's water supplies. In September 2006, the El Dorado County Water Agency (EDCWA) initiated the environmental review for a 40-year contract with the U.S. Bureau of Reclamation that would provide 15,000 acre feet of water per year from the Central Valley Project (CVP) to EDCWA for municipal and industrial use; the water would be made available in the Folsom Reservoir. The water would be shared equally between GDPUD and the El Dorado Irrigation District (EID). EID would divert the water directly from the Folsom Reservoir; however due to topography and hydraulics, GDPUD is unable to divert from Folsom Reservoir and would need to receive its allocation through a water exchange with another agency that could take delivery from Folsom. GDPUD is considering this exchange with the Placer County Water Agency (PCWA) as GDPUD could divert water through the North Fork American Pumping Station. The agreement for this exchange between GDPUD and PCWA would require approval of GDPUD, PCWA, and Reclamation. EDCWA's environmental document for the CVP contract has not been released for public review.

Other potential water supply projects for GDPUD include the following:

- Canyon Creek Dam Project: The Canyon Creek Dam would be located below the confluence of Canyon Creek and Dark Canyon Creek. It would create an additional 17,500 acre feet of storage (6,780 acre feet firm yield and 6,100 acre feet safe yield) and would provide water supplies for the western and southwestern portions of the District.

- Upper Stumpy Meadows: This project would operate in conjunction with the Stumpy Meadows Reservoir and is an alternative to the Canyon Creek Dam project. It would have an estimated safe yield of 3,200 acre feet.
- SMUD Cooperation Agreement: Per the terms of an agreement between the Sacramento Municipal Utility District (SMUD) and the El Dorado Water and Power Authority, GDPUD would receive 10,000 acre feet of the first 30,000 acre feet available by 2025 in SMUD's Upper American River Project (UARP). Exercising this option requires that water rights be acquired and SMUD be compensated for foregone power revenue. Water could be diverted at the Folsom North Pumping Station, which would require a water right exchange with PCWA.
- Rubicon River Diversion: GDPUD could construct a gravity diversion from the Rubicon River to Pilot Creek above Stumpy Meadows Reservoir. This project is an alternative to the 10,000 acre feet of SMUD UARP Project water.

In 2006, GDPUD had 3,559 water service accounts of which 86 percent are residential, 4 percent are commercial, and 10 percent are agricultural. This distribution is expected to shift slightly by 2025, with residential accounts decreasing to 78 percent and agriculture accounts increasing to 18 percent. The average daily use per residential connection has decreased from 472 gallons per day in 2004 to 429 gallons per day in 2006.

Although the majority of service accounts are residential, agricultural water use comprises 70 to 80 percent of total water demand. Agricultural land use generally includes smaller-acreage properties with crops that are suitable for sloped hillsides, including vineyards, Christmas trees, olive and citrus groves, berries, deciduous orchards, and pasture. GDPUD's irrigation season generally runs from May 1 to October 1 each year. In 2001 there were 1,195 irrigated agricultural acres within the District's boundaries; by 2025 the acreage is expected to increase to 3,527 acres.¹ This growth trend is not expected to change.

The projected water supply and demand through 2025 for GDPUD is shown below in *Table 4.2*. Firm yield is the annual quantity of water than can be made available in most years while imposing water deficiencies during hydrologic drought conditions. Safe yield is the maximum amount of water that can be made available in any year, including the driest year of record (1977 for the American River watershed).

¹ El Dorado County Water Agency. Water Resources Development and Management Plan. November 2007.

4.0 Georgetown Divide Public Utility District Water, Wastewater, and Power Services

Table 4.2
GDPUD Projected Water Supply and Demand
(AF/Yr, normal demand conditions)
(Water Supply: F = Firm Yield, S= Safe Yield)

	2005	2010	2015	2020	2025
Supply:					
Stumpy Meadows Reservoir	F=12,200 S=10,500	F=12,200 S=10,500	F=12,200 S=10,500	F=12,200 S=10,500	F=12,200 S=10,500
Total Firm Supply (Safe Yield Difference)	12,200 (1,700)	12,200 (1,700)	12,200 (1,700)	12,200 (1,700)	12,200 (1,700)
Demand:					
Residential	1,362	1,684	1,805	1,925	2,046
Commercial	233	158	179	201	223
Lg Landscape	97	112	127	142	157
Govt/Institutional	76	88	100	112	124
Agriculture	4,744	7,386	8,847	10,309	11,770
Operation Losses	3,300	3,300	3,300	3,300	3,300
Latent Demand	1,159	1,159	1,159	1,159	1,159
Total Demand	11,162	13,887	15,517	17,148	18,779
Difference – Firm Yield less Demand	1,038	(1,687)	(3,317)	(4,948)	(6,579)

Source: GDPUD 2005 Urban Water Management Plan, GDPUD 2005 Water Supply and Demand Summary

Actual water diversions in 2005 were 10,453 acre feet, and with latent demands included, water demand totaled 11,162 acre feet, significantly more than estimated in the District's 2005 *Urban Water Management Plan*. As shown in Table 4.2 above, GDPUD is anticipating a 36 percent increase in domestic water demands through 2025, and a 136 percent increase in agricultural water use. Using the firm yield and factoring in latent demand with operation losses, GDPUD's water supply is not adequate to meet future demand.

The El Dorado County Water Agency *Water Resources and Development Management Plan* (November 2007) includes water demand projections for GDPUD of 16,935 acre feet per year (AF/Yr) in 2025 and 28,406 AF/Yr at buildout² based on land uses within the County's 2004 General Plan and growth allocations based on SACOG's Traffic Analysis Zones (TAZ). When additional demand considerations are factored in, such as future service to currently unserved

² Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

areas and the adopted General Plan Amendment that increases the floor area ratio for commercial/industrial and research and development land uses, the projected water demand increases to 17,752 AF/Yr in 2025 and 30,733 AF/Yr at buildout. Using the District's current firm yield supply of 12,200 AF/Yr, an additional 18,533 AF/Yr will be needed at buildout to meet projected demand, and when safe yield is considered, 20,233 acre feet should be planned for.

The District will not have adequate supply to meet demands in the future without additional sources of supply and/or demand reductions. GDPUD evaluates the reservoir level in April of each year to determine water supply conditions. The District has a four stage water shortage contingency plan that includes voluntary and mandatory reductions based on severity. The District adopted criteria in May, 1997 such that critical year deficiencies would aim to conserve up to 50 percent of untreated water and 10 percent in treated water.

GDPUD has a long-standing policy to give priority to domestic water demand over agricultural use, and agricultural deliveries can be curtailed during dry periods. GDPUD's Ordinance 2005-01 allows District staff to respond to reliability issues by evaluating agricultural service requests each year. The ordinance prioritizes irrigation service requests with first priority given to parcels that received service during the immediate past irrigation season. New applications and their priority are evaluated with respect to other water demands for the section of ditch the parcel is located near.

4.3.2 Water System Infrastructure

GDPUD's water infrastructure includes storage facilities, a conveyance system, treatment plants, and distribution systems for both treated and untreated water. *Table 4.3* summarizes the existing water system facilities:

Table 4.3
GDPUD Water System Overview

	Quantity
Water Mains / Pump Stations	225 miles / 7 pump stations
Storage Capacity	Stumpy Meadows Reservoir – 20,000 af 12 tanks / 3.3 mg
Average Age of Distribution System	≥ 20 years
Treatment / Capacity	Walton Lake Water Treatment Plant – 2.7 MGD Auburn Lake Trails Water Treatment Plant – 2.3 MGD
Average Day Demand / Maximum Day Demand	2.0 MGD / 4.6 MGD

GDPUD's water system originates at Stumpy Meadows Reservoir, 17 miles to the east of the District's main service area. The water is released into Pilot Creek and diverted and conveyed through a series of ditches and transmission mains to the Walton Lake Water Treatment Plant. Both raw and treated water are distributed within the eastern portion of the District. Pipes and open ditches convey raw water further west to the Auburn Lake Trails Water Treatment Plant, which provides treated water to the western portion of the District's service area.

The Walton Lake Water Treatment Plant is a 2.7 MGD direct filtration plant. The distribution system for this plant serves Georgetown, Kelsey, Garden Valley, and portions of Greenwood. The Auburn Lake Trails Water Treatment Plant was constructed in 1971 and has a capacity of 2.3 MGD; it serves Cool, Pilot Hill, and portions of Greenwood.

In 2005 the District modified the treatment process at the Walton Lake plant to comply with new federal regulations regarding surface water filtration for drinking water. However, the filtration system for the Auburn Lake Trails plant does not meet current requirements, and space constraints preclude the addition of additional treatment facilities. To better serve the long term needs of the District, GDPUD plans to construct a new water treatment plant in Greenwood. The Greenwood Reservoir Water Treatment Plant is planned to have a permitted capacity of 3.0 MGD and will use a pressure microfiltration treatment process. The new plant will connect to the existing GDPUD system, and the Auburn Lake Trails treatment plant will be decommissioned. This project will also include construction of a 1.5 million gallon storage tank and a three-mile long treated water pipeline to connect into the existing treated water system. A portion of the \$12 million project is being funded through a \$1.434 million grant from the U.S. Environmental Protection Agency. The balance will be funded through a low interest State Revolving Fund loan. GDPUD released the project's draft environmental document for public review in June 2007. The new plant is expected to be operational by December 2008.

GDPUD has 12 small storage reservoirs with a capacity of 3.3 mg. This provides adequate fire storage. Fire flow is provided at normal pressures within the District's distribution system. There is a potential for service disruptions due to breaks or outages in the primary transmission system. EDCWA's *Water Resources Development and Management Plan* (November 2007) notes that, "Future water supply options should consider the ability to improve redundancy and the level of water service reliability, in addition to meeting projected water demands."

In November 2002 the District completed its Water System Reliability Study; this study identified \$4.3 million in improvements to the District's ditch system, including gunnite, crib walls, and replacing open ditches with pipe. The District uses this study as a basis for long-term maintenance and capital improvement plans. The *Water Resources and Development Management Plan* notes that GDPUD has delivered water for irrigation services at capacity of the ditch system since 2003.

GDPUD uses a five year Capital Improvement Program (CIP) to plan for infrastructure needs. The 2005-2009 CIP includes the following water system projects:

- Water Treatment projects: \$6.65 million
 - \$6.25 million for the Green Lake WTP
 - \$250,000 for the Walton Lake Water Treatment Plant Raw Water Bypass
 - \$100,000 for inspection of treated water storage tanks
 - \$50,000 for the Walton Lake Outlet Works
- Water Distribution System: \$835,000
 - Mainline relocation and line replacement, valve replacements, etc.
- Conveyance System Improvements: \$1.23 million
 - Dredging, up country reliability measures, conservation plan for Blue Heron Falls, etc.

The District's FY 2007/08 budget includes \$1.1 million in capital expenditures for the water system funded by District revenues and an additional \$9.7 million for capital projects and investments funded from other sources, such as grants, loans, and District restricted reserves.

EDCWA's *Water Resources and Development Management Plan* estimates the cost for the buildout capacity of water supply alternatives for GDPUD at \$198.2 million³, including the following:

- Treatment Capacity – \$20.7 million
- Reservoir Improvements - \$91.5 million
- Transmission and Distribution System - \$79.2 million
- Conservation - \$6.9 million

4.3.3 Wastewater System Infrastructure

GDPUD provides wastewater services within the Auburn Lake Trails development only. The wastewater infrastructure consists of a Community Disposal System for wastewater collection, conveyance, and discharge to leach fields; primary treatment is provided through the individual septic tanks. In addition, the District provides inspections of on-site septic systems. *Table 2.4* summarizes the District's existing wastewater system facilities:

³ EDCWA Water Resources Development and Management Plan, November 2007. Table 5-8

Table 4.4
GDPUD
Wastewater System Overview

Facility	Quantity
Force Main/Collection Line	1,800 feet / 11,000 feet
Lift Stations	1
Age of Community Disposal System	35 years
Average Dry Weather Flow	29,000 gpd
Treatment	Primary– discharged to leach fields

As part of a class action legal settlement, in 1984 GDPUD became the regulatory agency responsible for wastewater disposal within the Auburn Lake Trails community and the owner of the Community Disposal System that serves 136 smaller lots within the 1,100 lot subdivision. The District formed the Auburn Lake Trails On-Site Wastewater Disposal Zone in March 1985. The District's responsibility is to design and inspect new on-site systems and to monitor surface and groundwater quality and system performance. There are currently 970 developed lots with on-site systems. The 136 smaller lots that cannot support an onsite system are connected to the Community Disposal System which collects septic tank effluent and transfers it to a tank for release into a leach field. In 2005 the District implemented the Septic Tank Leak Detection Program for the CDS customers, and established a zero interest loan program to help customers with the cost of tank replacement.

An ultrasonic flow meter continuously monitors the flow to the leach fields. The lift station has an emergency generator and backup electrical system. The current flows are estimated at 29,000 gallons per day; this is expected to increase to 32,000 gallons per day at buildout. Only eight of the 136 smaller lots are not developed and have not connected to the system.

GDPUD is within the jurisdictional boundaries of the Central Valley Regional Water Quality Control Board (RWQCB) – Region 5. In 2006, the State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WQO No. 2006-003-DWQ) and GDPUD (as part of the Central Valley Region) must begin reporting all sewer system overflows to the California Integrated Water Quality System (CIWQS) by September 2, 2007.

In addition, the Order requires that the District prepare a Sewer System Management Plan (SSMP) with completion by May 2010. The SSMP provides a plan and schedule to manage, operate, and maintain all parts of the sanitary sewer system to reduce and prevent SSOs and mitigate any SSOs that do occur. The District has a Sanitary Sewer System Overflow Prevention and Response Plan as well as a Sanitary Sewer System Operation and Maintenance Plan.

GDPUD's 2005-2009 CIP includes \$95,000 in projects for the wastewater system, including sealing manholes and system repairs. The FY 2007/08 budget includes \$48,000 in capital projects for the Auburn Lake Trails wastewater system. Wastewater projects are funded through the fees collected within the Wastewater Management Zone, of which a portion is designated for future capital expenditures.

4.3.4 Hydroelectric Infrastructure

In December 2006, GDPUD approved a contract with Henwood Associates/Tunnel Hill LLC for the latter private entity to re-power, operate, and maintain the District's Buckeye and Tunnel Hill hydroelectric projects. The projects were last operated from 1984 to 1998 until the power contracts expired. The plants will primarily operate in the summer months and will not affect water supplies or water service. Per the terms of the 20 year agreement, GDPUD will receive a ten percent royalty on gross project revenues until Tunnel Hill recoups its investment at which time the District's share will increase to 15 percent. Tunnel Hill will renegotiate the power purchase agreement with PG&E after ten years.

The District has no operational responsibilities or financial obligations associated with this agreement. With normal water flow, the District projects that it will receive approximately \$22,500 in revenue annually from this venture. If successful, the District may consider sites for additional power plants.

4.3.5 Summary

GDPUD exercises a number of pre-1914 and other appropriative water rights in the Pilot Creek Basin and stores raw water in the Stumpy Meadows Reservoir. When using firm yield and factoring in latent demand and operational losses, GDPUD's water supply is not adequate to meet future demand. Should water shortages occur during multiple dry years, GDPUD would curtail agricultural water deliveries prior to domestic water deliveries and would implement its Water Shortage Contingency Plan to reduce water use. The water demand projections in the 2004 General Plan and EDCWA's *Water Resources Development and Management Plan* (November 2007) are significantly higher than those shown in GDPUD's 2005 *Urban Water Management Plan*, and project that new water supplies will be needed to meet projected demand by 2025 and at buildout.

GDPUD operates both water and wastewater systems, and has entered into an agreement for a private entity to operate its two hydroelectric plants. The District has planned for the infrastructure needs of water and wastewater services, and is planning to construct a new water treatment plant at Greenwood Lake. The District is pursuing new water supply options and is addressing capital needs through its five-year CIP.

4.4 Financing Constraints and Opportunities

GDPUD accounts for its water and wastewater services as business activities, with services funded through service charges. The District also receives a share of the one percent property tax. For FY 2005/06, total revenues for the District were \$1.7 million and total expenses were \$2.1 million. *Tables 4.5 and 4.6* summarize the financial history of the water and wastewater enterprise funds.

Table 4.5
GDPUD
Water Utility Enterprise Fund Summary

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Budget	FY 2007-2008 Budget
Operating Revenues	\$1,453,510	\$1,558,021	\$1,586,000	\$1,736,000
Operating Expenses	\$2,310,853	\$2,616,760	\$4,006,000	\$4,304,055
Depreciation	\$512,344	\$537,402		
Net Non-operating Revenues / (Expenses)	\$1,436,978	\$1,831,686	\$1,989,000	\$3,595,000
Contributions	0	\$5,041		
Change in Net Assets	\$67,291	\$240,586		
Beginning Balance	\$19,944,643	\$20,011,934	\$20,252,520	
Net Assets, End of Year	\$20,011,934	\$20,252,520		

The Water Utility Enterprise Fund had an unrestricted net asset balance of \$5.6 million at June 30, 2006.

Table 4.6
GDPUD
Waste Disposal Enterprise Fund Summary

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Budget	FY 2007-2008 Budget
Operating Revenues	\$370,147	\$319,825	\$301,000	\$317,000
Operating Expenses	\$278,090	\$321,257	\$370,000	\$375,000
Depreciation	\$25,472	\$25,719		
Net Non-operating Revenues / (Expenses)	\$8,305	\$10,762		
Contributions	0	0		
Change in Net Assets	\$74,890	(\$16,389)		
Beginning Balance	\$556,823	\$631,713	\$615,324	
Net Assets, End of Year	\$631,713	\$615,324		

The Waste Disposal Enterprise Fund had \$99,511 in unrestricted net assets at June 30, 2006.

GDPUD maintains reserves for operations, debt service, retiree health care, hydroelectric projects, wastewater operating capital, and capital for the Community Disposal System. At July 1, 2007 the District had estimated reserves of \$4.65 million.

GDPUD has several long term debt obligations related to capital improvements. In FY 2007/08 the District will retire its General Obligation Refunding Bond that was issued in 2002. There are six contracts with the State Department of Water Resources that bear interest rates ranging from 3.0286 to 4.0129 percent. The District also has a zero interest loan from the US Department of the Interior for the Otter Creek project. The outstanding balance of the long term debt at July 1, 2007 was \$1,712,612; debt service payments for FY 2007/08 will be \$284,479.

Five water assessment districts have been established to repay the construction loans noted above from the Department of Water Resources or US Department of Interior. The Assessment Districts include Kelsey North, Kelsey South, Pilot Hill North, Pilot Hill South, and Stewart Mine. The special assessments are collected through the property tax bill and are held in restricted accounts for debt service.

As noted in *Section 4.3* above, GDPUD formed the On-site Wastewater Disposal Zone in 1985. The purpose of the zone is to protect the ground and surface water within the District boundaries in compliance with the Regional Water Quality Control Board requirements. The assessment revenues from the Zone are restricted for use to pay the Zone's operating costs, and no unrestricted District funds can be used to pay Zone expenses. Property owners connected to the Community Disposal System pay additional assessments (refer to *Section 4.6.2* below).

In October 2005 the District entered into a cooperative agreement with the County, EID, El Dorado Water and Power Authority, and EDCWA regarding SMUD's application to re-license the Upper American River Project (UARP) with the Federal Energy Regulatory Commission. The agreement grants \$90,000 per year to the District, storage capacity in the UARP, and coordination of efforts to obtain additional water supplies. The first annual payment is due when SMUD is issued the new license and is no longer subject to judicial review. The license is still being negotiated.

GDPUD has the financial resources to maintain adequate service levels and provide for capital needs. The District has successfully pursued grant funding and leverages the use of project financing. In FY 2007/08 the District will retire a general bond obligation that will reduce debt service outlay by \$122,222 per year. The District has developed alternative revenue sources through hydroelectric projects and the agreement with SMUD for relicensing the UARP Project. However, the District is planning to develop additional water supplies and to construct a \$12 million water treatment plant. These represent significant long-term financial commitments from the District.

4.5 Cost Avoidance Opportunities

GDPUD is controlling costs for its water supply system by pursuing alternative sources of water supply and constructing a new, efficient water treatment plant that meets regulatory requirements. The District is coordinating with PCWA regarding the Central Valley Project water exchange from the Folsom Reservoir; this would be a cost-effective alternative for additional water supply. The District added staff in the FY 2007/08 year due to the need to increase maintenance activities for the system in order to avoid more costly capital projects that result from deferred maintenance.

4.6 Opportunities for Rate and Fee Restructuring

GDPUD customers pay service charges for water service; Auburn Lake Trails residents also pay wastewater service charges. The District receives on average 11.4 percent of the one percent property tax base assessed on parcels within its boundaries.

4.6.1 Water Rates and Fees

GDPUD's current water rate schedule was adopted in July 2004 and provides for incremental increases in water service charges through 2009. The rates include a base charge plus a three-tiered consumption charge. Residential and commercial accounts pay the same commodity rates with commercial paying a higher base rate.

In April 2007 GDPUD increased its Capital Facility Charge (CFC) for new connections based on a *Capital Facility Charge Study* prepared by Stantec Consulting (March 2007). The District increased the charge for a typical residential connection (5/8 to 3/4 inch meter) from \$5,000 to \$8,100.

4.6.2 Sewer Rates and Fees

The rates for the On Site Wastewater Management Zone were adjusted effective July 12, 2005. Parcels are charged a flat rate based on whether they are developed or undeveloped, and whether they are associated with the Community Disposal System. Connection fees to the Community Disposal System are currently set at \$1,500.

4.6.3 Current Service Rates

GDPUD's current water and wastewater rates are shown in *Table 4.7* below:

Table 4.7
GDPUD
2007 Single Family Residential Water and Wastewater Rates
(Bi-monthly)

Type	All Accounts
Water Charge	
Base Charge (all meter sizes)	\$39.95 residential \$50.32 commercial
Water Consumption Fee	2,000 to 4,000 cf - \$1.00 per ccf 4,000 to 6,000 cf - \$1.16 per ccf Above 6,000 - \$1.32 per ccf
Wastewater Charge	
Lots connecting to the Community Disposal System	\$18.50 undeveloped \$45.50 developed
Lots not Associated with the Community Disposal System	\$12.50 undeveloped \$25.00 developed

With the rate structure above, a single family residence connected to the Community Disposal System using 20 ccf (hundred cubic feet) of water would pay \$59.95 bi-monthly for water service and \$45.50 for sewer service.

4.7 Opportunities for Shared Facilities

GDPUD shares facilities with other regional agencies through water resource planning and water supply development. The District is one of the four agency members of the El Dorado Water and Power Authority, and coordinates with the El Dorado County Water Agency on water supply planning. The District's water system is not interconnected with other water supply systems, and there are limited opportunities to share physical facilities and resources.

4.8 Evaluation of Management Efficiencies

GDPUD has a General Manager and operates under the oversight of the elected Board of Directors. The District uses its 2002 Water Supply Reliability Plan, the annual budget and the five year CIP to guide operations.

4.9 Government Structure Options

GDPUD serves unincorporated area within northwestern El Dorado County. The District is providing adequate service and has planned for water supply, operational and capital needs. No other agency was identified that could cost-effectively provide the services the District is providing to the community. Therefore, no other government structure options were identified.

4.10 Local Accountability and Governance

GDPUD is governed by a five-member Board of Directors elected at large by voters within the District. The last contested election was in 2006. The governance is summarized in *Table 4.8*.

Table 4.8
Georgetown Divide Public Utility District

Date Formed:	June 1946		
Statutory Authorization:	Public Utility District Act of 1921 (Public Utilities Code §15501)		
Board Meetings:	District Office, 6425 Main Street 2nd Tuesday of each month at 9 am		
Member	Title	Term Expires	Compensation*
Norm Krizl	President	December 2008	Up to \$400 per month
Douglas Pickell	Vice President	December 2008	Up to \$400 per month
Michael Cooper	Treasurer	December 2010	Up to \$400 per month
Bob Diekon	Director	December 2010	Up to \$400 per month
JoAnn Shepherd	Director	December 2010	Up to \$400 per month

** Directors are also offered health, dental, vision, and life insurance.*

District Board meetings are open and accessible to the public. The District posts meeting notices and the agenda at the District office, on the District's website (www.gd-pud.org), and in all post offices in the local area. The District produces a newsletter for its customers and the District's website includes information on the District's services, finances, rates, planning studies and capital projects.

4.11 Sphere of Influence Recommendations

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review and update the sphere of influence (SOI) for each of the special districts and cities within the county.⁴ The SOI is defined by statute as a "plan for the probable physical boundary and service area of a local government agency as determined by the commission" (Government Code §56076).

GDPUD's sphere of influence includes 177 square miles to the south and east of the District, including a significant amount of area designated as Natural Resource on the County's 2004 General Plan Land Use map. Agriculture is considered a compatible use within the Natural Resource land use designation. However, lands to the east of the District's boundaries are not designated as being potential irrigable land in the EDCWA 2007 *Water Resources Development*

⁴ State of California Government Code Section 56425 et seq.

and Management Plan (Figure 4-1), although the Agricultural Commissioner is considering expansion of the Agricultural District to include this area, pursuant to General Plan policy 8.1.1.7. Potential irrigable lands were determined by the presence of parcel sizes of 10 acres or more, soils suitable for agricultural production, slopes of less than 50 percent, and located at an elevation of 3,000 feet or less outside the community regions.

The District has limited water supplies, and projected demands are expected to exceed supplies in 2025 and at buildout. EDCWA's 2007 *Water Resources Development and Management Plan* identifies areas considered likely for annexation based on proximity to the District boundary and infrastructure availability. The lands designated as Natural Resource that the District is not serving and would not likely serve for agricultural purposes should be removed from the District's SOI. Given current water supplies, resident demand and the distribution system, careful consideration should also be given to the western portion of the SOI since these areas are slated in the County's General Plan for development.

4.12 Determinations

4.12.1 Growth and Population

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

GDPUD serves a number of unincorporated communities within the northwestern portion of El Dorado County. The population within the service area is estimated at 9,100 residents; this is expected to increase to 13,404 by 2025 with a moderate growth rate through 2010. However, growth may occur at a slower pace and over a longer period due to economic factors.

4.12.2 Infrastructure Needs or Deficiencies

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

GDPUD provides treated and untreated water service within its water service area. It obtains its water supply from the Stumpy Meadows Reservoir and treats it at two water treatment plants. Based on the projections in the EDCWA 2007 *Water Resources Development and Management Plan*, the District will not have adequate water supply to meet demands in the future without additional sources of supply and/or demand reductions.

GDPUD operates both water and wastewater systems, and has entered into an agreement for a private entity to operate its two hydroelectric plants. The District has planned for the infrastructure needs of water and wastewater services, and is planning to construct a new water

treatment plant at Greenwood Lake. The District is pursuing new water supply options and is addressing capital needs through its five-year CIP.

4.12.3 Financing Constraints and Opportunities

Purpose: To evaluate a jurisdiction's capacity to finance needed improvements and services.

GDPUD has adequate financial resources to maintain service levels and provide for capital needs. The District has successfully pursued grant funding and leverages the use of project financing. The District has developed alternative revenue sources through hydroelectric projects and the agreement with SMUD for relicensing the UARP Project. However, the District is planning to develop additional water supplies and to construct a \$9 million water treatment plant. These will require significant long term financial commitments from the District.

EDCWA's *Water Resources and Development Management Plan* (November 2007) estimates the cost for the buildout capacity of water supply alternatives for GDPUD at \$198.2 million. This includes two water treatment capacity options; reservoir improvements; improvements to the Rubicon River, Canyon Creek Dam, and Folsom North projects; and priority measures for the ditch system. The Plan notes that, "The timing and capacity of new water supply improvements will be subject to many factors, including actual demands, the provision of water service to Other County Areas and additional irrigation demands." Other factors that may affect implementation include institutional and regulatory requirements, environmental considerations, and cost.

4.12.4 Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

GDPUD is controlling costs for its water supply system by pursuing alternative sources of supply and constructing a new, efficient water treatment plant that meets regulatory requirements.

4.12.5 Opportunities for Rate and Fee Restructuring

Purpose: To identify opportunities to impact rates positively without decreasing service levels.

The District revised its water service rate structure in 2004 and its wastewater service structure in 2005. The water system connection fees were adjusted in 2007 in accordance with the recommendations of a Capital Facility Charge study completed for the District.

4.12.6 Opportunities for Shared Facilities

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

The District shares resources with other regional water providers for water supply and planning. There are limited opportunities to share physical facilities or resources.

4.12.7 Evaluation of Management Efficiencies

Purpose: To evaluate management efficiencies of the jurisdiction.

GDPUD has a general manager and operates under the direction of the Board of Directors. The District uses the Water Reliability Study, annual budget, and five year CIP to plan for District operations.

4.12.8 Government Structure Options

Purpose: To consider the advantages and disadvantages of various government structures to provide public services.

GDPUD is providing adequate service and has planned for future water supply, operational and capital needs. There are no other service providers in the area that could provide cost-effective services to the residents and agricultural customers within the area.

4.12.9 Local Accountability and Governance

Purpose: To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management process.

GDPUD is governed by a locally elected Board of Directors. Meetings are noticed through posting in the District's office and on the District's website. The meetings are open and accessible to the public.

SECTION 5.0

GREENSTONE COUNTRY COMMUNITY SERVICES DISTRICT WASTEWATER SERVICE

5.1 Overview

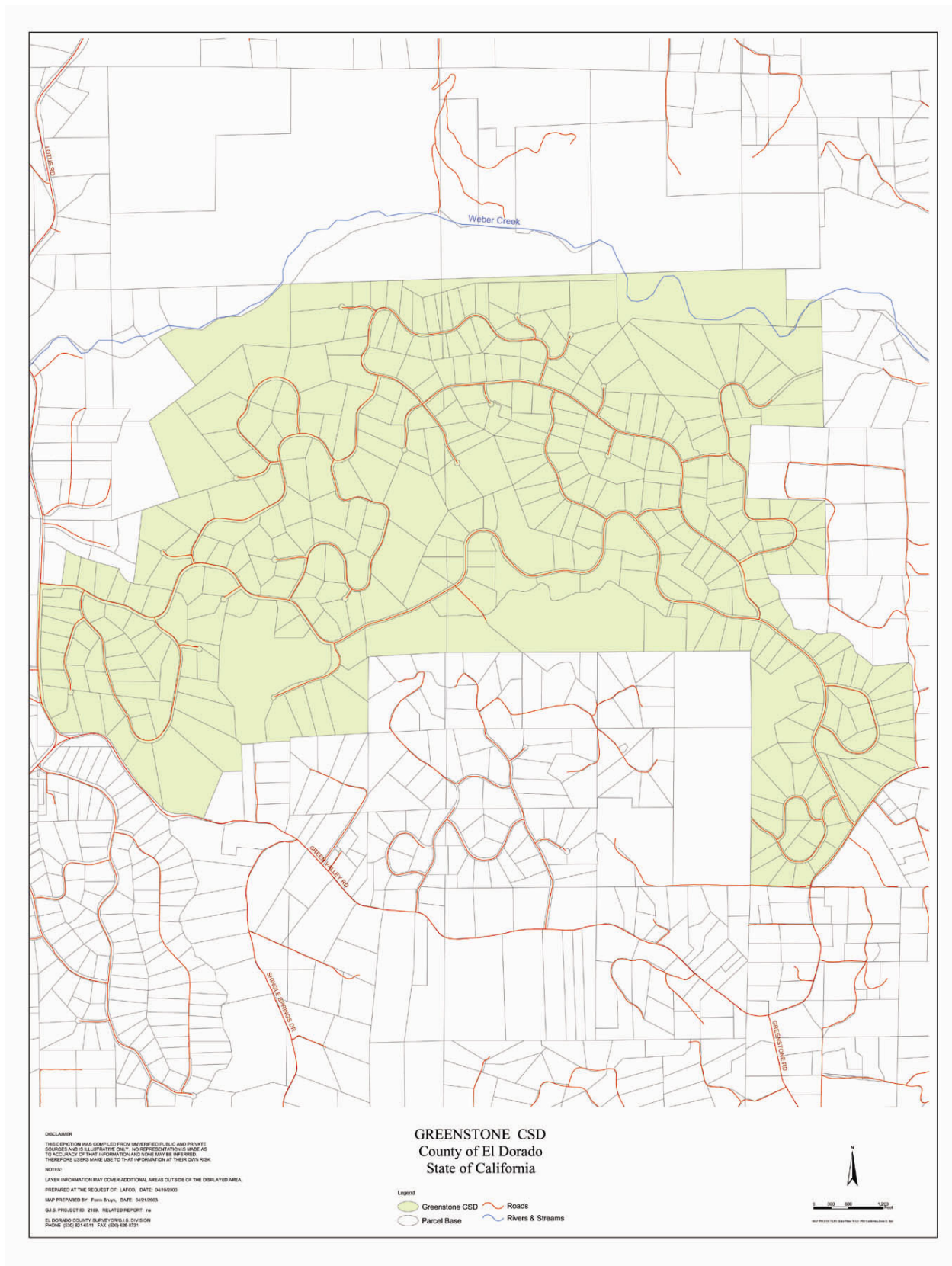
The Greenstone Country Community Services District was formed in 1981 to provide services to the Greenstone Country Subdivision located north of Green Valley Road in the Rescue area. The District's boundaries encompass approximately 3.5 square miles of unincorporated area; its boundaries and sphere of influence (SOI) are coterminous. The District provides the following services: septic system inspections; water quality testing in the community's lakes and streams; and maintenance of the parks, lakes, and trails that are owned by the homeowners association. The District does not own any wastewater infrastructure. Water service is provided by the El Dorado Irrigation District.

The District's profile is shown in *Table 5.1* and a map of the District's current boundary and SOI are shown in *Figure 5.1*.

Table 5.1
Greenstone Country CSD
Wastewater Service Information

Service Area / Financial Summary	
District Office:	3451 Stagecoach Road Placerville, CA 95667 (530) 622-6120
Service Area:	3.5 square miles
Population:	Est. 700 population (Year 2007)
Operating Budget (FY 2007-2008):	Revenues / Expenditures:\$206,400 / \$199,700
Net Assets 06/30/2006	
Wastewater Service Data	
Services:	Inspect septic systems, test water quality in lakes and streams, maintain recreation facilities
Number of Septic Systems	Approx. 347

5.0 Greenstone Country Community Services District Wastewater Service



5.2 Growth and Population Projections

The Greenstone Country community was developed in the early 1980's with equestrian properties and recreational amenities. The boundaries of the Greenstone Community Services District (GCCSD) include 347 parcels with an estimated population of 700 people. The area is designated for low density residential land use per the El Dorado County General Plan Land Use Element (July 2004); it is outside the urban limit line (ULL) established for the Placerville and Shingle Springs Community Regions.

Little growth is anticipated within the District's boundaries other than what will occur as a result of development of existing parcels.

5.3 Infrastructure Needs or Deficiencies

One of the conditions of approval for the Greenstone Country subdivision was the establishment of a public entity to maintain the sewage disposal systems as all properties are served by individual septic systems. In 1981 the Central Valley Regional Water Quality Control Board granted the GCCSD a waiver of waste discharge requirements based on the fact that the District had been formed for the operation and maintenance of the septic systems and the County regulates single family residential on-site wastewater treatment and disposal systems (Resolution No. 81-068). At the time of approval, the Regional Board expressed concern that the systems could fail due to shallow soil, slow percolation rates, and installation of systems that are unproven. The waiver remains in force at the Regional Board's discretion. This is not expected to change as long as there are no issues with the septic systems impacting water quality.

The County's Environmental Health Division is responsible for protecting public health and the environment from impacts associated with on-site individual sewage disposal systems. The County's Ordinance 15.32 includes the requirements for a private sewage disposal system.

GCCSD owns some equipment but does not own any wastewater infrastructure. The District has a long-standing contract with a Registered Geologist to provide ongoing engineering services, including conducting annual inspections of all septic systems and performing water quality testing on the community's lakes and streams. All new construction is reviewed by the District Geologist and must be permitted by the County. The water quality data is provided to the County in accordance with the County's requirements.

The District maintains reserves to replace capital assets and for miscellaneous capital improvements, including lake repairs. The District was projecting approximately \$231,000 in reserves at June 30, 2007.

5.4 Financing Constraints and Opportunities

GCCSD's primary sources of revenue are the District's share of the one percent property tax and a special tax approved in October 1981. *Table 5.2* summarizes the adopted budgets for FY 2006/2007 and 2007/2008 of the District.

**Table 5.2
Greenstone Country CSD
Financial Summary**

	FY 2006-2007 Budget	FY 2007-2008 Budget
Fund Balance, Beginning	\$105,843	\$156,661
Property Taxes	\$136,400	\$153,900
Direct Assessment	\$32,000	\$33,000
Planning/Engineering Svcs	\$7,000	\$7,000
Interest	\$5,000	\$12,500
Total Funding Sources	\$286,243	\$363,061
Operating Expenses	\$205,100	\$199,700
Contingency	\$74,643	\$141,379
To Reserves	\$6,500	\$21,982
Total Appropriations	\$286,243	\$363,061

GCCSD has adequate financial resources to continue to provide services for the community; the District has no long term debt and no major infrastructure needs.

5.5 Cost Avoidance Opportunities

The District is controlling costs by operating with limited paid staff. It contracts with a Registered Geologist to provide the necessary services to ensure that septic system monitoring occurs and owners are notified immediately before a system fails. This level of monitoring has enabled the District to maintain the conditions which allow for the discharge waiver from the Regional Board to remain in force. The District also contracts for maintenance and security services. For FY 2006/07, the District budgeted the following for contract services:

- \$32,000 for engineering services
- \$10,000 for maintenance and specialized services
- \$12,500 for security services

5.6 Opportunities for Rate and Fee Restructuring

Properties within the GCCSD boundaries are assessed a special tax of \$100 per improved lot and \$50 per unimproved lot for general district purposes. This special tax was approved in October 1981 with limits of \$300 per parcel per year plus \$150 per year per improvement. The District also receives on average 10.1 percent of the property tax base share assessed on the parcels within its boundaries. These revenues are adequate for the District to continue to provide services, provide for equipment needs, and maintain reserves.

5.7 Opportunities for Shared Facilities

Greenstone Country CSD serves the Greenstone Country community by monitoring septic systems, performing water quality testing, and maintaining recreation facilities on behalf of the homeowners association. The District is adjacent to Mortara Circle CSD; however, the latter agency only provides road and road maintenance services. Given the differences in services, these two entities have no opportunity to share facilities.

5.8 Evaluation of Management Efficiencies

GCCSD has a General Manager and contracts for engineering, maintenance, and security services. The District plans for operational and capital needs through the annual budgeting process.

5.9 Government Structure Options

GCCSD serves the Greenstone Country community within the Rescue area of El Dorado County. The District is providing adequate service and has planned for operational needs. Approval of the subdivision was conditioned on the establishment of a public entity to maintain the sewage disposal systems. No other agency was identified that could cost-effectively provide the services the District is providing to the community, including recreational facility maintenance. Therefore, no other government structure options were identified.

5.10 Local Accountability and Governance

The Greenstone Country CSD is governed by a five-member Board of Directors elected at large by voters within the District. The Board reviews the General Manager's performance annually. The governance is summarized in *Table 5.4*.

**Table 5.4
Greenstone Country Community Services District**

Date Formed:	May 1981		
Statutory Authorization:	Community Services District Law (Government Code §61000)		
Board Meetings:	District Office, 1st Wednesday, quarterly at 8:30 am		
Member	Title	Term Expires	Compensation
Van Dossey	Director	December 2010	None
Robert Caldwell	Director	December 2010	
Bob Ayrest	Director	December 2008	
Bertram Drouin	Director	December 2008	
Richard Reid	Director	December 2008	

GCCSD does not have a website. Meetings are open to the public; meeting notices are posted at least 72 hours in advance at the main community building and the two US Post Offices in the area.

5.11 Sphere of Influence Recommendations

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review and update the sphere of influence (SOI) for each of the special districts and cities within the county.¹ The SOI is defined by statute as a “plan for the probable physical boundary and service area of a local government agency as determined by the commission” (Government Code §56076).

Greenstone Country CSD’s sphere of influence is coterminous with its boundary. Given the purpose of the District to serve specific needs of the Greenstone community, this SOI is appropriate for the District and its service area.

5.12 Determinations

5.12.1 Growth and Population

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

The Greenstone Country CSD serves the unincorporated Greenstone Country community, a subdivision located in the Rescue area. The District serves an estimated population of 700.

¹ State of California Government Code Section 56425 et seq.

Limited growth within the District is expected and will be due primarily to development of remaining vacant parcels.

5.12.2 Infrastructure Needs or Deficiencies

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

The Greenstone Country CSD provides inspections of septic systems and tests water quality in lakes and streams. The District also maintains the community's parks, lakes, and trails that are owned by homeowners association. The District does not own any wastewater infrastructure and no infrastructure needs or deficiencies were noted.

5.12.3 Financing Constraints and Opportunities

Purpose: To evaluate a jurisdiction's capacity to finance needed improvements and services.

The Greenstone Country CSD is funded through the District's share of the one percent property tax and a special tax. The District has adequate financial resources to maintain service levels and provide for equipment replacement and miscellaneous improvements to the recreational facilities.

5.12.4 Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

The Greenstone Country CSD controls costs by having limited paid staff and contracting for services such as engineering, maintenance, and security.

5.12.5 Opportunities for Rate and Fee Restructuring

Purpose: To identify opportunities to impact rates positively without decreasing service levels.

The special tax for the Greenstone Country CSD was approved in 1981. The property tax and special tax revenues are adequate for the District's operations.

5.12.6 Opportunities for Shared Facilities

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

The Greenstone Country CSD provides services for the Greenstone Country community, and there are limited opportunities to share facilities with other agencies.

5.12.7 Evaluation of Management Efficiencies

Purpose: To evaluate the internal organizational structure of the jurisdiction.

The Greenstone Country CSD operates with minimal staff under the direction of the Board of Directors. The District uses the annual budget to plan for District operations.

5.12.8 Government Structure Options

Purpose: To consider the advantages and disadvantages of various government structures to provide public services.

The Greenstone Country CSD is providing adequate service and has planned for future operational and capital needs. There are no other service providers in the area that could provide cost-effective services for septic system monitoring and recreational facility maintenance.

5.12.9 Local Accountability and Governance

Purpose: To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management process.

The Greenstone Country CSD meetings are open and accessible to the public. Meeting notices are posted 72 hours in advance.

SECTION 6.0

GRIZZLY FLATS COMMUNITY SERVICES DISTRICT

WATER SERVICE

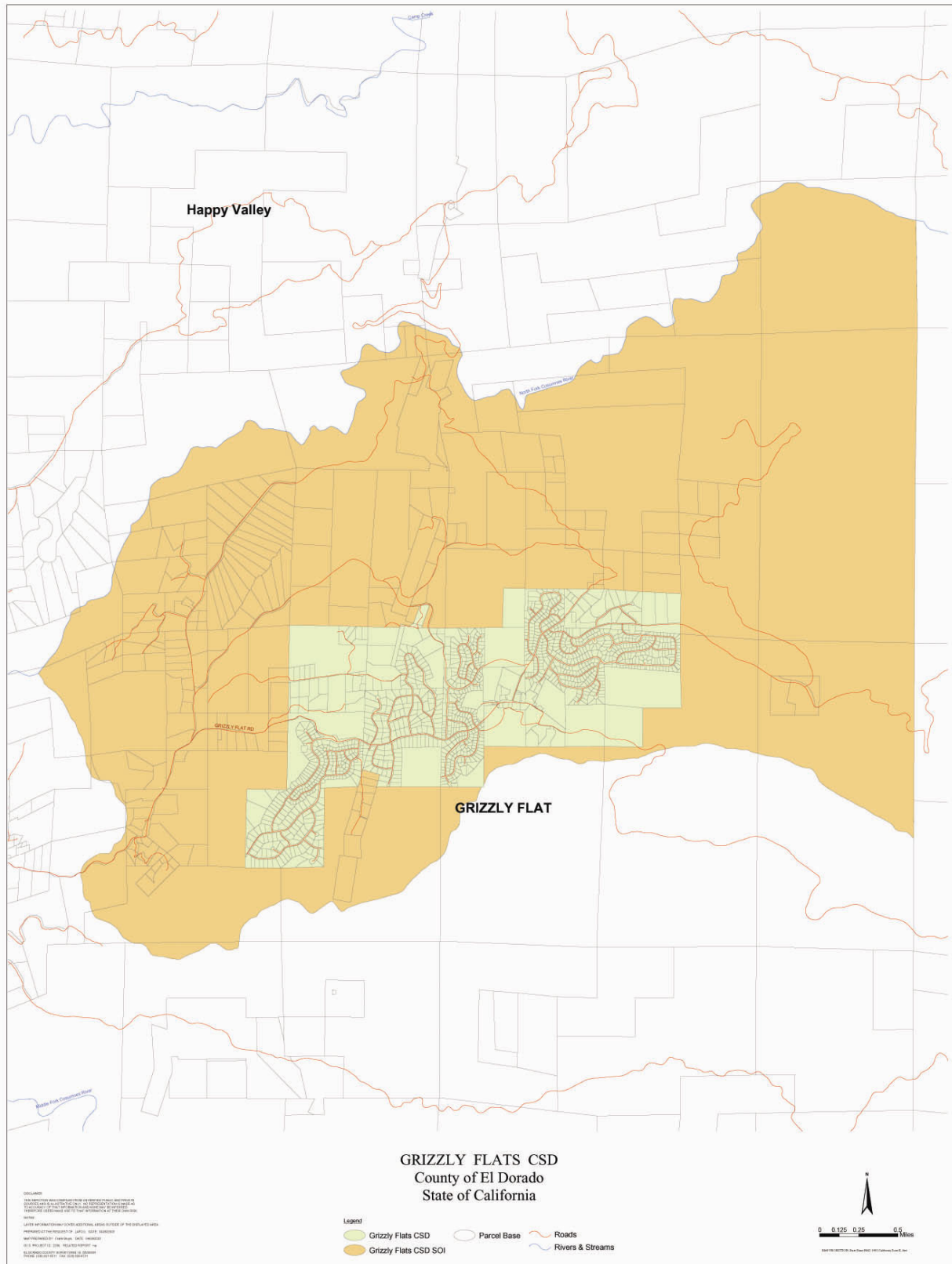
6.1 Overview

The Grizzly Flats Community Services District (GFCSD) was formed in 1987 to serve the unincorporated Grizzly Flat community in the southern portion of El Dorado County. The District's boundaries encompass an area of approximately 2.7 square miles surrounded by the Eldorado National Forest. The District's Sphere of Influence (SOI) encompasses an additional 13.6 square miles. GFCSD provides water that may be used for domestic use or fire protection. The District's primary water supply is obtained through diversion of stream flows from the North Canyon and Big Canyon Creeks, tributaries to the North Fork Cosumnes River. The water system infrastructure includes Eagle Ditch for conveyance, a raw water storage reservoir, treatment facility and storage, and distribution pipelines. Due to the water source and limited seasonal storage capacity, the District is vulnerable to water supply deficiencies during dry periods. The District's profile for water service is shown in *Table 6.1*, and a map of the District's current boundary and SOI are shown in *Figure 6.1*.

Table 6.1
Grizzly Flats CSD
Water Service Information

Service Area / Financial Summary	
District Office:	4765 Sciaroni Road PO Box 250 Grizzly Flats, CA 95636 (530) 622-9626 www.grizzlyflats.us/gfcsd
Service Area:	2.71 square miles
Population:	Est. 1,700 population (Year 2007)
Operating Budget (FY 2007-2008):	Revenues / Expenditures: \$431,658 / \$425,215
Net Assets 06/30/2006:	(not provided)
Water Service Data	
Services	Water for domestic use and fire protection
Number of Service Connections	Approx. 600
Water Main / Pumps	(not provided) miles of main / 7 pumps
Average Age of Distribution System	40 years
Treatment and Capacity	(not provided)
Storage Capacity	Raw water: 1 reservoir / 30 acre-feet Treated water: 2 tanks / 600,000 gallons

6.0 Grizzly Flats Community Services District Water Service



6.2 Growth and Population Projections

The Grizzly Flat community is located in the southern portion of El Dorado County and is surrounded by the El Dorado National Forest. It is considered a Rural Center per the El Dorado County General Plan Land Use Element (July 2004); therefore an urban limit line (ULL) is established for the community. The District's current boundaries are fairly consistent with the ULL. Land uses include medium to high density residential.

There are an estimated 1,222 parcels within the District's boundaries, with 600 customers receiving service. Using a factor of 2.9 residents per single family residential unit¹, the service population is approximately 1,700 residents. This area has a high percentage of homes that are used seasonally; although it is anticipated that the number of permanent residents will increase over the next twenty years. Based on the El Dorado County Assessor's records in 2002, there were 387 acres of vacant land in the Grizzly Flat area comprising 58 parcels. A number of the remaining lots are not developable due to environmental conditions.

The El Dorado County Water Agency (EDCWA) *Water Resources Development and Management Plan* (November 2007) uses growth projections based on the approved land uses in the County's 2004 General Plan. The 2004 General Plan estimates that there were 278 household units in the GFCSD area in 1999, increasing to 429 units by 2025 and 2,472 units at build out. The *Water Resources Development and Management Plan* estimates that there are approximately 1,200 parcels within the District boundary. With a demand factor of 0.42 acre-feet per dwelling unit, water demand at buildout² would be approximately 504 acre feet per year.

The topography and surrounding national forest pose significant physical limitations on the District's service area; consequently, little growth is anticipated within the District's boundaries. The growth that does occur will be a result of development of existing parcels and the transition from seasonal occupancy to permanent residencies.

6.3 Infrastructure Needs or Deficiencies

The Grizzly Flats CSD provides domestic water service and water for fire suppression for both structures and wildfires. Upon formation, the District assumed the water rights and facilities of the privately owned Grizzly Park Water Company. GFCSD has pre-1914 water rights and appropriative water rights to the North Canyon and Big Canyon Creeks, tributaries to the North Fork Cosumnes River, and to an unnamed tributary to Steely Creek. The District has an aging infrastructure system that dates back to the 1960s with inadequate seasonal storage capacity. In

¹ Sacramento Area Council of Governments factor for single family residential properties

² Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

September 2007, the District declared a Stage 1 Water Emergency Alert due to reduced flows in the creeks and limited stored supply.

There are no public wastewater services in the community; all developed parcels have individual septic systems.

6.3.1 Water Supply and Demand

GFCSD has a pre-1914 water right to divert water from two creeks, the North Canyon Creek and Big Canyon Creek in the North Fork Cosumnes River Basin. The North Canyon Creek watershed covers approximately 1,120 acres and the Big Canyon Creek watershed covers approximately 1,715 acres. These creeks are fed by seasonal rainfall and snowmelt and are part of a spring-fed system. Approximately seven parcels located outside and upstream of the District's boundary share this water source, which has a firm yield of 143.5 acre-feet of water per year. The District also has two permits from the State Water Resources Control Board for additional diversions. Permit 20357 authorizes the District to divert up to three acre feet per year (between November 1 and June 15) from an unnamed tributary to the Steely Fork of the Cosumnes River. This water is stored in Porters Pond for fire suppression purposes as no treatment is available. Permit 20358 allows the District to divert up to 31 acre feet per year (between November 1 and June 15) from the North Canyon Creek and Big Canyon Creek for seasonal storage in the raw water reservoir.

The District has one well with an estimated capacity of 15 gallons per minute; however it has high levels of manganese and iron and requires treatment upgrades before it can be used for potable supply. At this time groundwater is not considered a viable source of water supply.

Based on metered usage, water demands for GFCSD were 130 acre-feet in 2005. All District customers are metered, and the District is implementing a Stream Gauging Project to record water levels in order to provide more accurate data for future water supply and demand forecasts as well as for drought management studies.

EDCWA's *Water Resources and Development Management Plan* (November 2007) includes water demand projections for GFCSD of 504 AF/Yr at buildout based on land uses within the County's 2004 General Plan. Using the District's projected supply of 143 AF/Yr, an additional 361 AF/Yr would be needed at buildout to meet projected demand.

The District encourages conservation and has adopted water use prohibitions. Ordinance 88-1 outlines water shortage response measures, including three stages of water emergency conditions under which customers are expected to conserve from 10 to 50 percent of average daily use depending on the severity. The projected water supply and demand for GFCSD through buildout is shown below in *Table 6.2*.

Table 6.2
GFCSD Water Supply and Demand
(AF/Yr)

	2005	Buildout¹
Supply:		
Surface Water	143.5	143.5
Off stream storage		361
Total Supply	143.5	504
Demand	130	504
Difference	13.5	0

¹Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

6.3.2 Water System Infrastructure

Water is conveyed from the diversion points on the North Canyon Creek and Big Canyon Creek through GFCSD's piped Eagle Ditch to an earthen reservoir with a storage capacity of 30 acre-feet. The reservoir provides little or no seasonal storage and no carryover storage. As noted above, adequate supply and storage is an issue.

The raw water is treated to drinking water standards at the District's treatment facility that has a capacity of 400 gallons per minute. It is adequate to meet current demand, but depending on growth, expansion may be necessary in the future. The District added additional filtration in 2003 along with a new 200,000 gallon storage tank. The storage capacity for treated water is now 600,000 gallons. The distribution is mainly gravity fed with pumping in limited areas.

There are 144 fire hydrants in the community, rated at more than 500 gallons per minute. The raw water reservoir maintains a two million gallon reserve for fire protection purposes. This is considered adequate for local structural fire protection but not wildfire suppression.

The District is actively pursuing opportunities to improve storage capacity:

- The District is considering constructing a 350 acre-foot reservoir which would increase system firm yield to 526 acre feet per year (Reconnaissance investigation of Offstream Storage, 1998) in the vicinity of the District, preferably in a location that would allow for gravity flow to the treatment facility. The off-stream retention facility is intended to meet both wildfire suppression needs as well as potable water demand. The District has authorized a feasibility investigation to evaluate three locations.
- The District was pursuing a second reservoir on US Forest Service property; however the US Forest Service has denied the District's request to site a second reservoir on Forest Service property.

- The District is planning to line the upper portions of the side slopes of the existing reservoir to reduce leakage and increase the safe yield.

In June 2006 the District adopted a seven year Capital Improvement Plan that identifies approximately \$5.1 million in projects, including the following:

- \$4.6 million for an offstream storage reservoir
- \$385,000 to line the existing reservoir
- \$72,750 for meters, pipelines, and pump station improvements
- \$42,000 for shop and driveway/entrance improvements

At June 30, 2006 the District had approximately \$658,000 in reserves restricted for capital projects. However the District does not have sufficient revenue or reserves to fund the reservoir project and will have to pursue grants and loans.

6.3.3 Summary

GFCSD has a limited water supply that is subject to significant decreases during dry years. This situation is further exacerbated by limited seasonal storage capacity and the demands for potable water supply as well as adequate supply for structural and wildfire suppression. Constructing a new reservoir is a long term effort that will require negotiations with a number of entities, including the US Forest Service and private interests. Therefore, securing an adequate, reliable water supply will remain a significant infrastructure need for this District until a new storage facility is operational.

6.4 Financing Constraints and Opportunities

GFCSD's primary sources of revenue are water sales and connection fees. The District has reserves, including restricted reserves for capital projects and debt service. *Table 6.3* summarizes the financial history of the District.

Table 6.3
GFCSD
Financial Summary

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Projected	FY 2007-2008 Budgeted
Operating Revenues	\$466,806	\$404,925	\$431,718.00	\$431,658.00
Operating Expenses	\$301,934	\$339,533	\$406,391.00	\$425,215.00
Net Non-operating Revenues / (Expenses)	\$59,526	\$21,446	\$25,327.00	\$6443.00
Operating Transfers	(\$1,764)			
Change in Net Assets	\$222,634	\$86,838		

Table 6.3
GFCSD
Financial Summary

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Projected	FY 2007-2008 Budgeted
Beginning Balance	\$1,469,418	\$1,692,518	\$1,828,837	
Net Assets, End of Year	\$1,692,518	\$1,828,837		

At June 30, 2006 the District had cash reserves of \$909,180 with restricted reserves of \$747,215.

In 1998 GFCSD received a loan from the El Dorado Irrigation District (EID) to finance certain joint construction projects. The loan bears an interest rate of 5.38 percent per annum and matures in 2018. Annual payments of principal and interest total \$9,061; the outstanding balance at June 30, 2006 was \$120,012.

In 2004 GFCSD received a State Revolving Fund loan from the California Department of Water Resources; the proceeds were used for the construction of a 200,000 gallon water storage tank and an additional water treatment unit. The low interest loan matures in 2024 and bears an annual interest rate of 2.8 percent. Annual payments are \$16,619; the outstanding balance at June 30, 2006 was \$299,142.

GFCSD adjusted its rate structure in April 2006 to ensure adequate revenues to maintain service levels, provide for debt service and capital needs, and maintain reserves. The District partners with other agencies in El Dorado County for water planning and is pursuing grant funding for a portion of the cost to line the existing reservoir and to construct the new reservoir. However, the \$5.1 million in costs for the planned capital improvements as outlined in *Section 6.3* above are significant relative to the size of the district and its financial resources.

6.5 Cost Avoidance Opportunities

The District has made effective use of volunteers which has kept costs lower than if the District had a larger paid staff. Tasks such as maintenance of infrastructure and brush cleanup, clerical tasks as well as meter reading have been accomplished by volunteers. Additionally, volunteers have constructed a filter take building and installed approximately three miles of pipe between the North and Big Canyon Creek diversion points.

6.6 Opportunities for Rate and Fee Restructuring

GFCSD revised its rate structure in April 2006 to reflect the increased costs for service and infrastructure needs. The previous rate adjustment was approved in 1999. The monthly service charge was increased from \$30 to \$35 with an automatic three percent increase each July 1st with no cap. The District has a usage charge based on 100 gallon increments. The usage rates were

increased one percent with a 40 percent increase cap on the last tier (over 2,500 gallons). Residential properties are charged a flat rate up to 300 gallons per day. After that, the usage is based on a tiered rate. The majority of customers use 300 gallons or less per day. Under this rate structure, those customers would pay \$37.13 per month for water.

The District's current capital connection charge for water service is \$5,700 and \$750 for installation fees. In light of the capital improvement needs, the District should evaluate the connection charge given projected costs and anticipated cost inflation.

In addition to the service charges and connection fees, the District assesses a special standby or availability fee. Parcels within the District's boundaries are assessed \$48 each year to maintain or increase the present level of services.

6.7 Opportunities for Shared Facilities

Grizzly Flat is in a remote geographic region of the county making shared facilities unlikely. The largest water and wastewater provider, El Dorado Irrigation District, is approximately 2 miles to the northwest of the District. Due to EID's extensive infrastructure network, EID could potentially work with GFCSD to provide services. However, cost would be a significant limiting factor.

GFCSD does participate in regional water planning efforts and has worked with EID in the past on infrastructure projects that provided benefit to both districts.

6.8 Evaluation of Management Efficiencies

GFCSD has minimal staff and operates under the oversight of the elected Board of Directors. The District uses volunteer services for both field and office duties to the extent practical.

6.9 Government Structure Options

GFCSD serves the Grizzly Flat community within southern El Dorado County. The District is providing adequate service and has planned for infrastructure needs. Per the El Dorado County General Plan Public Services and Utilities Element (July 2004), public water service is to be provided as this area is designated as a Rural Center. The community is surrounded by the Eldorado National Forest, and there are no other service providers in the area that could provide public water service. Therefore, no other government structure options were identified.

6.10 Local Accountability and Governance

The Grizzly Flats CSD is governed by a five-member Board of Directors elected at large by voters within the District. The governance is summarized in *Table 6.4*.

Table 6.4
Grizzly Flats Community Services District

Date Formed:		October 1987	
Statutory Authorization:		Community Services District Law (Government Code §61000)	
Board Meetings:		District Office, 3 rd Tuesday of each month at 1 pm	
Member	Title	Term Expires	Compensation
Richard Englefield	President	December 2009	None
Fred Strauss	Vice President	December 2009	
Jackie Smelser	Treasurer	December 2011	
Richard Dawdy	Director	December 2009	
Mel Kelley	Director	December 2011	

GFCSD encourages public participation by making District information and documents available on the District’s website (<http://www.grizzlyflats.us/gfcsd/index.htm>) and holding meetings that are open and accessible to the public. Meeting notices are posted at least 72 hours in advance at the Grizzly Flats Post Office and in the District’s office.

6.11 Sphere of Influence Recommendations

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review and updates the sphere of influence (SOI) for each of the special districts and cities within the county.³ The SOI is defined by statute as a “plan for the probable physical boundary and service area of a local government agency as determined by the commission” (Government Code §56076).

GFCSD’s current SOI encompasses 13.6 square miles as shown in *Figure 6.1*. The County has established a Rural Center boundary for the Grizzly Flat community that limits growth in areas surrounding the District, and public water service will not be necessary. As discussed in *Section 6.3*, annual water supply is marginally adequate to meet existing demand within the District’s current service area. However, supplies will not be adequate to meet buildout demand. The

³ State of California Government Code Section 56425 et seq.

District has inadequate seasonal storage capacity and is working on a new offstream storage reservoir that will enable GFCSD to meet buildout demand. The District's SOI should be coterminous with the District's boundary; furthermore, the District's boundary should be evaluated with respect to consistency with the urban limit line to identify inconsistencies.

6.12 Determinations

6.12.1 Growth and Population

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

The Grizzly Flats CSD serves the Grizzly Flat community, designated in the County's 2004 General Plan as a Rural Center with an urban limit line. The current estimated population is 1,700 residents. Limited growth within the area is expected and will be due primarily to development of remaining vacant parcels and a transition from seasonal occupancy to permanent residencies.

6.12.2 Infrastructure Needs or Deficiencies

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

The Grizzly Flats CSD has pre-1914 and appropriative water rights; however this supply is variable and the community is at risk for supply reductions during dry periods. Annual water supply is marginally adequate to meet existing demand within the District's current service area. However, supplies will not be adequate to meet buildout demand. The District has inadequate seasonal storage capacity and is working on a new offstream storage reservoir that will enable GFCSD to meet buildout demand.

6.12.3 Financing Constraints and Opportunities

Purpose: To evaluate a jurisdiction's capacity to finance needed improvements and services.

The Grizzly Flats CSD has adequate financial resources to maintain service levels, provide for debt service and some capital needs, and to maintain reserves. However, the costs associated with developing additional storage facilities are significant. The District is pursuing grant funding to offset a portion of the cost.

6.12.4 Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

The Grizzly Flats CSD uses volunteers to the extent practical to control operational costs.

6.12.5 Opportunities for Rate Restructuring

Purpose: To identify opportunities to impact rates positively without decreasing service levels.

The Grizzly Flats CSD adjusted its water services rates in 2006, although the connection fees have not been revised since 1998. The District should evaluate these fees with respect to capital needs and cost inflation.

6.12.6 Opportunities for Shared Facilities

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

The Grizzly Flats CSD is isolated from other service providers, and there are limited opportunities to share facilities. The District does participate in regional water planning efforts.

6.12.7 Evaluation of Management Efficiencies

Purpose: To evaluate the internal organizational structure of the jurisdiction.

The Grizzly Flats CSD operates with minimal staff under the direction of the Board of Directors. The District uses adopted policies, the annual budget, and the seven year Capital Improvement Program to guide District operations.

6.12.8 Government Structure Options

Purpose: To consider the advantages and disadvantages of various government structures to provide public services.

The Grizzly Flats CSD is providing adequate service and has planned for future capital needs. There are no other service providers in the area that could provide public water service.

6.12.9 Local Accountability and Governance

Purpose: To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management process.

The Grizzly Flats CSD encourages public participation by making information and documents available on the District's website and holding meetings that are open and accessible to the public.

SECTION 7.0

SOUTH TAHOE PUBLIC UTILITY DISTRICT

WATER AND WASTEWATER SERVICES

7.1 Overview

The South Tahoe Public Utility District (STPUD) provides municipal water and wastewater services in the southern portion of the Tahoe Basin. The District was formed in 1950 to provide wastewater services while small private water companies and water mutuals provided water service. The District's original infrastructure consisted of two redwood septic tanks. In 1960 the District built its wastewater treatment plant, which has since been expanded to a treatment capacity of 7.7 million gallons per day (MGD). Environmental regulations require that all wastewater be exported outside of the Tahoe Basin. STPUD treats the wastewater to an advanced secondary level before exporting to Alpine County for use as agricultural irrigation or for fire suppression. STPUD began providing domestic water service in the mid 1970's through the acquisition of the water companies and water mutuals that could no longer meet regulatory requirements for drinking water.

STPUD serves an area of 42.2 square miles with a population of approximately 37,700. The District has a sphere of influence that encompasses an additional 3.2 square miles, which consists of lands in the central portion of the District. STPUD is within the jurisdictional boundaries of the Tahoe Regional Planning Agency (TRPA), a federal bi-state agency with authority to set strict limits to control growth. STPUD's profile for water and wastewater service is shown in *Table 7.1* and a map of the District's boundary and current SOI is shown in *Figure 7.1*.

Table 7.1
South Tahoe Public Utility District
Water and Wastewater Service Information

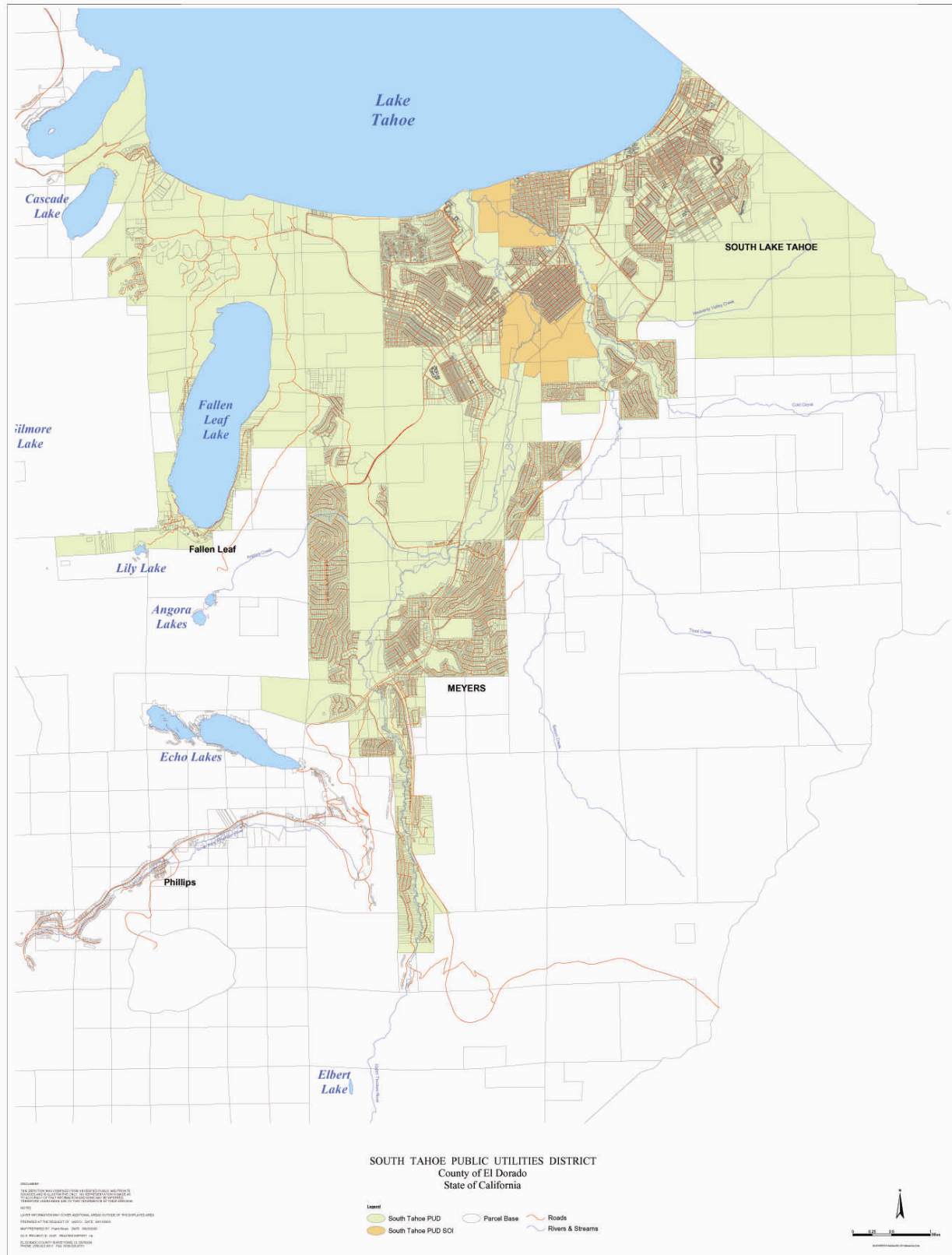
Service Area / Financial Summary	
District Office:	1275 Meadow Crest Drive South Lake Tahoe, CA 96150 (530) 544-6474 www.stpud.us
Service Area:	42.2 square miles
Population:	37,700 (Year 2007) Average Annual Growth Rate = 0.2%
Budget (FY 2007-2008):	Revenues / Expenditures: \$33 million / \$43 million Net Assets 06/30/2007: \$183,270,434

7.0 South Tahoe Public Utility District Water and Wastewater Services

**Table 7.1
South Tahoe Public Utility District
Water and Wastewater Service Information**

Water Service Data	
Services	Water Treatment, Distribution
Water Supply	Groundwater – 9,528 af
Number of Service Connections	~13,900
# Wells / Miles of Water Main / Number of Pump Stations	14 active wells / 370 miles / 15 pump stations
Average Age of Distribution System	approx. 40 years
Treatment	Well treatment for MTBE
Average Day Demand / Maximum Day Demand	7.09 MGD / 17 MGD
Storage Capacity	22 tanks / 9.9 mg
Wastewater Service Data	
Services	Wastewater collection, treatment and disposal
Number of Service Connections	~17,800
Lift Station / Collection Lines	42 lift stations / 420 miles
Avg. Dry Weather Flow	Approx. 4.2 MGD
Treatment / Capacity	STPUD Wastewater Treatment Plant – 7.7 MGD
RWQCB Region	Region 6 – Lahontan
Orders	Order No. R6-2004-010 – Waste Discharge Rqmts Order No. R6-1988-014 – Cease and Desist Order No. 2006-0003 – Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

7.0 South Tahoe Public Utility District Water and Wastewater Services



7.2 Growth and Population Projections

STPUD serves an area within the southern portion of the Tahoe Basin in El Dorado County. This includes the City of South Lake Tahoe and a number of unincorporated communities such as Montgomery Estates, Tahoe Paradise, Meyers, Angora Highlands, Fallen Leaf Lake, and Christmas Valley. The current estimated population is 37,700 residents; due to growth restrictions imposed by TRPA, future growth will be very limited. The area has a significant number of part-time residents and experiences population influxes due to seasonal tourism. Although this non-permanent population is not included in the population estimates, STPUD has factored in the demands on the water and wastewater systems.

The majority of the District's customers are single family and multi family residential properties with some commercial uses. A vacant land survey prepared from the El Dorado County Assessor's records in 2002 identified 11,985 acres consisting of 27 parcels within the South Tahoe area. The development of these parcels would be limited to approximately 460 dwelling units due to TRPA regulations. This equates to the development of 92 units per year over a five year period.

Little to no growth is expected to occur within the STPUD service area through 2030 due to TRPA regulations. However, existing development will continue to need public water and wastewater services to ensure a reliable source of water supply and to meet stringent regulatory requirements regarding the treatment and disposition of wastewater.

7.3 Infrastructure Needs or Deficiencies

STPUD relies on local groundwater for its water supply. The District's water infrastructure includes wells with treatment facilities and a storage and distribution system to serve 15 water service zones. The District's wastewater facilities include collection, conveyance, treatment, and discharge to agricultural lands in Alpine County.

7.3.1 Water Supply and Demand

STPUD extracts groundwater from the Tahoe Valley South groundwater basin. Water use within the Tahoe Basin is governed by the *California-Nevada Interstate Compact Concerning Water of Lake Tahoe, Truckee River, Carson River, and Walker River Basins* (Compact) that was approved in 1971. For the California side of the Tahoe Basin, the Compact allows for a total annual surface water and groundwater diversion of 23,000 acre feet per year (AF/Yr). The State Water Resources Control Board adopted a related policy in 1972; the *Policy for the Administration of Water Rights in the Lake Tahoe Basin* states that all surface water and

groundwater diversions shall not exceed the allocations set forth in the Compact. Of the 23,000 AF/Yr maximum established in the Compact, STPUD has rights to 9,528 AF/Yr.

The major water issue in the Tahoe Basin is one of water quality rather than water supply. The groundwater in this area has been impacted by methyl tertiary butyl ether (MTBE). In 1999, the STPUD Board of Directors adopted a policy that prohibits the delivery of drinking water containing detectable concentrations of MTBE. The extent of the contaminated plumes required STPUD to take 13 wells out of production. The District was successful in settling its lawsuit against the oil companies held as the responsible parties for the contamination and in August 2002 received a settlement of \$69.1 million. A District Ordinance restricts the use of the settlement funds to MTBE-related projects, including well treatment, securing alternate potable water sources, and improving the distribution system. The District is gradually restoring its groundwater supply system through the construction of three new wells and the use of effective wellhead treatment technology. Currently only two wells require MTBE treatment.

The District has filed several applications with the State Water Resources Control Board for additional water rights of 12,100 acre feet per year (AF/Yr) on Lake Tahoe. These applications are in review, and approval could take many years. STPUD also has water rights to 7,142 AF/Yr from Cold Creek and the Upper Truckee River. These rights are not used due to water quality issues; the District does not believe they may be usable in the foreseeable future and are not factored into the District's water supply projections.

In 2006, STPUD had approximately 13,900 water service accounts, of which 95 percent are residential and the remainder is commercial. This distribution is expected to remain fairly constant through 2030.

The projected water supply and demand through 2030 for STPUD is shown below in *Table 7.2*:

Table 7.2
STPUD Projected Water Supply and Demand
(AF/Yr, normal demand conditions)

	2005	2010	2015	2020	2025
Supply:					
Groundwater	9,528	9,528	9,528	9,528	9,528
Total Supply	9,528	9,528	9,528	9,528	9,528
Demand:					
Residential	6,537	6,652	6,781	6,949	6,949
Commercial	259	299	353	677	677
Un-accounted for Water	600	600	600	600	600
Total Demand	6,796	7,551	7,734	8,226	8,226
Difference	2,732	1,977	1,794	1,302	1,302

Source: STPUD Urban Water Management Plan 2005 Update (Draft January 2007)

The El Dorado County Water Agency *Water Resources and Development Management Plan* (November 2007) includes water demand projections for the Tahoe Basin of 12,362 AF/Yr in 2025 and 12,495 AF/Yr at buildout¹ based on land uses within the County's 2004 General Plan and TRPA regulations limiting growth. These projections also factor in the demand for the Tahoe City Public Utility District as well as demand from any lands outside either district that could be developed. The level of demand is based on assumptions for new residential and commercial development, and redevelopment projects such as new high-quality lodging facilities and higher occupancy rates.

Based on the analysis in STPUD's *Urban Water Management Plan 2005 Update* (January 2007 Draft), the District will have adequate water supplies through 2030 under normal conditions as well as single and multiple dry year scenarios. In the event of a water shortage, the District has a five stage water shortage contingency plan. The first stage is for normal conditions and includes provisions that prevent water waste. The second stage would impose additional conservation measures with only a two percent reduction in supply.

7.3.2 Water System Infrastructure

STPUD's water infrastructure includes a system of wells, water tanks, booster stations, and distribution pipelines. *Table 7.3* summarizes the existing water system facilities:

Table 7.3
STPUD Water System Overview

	Quantity
Wells / Production Capacity	14 active wells / 22.66 MGD
Water Mains / Booster Stations	370 miles / 15 booster stations
Storage Capacity	22 tanks / 9.9 mg
Average Age of Distribution System	Approx. 40 years
Treatment	Well treatment for MTBE
Average Day Demand / Maximum Day Demand	7.09 MGD / 17 MGD

The District has 14 active wells that have a maximum production capacity of 22.66 million gallons per day (MGD). The District began operating three new wells in 2004, 2006, and 2007; a fourth is under construction. Two wells have advanced oxidation MTBE treatment systems. The treatment process meets State Department of Public Health standards to treat to non-detectable levels so that the water can be used as potable water supply. The District is using federal funding provided through the Tahoe Restoration Act to destroy MTBE-contaminated wells where treatment systems will not be cost effective.

¹ Buildout represents total land use capacity with no constraints such as roads, open spaces, preserves, biological corridors, and slope setbacks.

STPUD's water distribution system originated from small private water companies that began serving the area in the late 1940's. The District has 15 water service zones; 15 booster stations are used to distribute water and maintain adequate flows in the system. Although legally not required to provide water for fire suppression, as a public benefit the District installs and provides service to fire hydrants in areas where new water mains are installed.

In 2000, the District's unaccounted for water loss was 13 percent. This includes water losses due to leaks, meter inaccuracies, operational flushing, fire suppression use, etc. This percentage is higher than the industry benchmark of 10 percent. For the past twelve years, the District has been replacing water mains that are undersized or in poor condition. The District has identified 85,000 lineal feet of undersized waterlines (4-inches or less), primarily in older neighborhoods, that need to be replaced with six-inch or greater lines to accommodate water demand and to provide for fire suppression. In addition, the District has identified 50,000 to 75,000 lineal feet of waterlines that are either leak-prone or of substandard material.

STPUD's water system has emergency interties with each of the four adjacent private water utilities: Lukins Brothers Water Company, Tahoe Keys Property Owners Association, Edgewood Water Company, and Lakeside Park Mutual Water Company. The Lukins Brothers Water Company system has severe capacity issues due to undersized infrastructure. At Lukins' request, STPUD conducted an engineering study of the system. The system serves approximately 950 customers. More than \$20 million in capital investment would be needed to bring the system up to STPUD standards. A funding mechanism to address the infrastructure needs (one that would not require the existing customer base to bear the cost) would be needed in order for the District to consider purchasing the system.

Approximately 97 percent of the District's residential accounts are not metered along with 20 percent of the commercial accounts. In 2004, the State enacted legislation requiring that urban water suppliers install water meters on all municipal and industrial service accounts by January 1, 2025 (Water Code Section 527). Furthermore, the law requires that on or after January 1, 2010, any urban water supplier seeking financial assistance from the State for a wastewater treatment project, water use efficiency project, drinking water treatment project, or for a permit for a new or expanded water supply must demonstrate compliance with this law. STPUD is considered an urban water supplier due to the number of customers and volume of water supplied annually. In addition, the District proactively pursues grant funding to assist in this effort. The District is working with the State on a potential extension of the time frame for compliance due to the limited construction season.

STPUD uses a ten year planning horizon for its Capital Improvement Program (CIP). The current CIP extends through FY 2016/2017 and includes approximately \$59 million in water system projects. For FY 2007/2008, STPUD has budgeted for \$7.6 million in water projects,

including \$2.2 million for completion of the new well, \$2.2 million in water distribution system improvements, and \$320,000 to begin the process to replace three aging water storage tanks. The funding for these projects is provided through existing reserves, capital improvement charges, service charges, and grants.

7.3.3 Wastewater System Infrastructure

STPUD operates the only wastewater treatment system in South Lake Tahoe. The wastewater infrastructure consists of facilities for collection, conveyance, treatment, and discharge. *Table 7.4* summarizes the District's existing wastewater system facilities:

Table 7.4
STPUD
Wastewater System Overview

	Quantity
Lift Stations / Sewer Line	42 lift stations / 420 miles sewer line
Average Age of Collection System	Approx. 40 years
Treatment /Capacity	STPUD Wastewater Treatment Plant – 7.7 MGD

STPUD's wastewater treatment plant has a capacity of 7.7 MGD with average flows of 4.2 MGD. The treatment process produces advanced secondary treated effluent. In 2006, the District treated approximately 4,200 acre feet (af) of wastewater flows. Flows are projected to increase to 5,000 AF/Yr by 2015. The plant has a 20 MGD emergency pump to handle wet weather flows and 58 mg of storage that can be used during export system shutdowns, high effluent events, or other disruptions. The plant also has three emergency generators capable of providing sufficient power to maintain normal operations during power outages. The California Integrated Water Quality System (CIWQS) notes a number of potential water quality violations for the plant in the summer of 2007; it should be noted these are subject to review and may be dismissed by the Regional Water Quality Control Board upon satisfactory resolution of the issue.

The Tahoe Preservation Act requires that all wastewater be exported out of the Tahoe Basin watershed. Therefore, STPUD conveys treated effluent 26 miles to Alpine County for agricultural irrigation or fire suppression use. The recycled water to be used for irrigation is stored in the 3,800 af Harvey Place Reservoir in Alpine County, then delivered through the Diamond Ditch system to several ranches that contract with STPUD to provide recycled water discharge. The reservoir is designed and operated to have sufficient capacity to hold wastewater effluent plus maximum flood flow. There have been challenges with some of the areas for land application due to soil conditions and limited percolation capacity. The District recently acquired the Diamond Valley Ranch for agricultural land application of recycled water if necessary.

The District's collection system consists of approximately 420 miles of gravity collection lines and 42 lift stations. In January 2007 the District initiated the preparation of a Wastewater Collection Master Plan. The Plan, which is expected to be complete in 2008, will provide a comprehensive guide for improving the collection system.

STPUD is within the jurisdictional boundaries of the Lahontan Regional Water Quality Control Board (RWQCB) – Region 6. In 2006, the State Water Resources Control Board adopted the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (WQO No. 2006-003-DWQ) and STPUD (as part of the Lahontan Region) must begin reporting all sewer system overflows to the CIWQS by September 2, 2007. The District had no major sanitary sewer overflows (SSOs) in 2006 or 2007.

In addition, the Order requires that the District prepare and implement a Sewer System Management Plan (SSMP) by August 2009. The SSMP provides a plan and schedule to manage, operate, and maintain all parts of the sanitary sewer system to reduce and prevent SSOs and mitigate any SSOs that do occur. STPUD is preparing an SSMP; it is expected to be finalized in October 2007.

The District's ten year CIP includes \$64 million for wastewater projects through FY 2016/2017, including pump replacement, treatment process improvements, and improvements to the headworks. For FY 2007/2008 the District has budgeted for \$10.6 million in wastewater projects. Projects of note include replacement of an effluent pump station, upgrades to the Luther Pass Pump Station for recycled water, and implementation of other improvements to the recycled water system.

7.3.4 Summary

STPUD relies on groundwater produced from the Tahoe Valley South Basin for its water supply. There are significant plumes of MTBE-contaminated groundwater within the Tahoe Basin and the District must provide MTBE treatment on certain wells. The District has destroyed some contaminated wells and has constructed new wells that are not impacted. Through the MTBE settlement the District has funds designated to address contamination issues. Per STPUD's *Urban Water Management Plan 2005 Update* (January 2007 Draft), supplies will be adequate to meet projected demands through 2030 under normal conditions as well as single and multiple dry year scenarios.

STPUD operates both water and wastewater systems, including well treatment and a wastewater treatment plant. Due to strict environmental regulations, all wastewater must be exported out of the Tahoe Basin. The District exports advanced secondary treated effluent to Alpine County for land application and fire suppression use. Waterline replacement and installing meters on non-

metered water accounts will be an infrastructure need for several years as the District systematically implements improvements. For wastewater infrastructure, major improvements are scheduled for the Wastewater Treatment Plant as well as improvements at the Alpine County facilities. The District has planned for the infrastructure needs of its water and wastewater services through its ten-year CIP.

7.4 Financing Constraints and Opportunities

STPUD accounts for its water and wastewater services as business activities, with services funded through service charges. The District also receives a share of the one percent property tax. For FY 2005/2006, total revenues for the District were \$28.2 million and total expenses were \$24.6 million. *Tables 7.5 and 7.6* summarize the financial history of the water and wastewater enterprise funds.

Table 7.5
STPUD
Water Utility Enterprise Fund Summary

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Projected	FY 2007-2008 Budgeted
Operating Revenues	\$8,181,899	\$8,607,064	\$9,036,178	\$9,712,001
Operating Expenses	\$6,161,803	\$6,210,852	\$6,868,762	\$8,849,825
Depreciation	\$1,367,008	\$1,452,289	\$1,802,714	\$2,000,000
Net Non-operating Revenues / (Expenses)	\$970,227	\$1,460,955	\$1,750,978	\$1,682,512
Contributions/Reimb.	\$60,000	(\$727,626)	\$7,630	\$1,160,000
Change in Net Assets	\$1,683,315	\$1,617,252	\$2,123,310	\$1,704,688
Beginning Balance	\$67,207,438	\$68,890,753	\$70,508,005	\$72,631,315
Net Assets, End of Year	\$68,890,753	\$70,508,005	\$72,631,315	\$74,336,003

The Water Utility Enterprise Fund had an unrestricted net asset balance of \$9.2 million at June 30, 2007.

Table 7.6
STPUD
Sewer Enterprise Fund Summary

	FY 2004-2005 Actual	FY 2005-2006 Actual	FY 2006-2007 Projected	FY 2007-2008 Budgeted
Operating Revenues	\$10,545,311	\$10,960,272	\$11,309,020	\$12,218,101
Operating Expenses	\$11,015,664	\$10,516,292	\$11,856,445	\$13,791,775
Depreciation	\$4,396,910	\$4,520,427	\$4,521,411	\$4,949,000
Net Non-operating Revenues / (Expenses)	\$4,821,363	\$5,306,593	\$6,596,924	\$5,964,793
Contributions	\$167,347	0	\$81,634	\$429,583
Change in Net Assets	\$121,447	\$1,230,146	\$1,609,722	(\$128,298)
Beginning Balance	\$107,678,004	\$107,799,451	\$109,029,597	\$110,639,319
Net Assets, End of Year	\$107,799,451	\$109,029,597	\$110,639,319	\$110,511,021

The Sewer Enterprise Fund had \$15.6 million in unrestricted net assets at June 30, 2007.

STPUD maintains reserves designated for operations, capital improvements, self-insurance, and rate stabilization. The District's reserve policy establishes the minimum and maximum amount of reserves for each purpose. The following summarizes the adopted reserve limits and estimated balance at June 30, 2007: {to be provided}

	Estimated Balance	Reserve Limit
▪ Operations:	\$4.5 million	\$6.7 million
▪ Capital:	\$23.4 million	\$172.9 million
▪ Self-Insurance:	\$300,000	\$2.2 million
▪ Rate Stabilization:	\$5.7 million	\$9.3 million

STPUD has several long term debt obligations related to capital improvements, including a note payable, an installment agreement, and water and sewer revenue bonds. The outstanding balance of the long term debt at June 30, 2006 was \$21.1 million bearing interest rates ranging from 3.25 to 5.65 percent (excluding the Martin note discussed below); average annual debt service payments through FY 2010/2011 will be \$2.3 million. The installment agreement and revenue bonds have requirements regarding thresholds for net water and sewer revenues and maximum outstanding debt obligations. The District is in compliance with these requirements.

The District will pay off a note to the Martin Family in December 2007. This financing was used to acquire the Angora Water Company. The note bears interest of 10.5 percent; pay off of this obligation will relieve the District of monthly debt service payments of \$19,512.

As noted in *Section 7.3* above, in 2002 STPUD received a legal settlement of \$69.1 million for damages related to MTBE contamination in the groundwater (litigation fees reduced this amount to approximately \$48.1 million). By District Ordinance these funds are restricted for use in mitigating MTBE issues, including well treatment facilities and developing alternate sources of water supply. At June 30, 2007 the District had \$12.9 million restricted for MTBE related projects.

STPUD uses a pay as you go approach to fund capital projects where feasible and obtains financing when necessary for larger projects. A majority of the District's customers pay a flat rate for water and sewer service so the District's revenue streams are relatively stable. STPUD has the financial resources to maintain adequate service levels and provide for capital needs. The District has successfully pursued federal assistance and other grant funding, and leverages the use of project financing where appropriate.

7.5 Cost Avoidance Opportunities

STPUD controls costs through the use of an asset management system that allows the District to predict asset failure and establish optimal replacement schedules. This avoids costly outages and emergency repairs. The Luther Pass Pump Station, which is the main recycled water pumping station, has state of the art software to maximize pumping efficiency. It also allows the District to leverage the use of the lowest cost electricity rates. The District works cooperatively with public and private interests in Alpine County to ensure that the recycled water system is efficient and meets regulatory requirements.

7.6 Opportunities for Rate and Fee Restructuring

STPUD periodically reviews its rate structure and capital fees. Service rates were last updated effective July 1, 2007; the previous rate change occurred on July 1, 2006. Rate stabilization is a priority for the District, and the District maintains reserves and uses a ten-year horizon for financial and capital improvement planning for this purpose. It should be noted that, unlike service areas with steady demand, the District must have available capacity to serve the seasonal population and part time residences even though they will have periods of limited consumption. The percentage of the service fee considered the base charge (or readiness to serve cost) is critical for STPUD. In addition to service charges, the District receives on average 11 percent of the one percent property tax base assessed on parcels within its boundaries.

For water service, STPUD has both flat rates for non-metered accounts and consumption based rates for metered accounts. A single family dwelling without a meter pays \$445.60 annually. A

metered single family dwelling pays an annual service charge of \$244.48 plus a consumption charge of \$2.12 per hundred cubic feet.

The District uses flat rates for sewer service, with three price levels based on the type of connection. The highest rate is paid by commercial uses, restaurants, and related uses with higher levels of wastewater loading.

7.6.1 Current Service Rates

STPUD's current water and wastewater rates are shown in *Table 7.7* below:

Table 7.7
STPUD
2007 Single Family Residential Water and Wastewater Rates
(Quarterly)

Type	All Accounts
Water Charge	
Not metered	\$111.40
Metered (3/4" meter)	\$61.12 \$2.12 per ccf
Wastewater Charge	
Sewer Charge	\$81.45

With the rate structure above, a single family residence without a meter receiving both water and sewer service would pay a rate that equates to \$64.28 per month.

The current connection fee schedule became effective January 1, 2007. Connection fees are based on service units; a single family dwelling with two bathrooms and a kitchen (3 service units) has a connection fee of \$13,525 (\$9,623 sewer plus \$3,902 water).

In keeping with best management practices, the District should consider adopting a tiered rate structure for metered accounts to encourage conservation.

7.7 Opportunities for Shared Facilities

STPUD shares facilities with other agencies in the Tahoe region, including the following:

- Grant administrator position shared with Alpine County
- Water pump station shared with Lake Valley Protection District in Alpine County
- Recycled water provided to Diamond Valley area of Alpine County that has limited water storage capabilities
- Potable water supply provided to Tahoe Keys Association

The District participates in regional planning efforts for the Tahoe Basin and participates in the Lake Tahoe Wastewater Infrastructure Partnership (LTWIP). Members of the LTWIP collaborate on efforts to ensure the efficient use of US Army Corps grant funding for Tahoe Basin wastewater programs.

7.8 Evaluation of Management Efficiencies

STPUD operates under the direction of its General Manager and the oversight of the elected Board of Directors. The District has set goals and objectives for each of its departments. The District uses its ten-year financial plan and CIP to guide operations and to ensure continued compliance with water quality standards and environmental regulations for the Tahoe Basin.

7.9 Government Structure Options

STPUD serves the City of South Lake Tahoe and unincorporated area within the southern portion of the Tahoe Basin. The District's service area is in El Dorado County; however the District has facilities in Alpine County for the discharge of its recycled water. The District is providing adequate service and has planned for water supply as well as the operational and capital needs for its water and wastewater services. The Tahoe City Public Utility District (TCPUD) serves the area to the north of STPUD along the western shore of Lake Tahoe. Other than maintaining the status quo, one government structure option was identified that would consolidate STPUD with TCPUD.

STPUD and TCPUD are providing similar water and wastewater services within their boundaries. The advantages of this option may include economies of scale due to operational efficiencies. However, the Districts are focused on serving the needs of the communities within their respective service areas and maximize the use of gravity flow. A consolidation could result in increased costs, loss of efficiency, and loss of local control regarding capital improvements. Consolidation would require further study to determine whether there would be real operational efficiencies as well as the potential benefits and costs.

7.10 Local Accountability and Governance

STPUD is governed by a five-member Board of Directors elected at large by voters within the District. The November 2007 election is contested, with the incumbents and new candidates running for three open seats. The governance is summarized in *Table 7.8*.

Table 7.8
South Tahoe Public Utility District

Date Formed:		September 1950	
Statutory Authorization:		Public Utility District Act of 1921 (Public Utilities Code §15501)	
Board Meetings:		District Office, 1st and 3rd Thursday of each month at 2:00 PM	
Member	Title	Term Expires	Compensation*
Eric Schafer	President	December 2009	\$400 per month
Kathleen Farrell	Director	December 2011	\$400 per month
James R. Jones	Director	December 2009	\$400 per month
Mary L. Mosbacher	Director	December 2011	\$400 per month
Dale Rise	Director	December 2011	\$400 per month

** Directors are also offered health and dental insurance and CalPERS.*

STPUD meetings are open to the public. The District posts meeting notices and the agenda at the District office and on the District's website (www.stpud.us). The District produces a newsletter for its customers and the District's website includes information on the District's services, finances, awards, and capital projects. The District's Helping Hands program provides emergency assistance to customers for payment of their water and sewer bills when they have no alternative financial assistance.

7.11 Sphere of Influence Recommendations

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO review and update the sphere of influence (SOI) for each of the special districts and cities within the county.² The SOI is defined by statute as a "plan for the probable physical boundary and service area of a local government agency as determined by the commission" (Government Code §56076).

STPUD's sphere of influence includes 3.2 square miles within the central portion of the District's service area. The lands within the SOI are bounded by the District. Given the water quality concerns in the region and regulations regarding wastewater, these areas may need to annex to the District at some point in the future and therefore should remain in the District's SOI.

² State of California Government Code Section 56425 et seq.

7.12 Determinations

7.12.1 Growth and Population

Purpose: To evaluate service needs based upon existing and anticipated growth patterns and population projections.

STPUD serves an area within the southern portion of the Tahoe Basin, including the City of South Lake Tahoe and several unincorporated communities. The current estimated population is 37,700; however this area has a high proportion of part time residences and seasonal tourism which affect water and wastewater services but are not factored into population estimates. Little to no growth is expected to occur within the STPUD service area through 2030 due to the Tahoe Regional Planning Authority regulations that limit development.

7.12.2 Infrastructure Needs or Deficiencies

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

STPUD relies on groundwater produced from the Tahoe Valley South Basin for its water supply. There are significant plumes of MTBE-contaminated groundwater within the Tahoe Basin and the District must provide MTBE treatment on certain wells. Through the MTBE settlement, the District has funds designated to address contamination issues. Per STPUD's *Urban Water Management Plan 2005 Update* (January 2007 Draft), water supplies will be adequate to meet projected demands through 2030 under normal conditions as well as single and multiple dry year scenarios.

STPUD operates both water and wastewater systems, including well treatment and a wastewater treatment plant. Due to strict environmental regulations, all wastewater must be exported out of the Tahoe Basin. The District exports advanced secondary treated effluent to Alpine County for agricultural irrigation and fire suppression use. The District has infrastructure needs related to waterline replacement and metering. The District has planned for the infrastructure needs of its water and wastewater services through its ten-year CIP.

7.12.3 Financing Constraints and Opportunities

Purpose: To evaluate a jurisdiction's capacity to finance needed improvements and services.

STPUD uses a pay as you go approach to fund capital projects where feasible and obtains cost effective financing when necessary for larger projects. A majority of the District's customers pay a flat rate for water and sewer service so the District's revenue stream is relatively stable. STPUD has the financial resources to maintain adequate service levels and provide for capital

needs. The District has successfully pursued federal assistance and other grant funding, and leverages the use of project financing where appropriate.

7.12.4 Cost Avoidance Opportunities

Purpose: To identify practices or opportunities that may help eliminate unnecessary costs.

STPUD is controlling costs through the use of asset management technology and state of the art software for the Luther Pumping Station to maximize pumping efficiency and optimize use of the lowest cost electricity rates.

7.12.5 Opportunities for Rate and Fee Restructuring

Purpose: To identify opportunities to impact rates positively without decreasing service levels.

The District periodically reviews and updates its service rate schedule and connection charges. Water rates include both non-metered flat rates and metered rates with a base charge and consumption fee. The District uses a flat rate for sewer service, with four price levels based on wastewater loading. The District should consider adopting a tiered rate structure for metered water service accounts.

7.12.6 Opportunities for Shared Facilities

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

The District shares facilities and resources with other agencies, including providing recycled water to the Diamond Valley area of Alpine County for irrigation and fire suppression.

7.12.7 Evaluation of Management Efficiencies

Purpose: To evaluate management efficiencies of the jurisdiction.

STPUD operates under the direction of a general manager with the oversight of the Board of Directors. The District uses its ten-year financial plan and CIP to guide District operations.

7.12.8 Government Structure Options

Purpose: To consider the advantages and disadvantages of various government structures to provide public services.

STPUD is providing adequate service and has planned for future water supply as well as the operational and capital needs for its water and wastewater services. One government structure option would consolidate STPUD and the Tahoe City Public Utility District to the north. The Districts are providing similar water and wastewater services within their boundaries. The

advantages of this option may include economies of scale due to operational efficiencies. However, a consolidation could result in increased costs, loss of efficiency, and loss of local control regarding capital improvements. Further study would be needed to determine whether there would be real operational efficiencies as well as the potential benefits and costs.

7.12.9 Local Accountability and Governance

Purpose: To evaluate the accessibility and levels of public participation associated with the agency's decision-making and management process.

STPUD is governed by a locally elected Board of Directors. Meetings are noticed through posting in the District's office and on the District's website. The meetings are open and accessible to the public.

SECTION 8.0 OTHER DISTRICTS WATER AND WASTEWATER SERVICES

8.1 Other Community Services Districts within El Dorado County

The Cameron Estates Community Services District (CECSD) and the El Dorado Hills Community Services District (EDHCSD) are authorized to provide water, wastewater or power services. However, neither District has the infrastructure to provide the services and is not currently planning to offer those services in the foreseeable future. In 2006 the Community Services District Law (Government Code Section 61000 et seq.) was updated, requiring LAFCOs to inventory the existing powers of community services districts and identify as latent any powers that the district is not currently exercising on or before January 1, 2006. Should a district propose to reactivate a latent power, the district would have to request and obtain LAFCO approval pursuant to the procedures in Government Code Section 56824.12; this would include submission of a plan for service that includes a proposed budget, revenues and staff that would be allocated to provide the service. Therefore, as discussed below, these services should be considered latent powers for the two districts.

8.1.1 Cameron Estates Community Services District

The Cameron Estates Community Services District (CECSD), formed in 1969, serves the unincorporated Cameron Estates community south of Highway 50 in the Cameron Park area. Land use within the District's boundaries is low density residential. The El Dorado Irrigation District (EID) provides water service throughout the area and wastewater services to those properties that do not have individual septic systems. Pacific Gas & Electric (PG&E) is the electric utility provider.

CECSD currently provides services for road maintenance for the community. In addition, the District is authorized to provide the following services that are under LAFCO purview: water, fire, recreation and parks, enforcement of Covenants, Codes and Restrictions (CC&R) and police protection. With respect to the services addressed in this review, CECSD does not have the infrastructure to provide water service and does not plan to provide this service in the future. Therefore, water service should be changed to a latent power.

8.1.2 El Dorado Hills Community Services District

The El Dorado Hills Community Services District (EDHCSD) serves the unincorporated El Dorado Hills community in the western portion of the county. The area is served by EID for water and wastewater needs, and PG&E for electric utility services.

EDHCSD is authorized to provide the following services: water, fire, parks, recreation, sewer, garbage, lighting, landscape, mosquito abatement, police, library, roads and bridges, cable television, electricity, and CC&R enforcement. The District provides primarily recreational services including community parks and planning services for the parks. In addition, the District provides residential and commercial solid waste collection as well as administering recycling programs, lighting and landscape services, cable TV franchise fee administration and the enforcement of CC&Rs. The District may explore opportunities for power service in the future, including hydroelectric power generation, but does not plan to directly provide water, wastewater, or power services in the foreseeable future. Therefore, water, sewer, and power services should be changed to latent powers.

8.2 Other Districts Providing Service within El Dorado County

In addition to the service providers reviewed in Chapters 2 through 7, there are three special districts that are located within adjacent counties and are providing services to lands within El Dorado County. These include the Kirkwood Meadows Public Utility District (Alpine County), the McKinney Water District (Placer County), and the Tahoe City Public Utility District (Placer County). El Dorado LAFCO is not the principal LAFCO for these agencies and therefore is not required to adopt determinations regarding the services provided. However, the districts and the services they provide are described below to ensure a comprehensive overview of water, wastewater, and power services within El Dorado County.

8.2.1 Kirkwood Meadows Public Utility District

The Kirkwood Meadows Public Utility District (KMPUD) was formed in 1985 under the Public Utility District Act (Public Utilities Code Section 15501 et seq.). The District serves an area of approximately 1.1 square miles (700 acres) with lands in El Dorado, Alpine, and Amador Counties; Alpine is the principal LAFCO. The District provides the following services: fire protection, water, wastewater, electric and gas utilities, solid waste, mosquito abatement, cable television, snow removal, public buildings, and recreation and parks.

The District receives its water supply from groundwater wells and provides domestic and irrigation water service. In April 2007 the District adopted a water stage alert system that limits water use by the community based on water levels in District Wells Nos. 4 and 5. The District's wastewater treatment plant was recently upgraded to a capacity of 240,000 gallons per day. Maximum peak flows at buildout are expected to be 200,000 gallons per day.

KMPUD's water rates are as follows:

Table 8.1
Kirkwood Meadows PUD
Water and Sewer Rates (monthly)

Type	All Accounts
Water Charge	
Base Charge (all meter sizes)	\$15.73
Water Consumption Fee	\$14.44 per ccf – treated \$4.00 per ccf – irrigation (residential) \$6.00 per ccf – irrigation (commercial)
Sewer Charge	
Base Charge	\$8.75

Source: KMPUD website - www.kmpud.com

Connection fees (for both water and sewer) are \$9,238.25 without irrigation and \$9,371.34 with irrigation. In addition, the District receives a portion of the base property tax collected by El Dorado County on parcels within the District boundaries; in FY 2006/2007 KMPUD's share was 4.9928 percent. Per the State Controller's Report, for FY 2004/2005 KMPUD's total revenues were \$1.58 million and total expenses were \$1.36 million with debt of \$474,542. Waste disposal services generate approximately 78 percent of KMPUD's revenues.

8.2.2 McKinney Water District

The McKinney Water District (MWD) was formed in 1961 under the California Water District Law (Water Code Section 34000 et seq.). The District is located immediately west of Highway 89 at the El Dorado/Placer county boundary. MWD serves an area of approximately 11 acres that is considered built out. Placer LAFCO is the principal LAFCO. The District provides domestic water service only.

MWD charges for water service. In addition, the District receives a portion of the base property tax collected by El Dorado County on parcels within the District boundaries; in FY 2006/2007 MWD's share was 18.4843 percent. Per the State Controller's Report, for FY 2004/2005 MWD's total revenues were \$177,686; property tax revenue comprised 54.5 percent of total district revenues.

MWD was included in Placer LAFCO's *Municipal Service Review for Area 3 Services* that reviewed service providers along the Highway 89 corridor adjacent to Lake Tahoe. However, the District did not provide sufficient information regarding its services, infrastructure, or financial condition and Placer LAFCO was unable to make determinations in accordance with Government Code Section 56430. MWD is surrounded by the Tahoe City Public Utility District and the *Area 3 Services MSR* noted that further review should be undertaken regarding the ability of the McKinney Water District to continue to provide adequate service and to determine

whether there are cost or service efficiencies in dissolution and annexation of that territory to the Tahoe City Public Utility District.

8.2.3 Tahoe City Public Utility District

The Tahoe City Public Utility District (TCPUD) was formed in 1938 under the Public Utility District Act (Public Utilities Code Section 15501 et seq.) to provide public water service to the residents within the Tahoe City area. The District's service area currently covers approximately 22 square miles and extends from the northern shore of Emerald Bay to Dollar Hill, and along the Truckee River to the Nevada County line. The portion within El Dorado County encompasses 11.12 square miles. (The South Tahoe Public Utility District serves the southern shore of Emerald Bay.)

TCPUD's services have expanded to include sewer, recreation, and parks. The District serves approximately 3,800 water service accounts with three separate water systems. There are numerous private water companies and water mutuals providing service within the District's service area. The District's water supply is from deep groundwater wells; the District provides chlorine treatment at the wellhead.

The District provides wastewater service to approximately 7,300 sewer accounts; wastewater is collected and conveyed to the Tahoe-Truckee Sanitation Agency (T-TSA) Water Reclamation Plant east of Truckee. T-TSA is the sole operator of wastewater treatment facilities for Eastern Placer County and Eastern Nevada County. The treatment plant has a permitted capacity of 9.6 MGD for a maximum 7-day average summer flow and 15.4 MGD for peak flow.

TCPUD receives revenue through user fees, grants, property tax, and interest income. The adopted budget for 2007 includes operating revenues of \$9.16 million and operating expenses of \$7.21 million excluding depreciation. The District has budgeted for \$6.76 million in capital expenditures in 2007 and has \$1.85 million in reserves. The District receives a portion of the base property tax collected by El Dorado County on parcels within the District boundaries; in FY 2006/2007 TCPUD's share was approximately 14.12 percent.

The District's current rate schedule for service charges and connection fees became effective January 1, 2007. Rates are as follows:

8.2
Tahoe City PUD
Water and Sewer Rates

Type	All Accounts
Water Charge	
Base Charge (5/8x3/4" meter))	\$446.92 yearly (\$37.24/mo)
Water Consumption Fee	\$2.72 per 1000 gals in excess of 25,000 gallons per quarter (metered accts)
Sewer Charge	
Base Charge	\$201.76 yearly (\$16.81/mo)

T-TSA collects separate service charges for wastewater treatment services.

TCPUD's current connection fees are \$2,000 for residential water service and \$1,000 for residential sewer service.

TCPUD was included in Placer LAFCO's *Municipal Service Review for Area 3 Services* that reviewed service providers along the Highway 89 corridor adjacent to Lake Tahoe. Placer LAFCO adopted determinations for the District in accordance with Government Code Section 56430.

8.2.4 Private Water Companies

The California Public Utilities Commission identified two private water purveyors serving area within the vicinity of the El Dorado County/Placer County border on Lake Tahoe: the Tahoe Cedars Water Company and the Tahoe Swiss Village Utilities, Inc. They serve small areas; detailed information on their service areas and systems was not available. There are also private water service purveyors serving area in the vicinity of STPUD, including the Lukins Brothers Water Company (see additional discussion in *Section 7.3*).

The Tahoe Cedars Water Company has two wells and serves approximately 1,100 to 1,200 homes. During the summer the population is estimated at 3,000 to 5,000 people; for the remainder of the year it is approximately 1,000 to 2,000. The company charges a \$1,000 connection fee, and monthly service fees are \$276.98 with annual cost of living increases.

Tahoe Swiss Village Utilities, Inc. operates as the Glen Ridge Water Company. They serve approximately 43 homes with a summertime population of 150. The company has one well. There is a flat rate water service fee of \$515.97 per year. There is no connection fee other than the meter charge.

The Lukins Brothers Water Company serves 950 homes plus 24 commercial buildings. The population is estimated at 3,000. The company has three wells; there are significant infrastructure

needs due to limited capacity in the water lines. The company charges a flat rate water service fee of \$283.24 per year.

SECTION 9.0 RESOURCES

Resources used for this Municipal Service Review include, but are not limited to, the following:

General

California Department of Finance, Population Estimates for Cities, Counties and State,
2001-2007 (Table E-4)

County of El Dorado. General Plan 2004.

Land Use Element: July 2004

Land Use Diagram: July 19, 2004

Public Services and Utilities Element: July 2004

County of El Dorado Auditor-Controller. AB-8 Assessed Value and Increment Percentages
Report for 2006/07

El Dorado County Economic and Demographic Profile Series 2006. Center for Economic
Development. California State University, Chico

El Dorado County Water Agency. Water Resources Development and Management Plan.
November 2007

Sacramento Area Council of Governments Population Projections 2007

State Water Resources Control Board. California Integrated Water Quality System (CIWQS)
<http://ciwqs.waterboards.ca.gov>

City of Placerville

City of Placerville. 2005 Urban Water Management Plan. June 2007. Brown and Caldwell

City of Placerville. Water Master Plan. December 13, 2005. Kennedy/Jenks Consultants

City of Placerville. Sewer System Master Plan Phase 1 Summary Report. August 2006. Holmes
International and CXS Consulting, Inc.

City of Placerville Basic Financial Statements, Supplemental Information, and Independent
Auditors' Report for FY ended June 30, 2005. Caporicci & Larson, Certified Public
Accountants

City website: www.ci.placerville.ca.us

El Dorado Irrigation District

El Dorado Irrigation District. Urban Water Management Plan 2005 Update. Adopted January 23, 2006. Brown and Caldwell

El Dorado Irrigation District. 2007 Water Resources and Service Reliability Report. June 25, 2007

El Dorado Irrigation District. Water Supply Master Plan Administrative Draft. December 2001

El Dorado Irrigation District. Ditch System Master Plan Project No. 03013H. June 2004

El Dorado Irrigation District. Wastewater Master Plan Update. November 2001. HDR Engineering, Inc.

El Dorado Irrigation District. Recycled Water Master Plan. December 2002 Draft. HDR Engineering, Inc.

El Dorado Irrigation District. Independent Auditor's Report and Basic Financial Statements for Years ended December 31, 2004 and December 31, 2005. Richardson and Company

El Dorado Irrigation District. Comprehensive Annual Financial Report for the Year ended December 31, 2006

El Dorado Irrigation District. Five-Year Capital Improvement Program. 2007-2011

El Dorado Irrigation District. Board Policies and Administrative Regulations. January 2007

United States of America 117 FERC ¶ 62,044. Federal Energy Regulatory Commission. Order Issuing New License. Project No. 184-065. October 18, 2006

District website: www.eid.org

Georgetown Divide Public Utility District

Georgetown Divide Public Utility District 2005 Urban Water Management Plan

Georgetown Divide Public Utility District. Greenwood Lake Water Treatment Plant Project Draft Environmental Impact Report (SCH No. 2006092081). June 2007

Georgetown Divide Public Utility District Capital Facility Charge Study. Updated March 2007. Stantec Consulting

Georgetown Divide Public Utility District Basic Financial Statements for FY ending June 30, 2005

Georgetown Divide Public Utility District Basic Financial Statements for FY ending June 30, 2006

Georgetown Divide Public Utility District Fiscal Year 2007-08 Budget. June 12, 2007

Georgetown Divide Public Utility District Five Year Capital Improvement Program. May 2005

District website: www.gd-pud.org

Greenstone Country Community Services District

Greenstone Country Community Services District Budget for FY 2006/2007

Greenstone Country Community Services District Budget for FY 2007/2008

Grizzly Flat Community Services District

Grizzly Flats Community Services District Independent Auditor's Report, Financial Statements and Supplemental Information for FY ended June 30, 2005. John F. Warden, Jr. CPA

Grizzly Flats Community Services District Financial Statements and Independent Auditor's Report for FY ended June 30, 2006. Robert W. Johnson, CPA

Grizzly Flats Community Services District Final Operations and Maintenance Budget 2006/2007

Grizzly Flats Community Services District Master Capital Improvement Plan. Adopted June 2006

District website: www.grizzlyflats.us/gfcsd.org

Kirkwood Meadows Public Utility District

Placer County Local Agency Formation Commission. Municipal Services Review for Area 3 Services

District website: www.kmpud.com

South Tahoe Public Utility District

South Tahoe Public Utility District. Urban Water Management Plan 2005 Update. January 2007.
Kennedy/Jenks Consultants

South Tahoe Public Utility District Comprehensive Annual Financial Report for FY ended June 30, 2005

South Tahoe Public Utility District Comprehensive Annual Financial Report for FY ended June 30, 2006

South Tahoe Public Utility District Ten-Year Financial Plan 2006/07 to 2015/16. July 2006

South Tahoe Public Utility District Annual Budget for FY June 1, 2006 – June 30, 2007

South Tahoe Public Utility District Annual Budget for FY June 1, 2007 – June 30, 2008

District website: www.stpud.us

Tahoe City Public Utility District

Placer County Local Agency Formation Commission. Municipal Services Review for Area 3 Services

District website: www.tahoecitypud.com