



COTTONWOOD WATER DISTRICT

MUNICIPAL SERVICES REVIEW

ADMINISTRATIVE DRAFT

2014 UPDATE

Prepared
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1.0 INTRODUCTION

Local Agency Formation Commissions (LAFCo) are state mandated local agencies that are responsible for evaluating the Sphere of Influence (SOI) of local government agencies, which includes water districts like the Cottonwood Water District (District). The SOI encompasses the maximum area that a local governmental agency is expected to serve. Establishment of this boundary is necessary to determine which governmental agencies can provide services in the most efficient manner to the people and property in any given area. The District's Service Area Boundary (SAB) within the SOI is smaller and is the area wherein the District is likely to provide water service within the given planning period of the District's current Master Water Plan. LAFCo operations are governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

The requirement for LAFCos to conduct reviews of local municipal services was established with the passage of AB 2838, the Cortese-Knox-Hertzberg (CKH Act) Local Government Reorganization Act of 2000. Prior to the 2000 amendments, existing law authorized LAFCos to conduct municipal service review. These studies were not termed MSR studies, rather they were called "special studies." These LAFCo special studies generally provided evaluation tools to support future LAFCo actions or were part of a reorganization committee effort. However, the reviews were very minimal. Existing law (Government Code Section 56430) now states that in order to prepare and update a Sphere of Influence (SOI), LAFCos are required to first conduct a municipal service review of the services provided in the county by the various service providers which includes the cities, county, water districts, fire districts, and community services districts.

One of the main provisions of AB2838 is to strengthen LAFCo powers to prevent sprawl and ensure the orderly extension of government services. To this end the law requires the following:

- Requires pre-zoning for territory proposed to be annexed to a city to ensure clear knowledge of plans and potential impacts.
- Requires LAFCo to update spheres of influence at least once every five years.
- Requires LAFCo to initiate periodic regional or sub-regional service reviews at least every five years, to determine local government service needs and adequacy.
- Requires counties to consult with affected cities prior to approving any development or land use change within a sphere of influence.
- Requires LAFCos to give "great weight" to any agreements reached between cities and counties on development within spheres of influence.
- Requires LAFCos to ensure that a proposal to extend services to previously unserved territory within an unincorporated area is consistent with the policies of the Act, including promoting orderly development, discouraging urban sprawl, preserving open space and prime agricultural lands, providing housing for persons and families of all incomes, and the efficient extension of governmental services
- Defines "prime agricultural lands" more precisely.
- Requires LAFCo to consider existing data on timely availability of water supplies, regional housing needs, information from land owners, and land-use designations in boundary change decisions.
- Allows LAFCo, when making a decision, to consider regional growth goals and policies adopted by a formally established collaboration of local elected officials.

AB 2838 gives LAFCo approval power over any extension of services outside a city's or a special district's existing jurisdiction, if an expansion in service capacity is planned, even if the service recipient is another public agency. The term "municipal services" generally refers to the full range of services that a public agency provides or is authorized to provide. Beginning in January of 2001, LAFCos became responsible for undertaking municipal service reviews prior to or in conjunction with the establishment of an entity's sphere of influence (SOI). As part of its review of municipal services, LAFCo is required to prepare a written statement of its determination 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.

Any sphere of influence (SOI) must be reviewed and updated as necessary. Some updates may simply involve an affirmation of the existing SOI boundaries or some modifications to the SOI to achieve consistency with the CKH Act. Government Code Section 56430 states that municipal service reviews must be conducted prior to, or concurrent with, those updates.

Shasta County LAFCo, due to its limited staffing, has made a policy decision to allow interested agencies, such as the District, to provide substantially completed documents to LAFCo for faster processing. Therefore, this document is titled *Administrative Draft Cottonwood Water District Municipal Services Review*. It is provided to LAFCo to utilize, as necessary, to prepare the MSR for the District. This document is essentially the "response to the request for information" (RFI) requested by LAFCo in a narrative form. It can be easily revised since it is being provided to LAFCo in Microsoft Word format. LAFCo has all rights to change or edit the document as necessary.

Whereas, all governmental agencies within Shasta County are providing LAFCo RFI's, the District elected to provide the Administrative Draft to expedite the preparation of the District's MSR due to several issues.

In early 2004, the Cottonwood Union Elementary School District requested that the District provide water service to the new elementary school to be constructed on Gas Point Road, immediately west of the Gas Point Road Market at the intersection with Rancho Estates Drive. The school is to construct 7,600 feet of water line from the existing line located at the intersection of Rhonda Road and Gas Point Road. However, the school was not located within the existing SAB of the District and could not be provided service unless it was either annexed into the District or unless the Shasta County Local Agency Formation Commission (LAFCo) approved an "Out of Agency Service Agreement." On May 5, 2005, the LAFCo Board met and approved the Agreement subject to "completion of the MSR (Municipal Services Review) for Cottonwood Water District and annexation within a time period of one year.

In the process of performing research for the request for the "Out of Service Agreement," it was discovered that a number of parcels were outside of the District's SAB. Many of these parcels were already receiving service.

Since the District needed to amend its District SAB to address the inclusion of the school and other parcels, the District determined that it would be appropriate to amend its SAB to accommodate properties that desired to receive District service and to respond to future growth.

In recognition, the District in 2006 completed the annexation of 1,099 acres with LAFCo approval (1.72 square miles). The District SAB prior to 2006 encompasses 1,446 acres (2.26 square miles). The District's new SAB encompasses 2,545 acres (3.99 square miles). The District does not propose updating its SOI. However, the City of Anderson has expressed interest in annexing lands within the District's northwest boundary. To date no formal requests have been made by the City. The District's SOI includes this area to the north for future tank sites due to the higher elevation. Any request for detachment of a portion of the District's SOI in this area for future City of Anderson projects will need to include dedicated easements for a future tank site and water main.

2.0 AREA BACKGROUND

The District is located within the unincorporated community of Cottonwood in Shasta County (**Figure 1**). The area is bisected by Interstate 5 running north and south. The southern boundary of the SAB is about one-quarter mile north of Cottonwood Creek, and the City of Anderson and portions of Shasta County abut the northern boundary.

Interstate 5 provides full interchange access at Gas Point Road. The distance to the City of Redding to the north is approximately 14 miles, to the City of Anderson, also to the north, 4-1/2 miles, and to the City of Red Bluff to the south, 15 miles. The District is located either all or within portions of Section 34, 35, and 36 of Township 30 North, Range 4 West and Sections 1, 2, 3, 4, 9, 10, 11, and 12 of Township 29 North, Range 4 West of the "Cottonwood, Calif." 7.5 minute Topographic Quadrangle Map. In addition to the U.S.G.S. topographic mapping, **Figure 1** identifies the existing and proposed District SAB within the existing SOI.

The most predominate land use type in the District is single-family residential with a limited amount of small agricultural parcels locate west of the Cottonwood Elementary School and south of Gas Point Road. Urban density residential development (generally greater than three dwelling units per acre) exists in the downtown area and on the west side of Rhonda Road, north of Gas Point Road. Suburban density residential development (generally 0.25 to 1.9 acre lot sizes) exists along Rhonda Road north of the ACID canal, and in a few scattered locations. Commercial land uses are generally concentrated along Main Street and Front Street. A shopping center is located southwest of the intersection of Gas Point Road and Rhonda Road. Industrial uses are generally concentrated on the southeast side of the railroad tracks south and east of the downtown area, and near the Cottonwood Auction Yard at the north end of town. Public and institutional uses (e.g. schools, churches, the fire station, etc.) exist in scattered locations.

On September 3, 2013 The Cottonwood Water District Board of Directors approved a 90 unit residential housing development encompassing 120 acres referred to as Stephens Ridge project. The location is within the Districts sphere of influence but outside of the District service area boundary. The majority of the area proposed for annexation is largely undeveloped, tree covered hills and canyons in the northwestern portion of the service area boundary.

3.0 DISTRICT BACKGROUND

The District was formed January 19, 1955 under the State of California Government Code Section 30321 of the California Water Code. The purpose for creating the District was to supply residents and businesses with water for domestic use, sanitation, and fire protection. In 1956 water service was initially provided to the downtown area with the installation of a distribution system including Well No. 1 and the now abandoned Rhonda Road Well. The 1956 service area had 160 service connections.

4.0 REVIEW BY CATEGORIES

4.1 EXISTING INFRASTRUCTURE, FACILITIES AND SERVICES

The District has continued to expand its service area with new residential, commercial, and industrial development, or through annexations of existing developed and undeveloped land. The District has expanded its groundwater production with four additional wells, a booster pump station, and two storage tanks.

In April 2014 the Cottonwood Water District had 1,203 water service connections of which approximately 1,158 are single family residences. A number of these service connections are schools and businesses and represent more than one typical single family household equivalent (HE). Large water users are assigned a number of HEs based upon their demand. In 2014, it is estimated that the District had a total of 1,423 HEs.

An HE uses an estimated 1,700 gallons of water on the maximum day demand (MDD). In 2013, the District experienced several MDD of 2.4 million gallons per day (MGD) as determined by flow meters at the District's five wells. This is approximately equal to the number of HEs times the MDD per HE or $1,423 \text{ HEs} \times 1,700 \text{ GPD/HE} = 2.4 \text{ MGD}$.

The District has five operable wells with capacities shown in Table 1. Well 3 is isolated and serves only the small Arroyo Manor Subdivision of approximately 40 HEs at the north end of the District off Locust Road. The remaining four wells serve the majority of the District with a combined capacity of 1,960 gallons per minute or 2.8 MGD. With all wells in service, pumping 24 hours per day, an estimated 1,660 HEs could be served. However, well pumps can and do fail or are taken off line for service, therefore, when determining the reliable or "firm" capacity of a given water system, the largest well is not counted. In this case Well 1 would be taken off line for a firm capacity of only 1,360 GPM or 2.0 MGD, which has the capacity to serve approximately 1,150 HEs on the MDD.

Thus the District currently has the capacity to serve an additional 230 HEs if all of the wells are in service on a MDD; however, the District is actually serving approximately 270 HEs beyond its firm well capacity.

Table 1	
Cottonwood Water District Well Capacity	
Well No.	2002 Hydraulic Model Capacity (GPM)
1	600
2	550
3	260
4	450
5	360
TOTAL	2,220 GPM (3.2 MGD)

Table 2 identifies an inventory of all of the infrastructure and facilities (improvements) in the District. In addition, the table provides when the improvements were installed, service life, and their value. The table is important since it is the basis of the Capacity Charge established by the District in October 2005 to fund the existing and future District improvements as discussed in Section 4.3 – Fiscal. Figure 2 identifies the location of the existing infrastructure.

TABLE 2

COTTONWOOD WATER DISTRICT
PRESENT AND FUTURE FACILITIES INVENTORY FOR CONNECTION FEE BASIS

ITEM NO.	ITEM	AMOUNT	UNIT	UNIT COST ¹	TOTAL COST	INDIRECT COSTS @ 20% ²	TOTAL CURRENT PROJECT COST	INSTALL DATE ³	SERVICE LIFE ⁴	DEPRECIATED VALUE ⁵
1.	PIPE (INCHES)	294	FT	\$25	\$7,350	\$1,470	\$8,820	1956	50	\$176
		20,701	FT	\$35	\$724,535	\$144,907	\$869,442	1956	60	\$159,398
		34,520	FT	\$40	\$1,380,800	\$276,160	\$1,656,960	1968	60	\$635,168
		41,529	FT	\$45	\$1,868,805	\$373,761	\$2,242,566	1972	60	\$1,009,155
		2,543	FT	\$50	\$127,150	\$25,430	\$152,580	1988	75	\$117,995
		4,495	FT	\$55	\$247,225	\$49,445	\$296,670	1988	75	\$229,425
2.	MAIN SECTION VALVES	182	EACH	\$1,500	\$273,000	\$54,600	\$327,600	1972	50	\$111,384
3.	TREFOIL PRESSURE REDUCING VALVE (PVR)	1	EA	\$15,000	\$15,000	\$3,000	\$18,000	1979	50	\$8,640
4.	SAVAGE & FOURTH PRV	1	EA	\$10,000	\$10,000	\$2,000	\$12,000	2004	50	\$11,760
		1	EA	\$15,000	\$15,000	\$3,000	\$18,000	2004	50	\$17,640
		1	EA	\$5,000	\$5,000	\$1,000	\$6,000	2004	50	\$5,880
5.	WELL NUMBER 1 WELL CONSTRUCTION	1	EA	\$200,000	\$200,000	\$40,000	\$240,000	1963	50	\$38,400
		100	SF	\$150	\$15,000	\$3,000	\$18,000	1984	50	\$10,440
		1	EA	\$40,000	\$40,000	\$8,000	\$48,000	1963	50	\$7,680
		1	EA	\$100,000	\$100,000	\$20,000	\$120,000	1956	50	\$2,400
		1	EA	\$20,000	\$20,000	\$4,000	\$24,000	1963	50	\$3,840
		1	LS	\$10,000	\$10,000	\$2,000	\$12,000	1963	50	\$1,920
6.	WELL NUMBER 2 WELL CONSTRUCTION	1	EA	\$200,000	\$200,000	\$40,000	\$240,000	1972	50	\$81,600

TABLE 2

COTTONWOOD WATER DISTRICT
PRESENT AND FUTURE FACILITIES INVENTORY FOR CONNECTION FEE BASIS

ITEM NO.	ITEM	AMOUNT	UNIT	UNIT COST ¹	TOTAL COST	INDIRECT COSTS @ 20% ²	TOTAL CURRENT PROJECT COST	INSTALL DATE ³	SERVICE LIFE ⁴	DEPRECIATED VALUE ⁵
7.	WELL BUILDING	100	SF	\$150	\$15,000	\$3,000	\$18,000	1984	50	\$10,440
	WELL PUMP & CONTROLS	1	EA	\$100,000	\$100,000	\$20,000	\$120,000	1972	50	\$40,800
	PRESSURE VESSEL	1	EA	\$20,000	\$20,000	\$4,000	\$24,000	1972	50	\$8,160
	WELL	1	LS	\$10,000	\$10,000	\$2,000	\$12,000	1972	50	\$4,080
	APPURTENANCES	1	LS	\$40,000	\$40,000	\$8,000	\$48,000	1984	50	\$27,840
	SHOP BLDG	1	LS	\$20,000	\$20,000	\$4,000	\$24,000	2004	50	\$23,520
	BACKHOE BLDG	1	LS	\$20,000	\$20,000	\$4,000	\$24,000	2004	50	\$23,520
	WELL NUMBER 3	1	EA	\$57,000	\$57,000	\$11,400	\$68,400	2005	50	\$57,000
	100,000 GALLON BOLTED TANK	2	EA	\$3,000	\$6,000	\$1,200	\$7,200	1982	50	\$3,888
	BOOSTER PUMPS	1	EA	\$200,000	\$200,000	\$40,000	\$240,000	1968	50	\$62,400
WELL	1	EA	\$200,000	\$200,000	\$40,000	\$240,000	2004	50	\$235,200	
WELL PUMP	1	EA	\$40,000	\$40,000	\$8,000	\$48,000	2001	50	\$44,160	
EMERGENCY GENERATOR	1	EA	\$20,000	\$20,000	\$4,000	\$24,000	1984	50	\$13,920	
PRESSURE VESSEL	1	EA	\$10,000	\$10,000	\$2,000	\$12,000	1968	50	\$3,120	
WELL	1	EA	\$200,000	\$200,000	\$40,000	\$240,000	1988	50	\$158,400	
CONSTRUCTION	150	SF	\$150	\$22,500	\$4,500	\$27,000	1988	50	\$17,820	
WELL BUILDING	1	EA	\$100,000	\$100,000	\$20,000	\$120,000	1988	50	\$79,200	
WELL PUMP & CONTROLS	1	EA	\$20,000	\$20,000	\$4,000	\$24,000	1988	50	\$15,840	
PRESSURE VESSEL	1	LS	\$10,000	\$10,000	\$2,000	\$12,000	1988	50	\$7,920	
APPURTENANCES	1	EA	\$200,000	\$200,000	\$40,000	\$240,000	1992	50	\$177,600	
WELL	150	SF	\$150	\$22,500	\$4,500	\$27,000	1992	50	\$19,980	
CONSTRUCTION	1	EA	\$100,000	\$100,000	\$20,000	\$120,000	1992	50	\$88,800	
WELL BUILDING	1	EA	\$100,000	\$100,000	\$20,000	\$120,000	1992	50	\$88,800	
WELL PUMP &	1	EA	\$100,000	\$100,000	\$20,000	\$120,000	1992	50	\$88,800	

TABLE 2

COTTONWOOD WATER DISTRICT										
PRESENT AND FUTURE FACILITIES INVENTORY FOR CONNECTION FEE BASIS										
ITEM NO.	ITEM	AMOUNT	UNIT	UNIT COST ¹	TOTAL COST	INDIRECT COSTS @ 20% ²	TOTAL CURRENT PROJECT COST	INSTALL DATE ³	SERVICE LIFE ⁴	DEPRECIATED VALUE ⁵
10.	CONTROLS									
	PRESSURE VESSEL	1	EA	\$20,000	\$20,000	\$4,000	\$24,000	1992	50	\$17,760
	WELL	1	LS	\$10,000	\$10,000	\$2,000	\$12,000	1992	50	\$8,880
11.	APPURTENANCES	1	EA	\$40,000	\$40,000	\$8,000	\$48,000	2001	50	\$44,160
	EMERGENCY GENERATOR	1	EA	\$40,000	\$40,000	\$8,000	\$48,000	2001	50	\$44,160
	DISTRICT FACILITIES	700	SF	\$150	\$105,000	\$21,000	\$126,000	1963	50	\$20,160
12.	DISTRICT OFFICE	0.3	ACRES	\$50,000	\$15,000	\$3,000	\$18,000	1963	100	\$10,440
	LAND MAINTENANCE YARD	1	ACRES	\$50,000	\$50,000	\$10,000	\$60,000	1972	100	\$40,200
	RHONDA ROAD TANK	0.64	ACRES	\$30,000	\$19,200	\$3,840	\$23,040	2005	100	\$23,040
13.	12" WATER MAIN	3,900	FT	\$50	\$195,000	\$39,000	\$234,000	2005	75	\$234,000
	1 MG WELDED STEEL TANK	1	LS	\$600,000	\$600,000	\$120,000	\$720,000	2005	50	\$720,000
	TOTAL CURRENT & DEPRECIATED COST FOR EXISTING FACILITIES						\$9,271,000			\$4,672,000
14.	TOTAL CURRENT SERVICE CONNECTIONS						1,022			,1022
	CURRENT & DEPRECIATED COST PER CONNECTION						\$9,100			\$4,600

NOTES:

- Unit costs are approximate based upon public works projects bid in northern California in 2005.
- Indirect costs include engineering and project administration costs.
- Installation dates are approximate based upon District records.
- Service life are approximate based upon industry standards.
- Depreciation is straight line.
- JULY 2005 ENR-CI = 7422

4.2 ADMINISTRATION, MANAGEMENT, AND OPERATIONS

For the purposes of preparing a Municipal Services Review, information with respect to administrative, management and operational functions including employee categories and internal organization, agency policies, rules and regulations are evaluated with respect to efficiencies and/or cost avoidance opportunities.

The District Board of Directors operates as the governing body of the District. The management of the District is the responsibility of the District Manager as appointed by the Board. Administrative and fiscal recommendations are made by the District Manager to the District Board for approval. The District has a policy and procedures manual for all employees.

The District has three full-time employees. Full-time positions include one District Manager, one maintenance worker, and one secretary. Annual audits, attorney needs, and fee studies are contracted out to save the costs that would otherwise be associated with staff positions for those services.

The District participates in a joint powers agreement with the Association of California Water Agencies (ACWA)/Joint Powers Insurance Authority. The District contributes to the California Public Employees Retirement System (PERS) and provides vacation, holiday and sick leave payments to its employees. The District is also a member of the California Rural Water Association and the Association of California Water Agencies.

4.3 FISCAL

The Board of Directors is responsible for establishing and maintaining a system of internal accounting control. The Board operates as a financial committee with guidance from their accountant and assistance from the District Manager. The annual budget is drafted and recommendations are made to the Board for approval. In addition, monthly financial statements are presented to the Board for review and comment.

The District does not share in the Shasta County Special District property tax pool because it did not levy an ad valorem tax in the base year of 1976-1977. The District's accounts were organized between the Enterprise Fund which is used to account its water utilities activities and the Bond Fund which reflects the assessments received from the 1991 North Main Street Assessment District and the principal and interest paid to the bond holders. In 2004-2005 all obligations were paid and the assessment district is no longer in existence.

The District budget for the fiscal year 2012-2013 is \$445,580. The District's operating budget is included as **Appendix A**. The Audited Financial Statements as of June 30, 2013 are provided as **Appendix B**. The District received most of its revenue from water sales (\$436,186) and connection fees (\$27,600). Major expenses were water transmission and distribution (\$185,300), payroll (\$120,364), and general/administrative expenses (\$73,743). Net income was \$31,379.

As previously noted, the Capacity Charge (**Appendix C**) went into effect in October 2005 to compensate the District for monies expended for various system facilities upon which a property seeking water service will now rely for services and for on-going operation and maintenance of the water system. The Capacity Charge replaces the previous Connection Fee of \$1,618 and \$15 front footage fee. The fee is for the recapture of costs expended to provide such facilities as water storage, water production, pumping stations, distribution systems and miscellaneous costs, which facilities will provide a benefit to the property to be served, and to fund the capital costs of general improvements that are planned for the future.

The Capacity Charge is comprised of two components. The first is based on the total cost of the existing system (estimated at \$9,271,000) were it have to be constructed today, less depreciation for a value of the system at approximately \$4,672,000. Based on 1,022 connections as of July 2005, the depreciated value of the existing facilities was \$4,600 per connection.

The second component of the Capacity Charge was the total cost of future major general improvements which includes the construction of Well No. 6 and a 0.25 million gallon water tank estimated at \$820,000 (to be discussed under **Infrastructure Needs or Deficiencies**). These facilities should provide required water and minimum storage volume over the next 10 years for an estimated new 350 service connections. The estimated cost per connection is \$2,300. The combination of the two components is the \$6,900 Capacity Charge implemented.

Infrastructure replacement is prioritized on the basis of age, wear and necessity. The district policy for replacement of engines is based on a 50-year service life. The District has no other policy for replacement of infrastructure.

4.4 GOVERNANCE

The Board of Directors operates as the governing body for the District. Among its duties are approving the District's budget, setting the utility rates, and issue bonds as authorized by the District. The authorized number of Directors is five and they are elected to staggered four year terms. An election is held every two years, only if there are more candidates than vacancies. The only persons authorized to vote are registered voters who reside within the District boundaries and they do not have to be property owners. Board members are required to live within the district boundaries and be registered voters. Board members do not receive benefits.

Board meetings are held the second Wednesday of the month at 5:00 pm at the District Offices, 3282 Chestnut Street, Cottonwood, California. Matters pertaining to District operations that require action by the Board are placed on an agenda for a regular meeting of the board. Meetings are subject to the Ralph M. Brown Act (the open meeting statute), and all State laws pertaining to notification of public meetings on District matters are strictly adhered to. Often for special meetings (as an example the workshop on annexation boundaries), a notice is sent of the meeting to all customers which includes the date, time, place and purpose of meeting. In addition, notices are posted at the District office and Post Office and published in the local newspaper.

5.0 REGIONAL CONTEXT/IMPACTS

As previously noted, the District does not propose updating its Sphere of Influence. However, the City of Anderson has expressed interest in annexing lands within the Districts' northwest boundary. To date no formal requests have been made by the City.

At this time there is no consideration of combining water districts. The closest public water systems are the Clear Creek Community Services District and the City of Anderson.

Combining the District with County Service Area #17 which provides wastewater treatment services to portions of Cottonwood has been raised. Neither the District Manager nor the Board have expressed an interest in combining the two. Furthermore, in a discussion with Shasta County Public Works Director, Pat Minturn, he identified that there are no existing districts within Shasta County that provide both water and wastewater services. Even the cities have separate departments or divisions to oversee these services. Consolidation would also not be practical due to the completely separate function of the services.¹

6.0 WRITTEN DETERMINATIONS

The following nine determinations are required to be made by the LAFCo Commission pursuant with Government Code Section 56430. The following determinations have been prepared consistent with Shasta LAFCo's policy and procedures for review of municipal services.

6.1 FUTURE INFRASTRUCTURE, FACILITIES, AND SERVICES

Since 1982, the District has averaged approximately 26.7 services per year. (Figure 3). The majority of the connections are residential with the balance being commercial. Figure 3 provides a comparison between the number of connections since 1982 and actual connections. Based on the historical service connection data, it is estimated that by year 2015, the District will have a total of approximately 1,296 service connections or approximately 1,550 HEs. At that time, the MDD will be an estimated 2.6 MGD (1,550 HEs x 1,700 GPD/HE). The District needs to proceed with construction of Well 6 in order to reliably accommodate the current and future water demands.

In order to meet the ultimate proposed SAB MDD water demand of 5.7 MGD to serve approximately 3,400 HEs the District will need to add 3.7 MGD in capacity. This could be accomplished by adding four wells that each produces approximately 640 GPM. Larger wells could be constructed; however, the larger well would then need to be taken out of service in determining the firm pumping capacity.

It is usually more economical and reliable to provide stored water for supply needed during: (1) peak demands in excess of maximum daily demand, (2) fire demands, and (3) in the event of an emergency short loss of the usual source of supply, such as a power outage. Based upon the ultimate MDD of 5.7 MGD, the required storage in a typical water system is a function of three quantities as follows:

Equalizing storage is the amount of water needed over and above the maximum daily demand rate to satisfy peak demands of the day. This is often found to be between 15 and 25 percent of the MDD and has been assumed to be 25 percent for planning purposes herein, for a required volume of 1.4 MG (25 percent of 5.7 MGD).

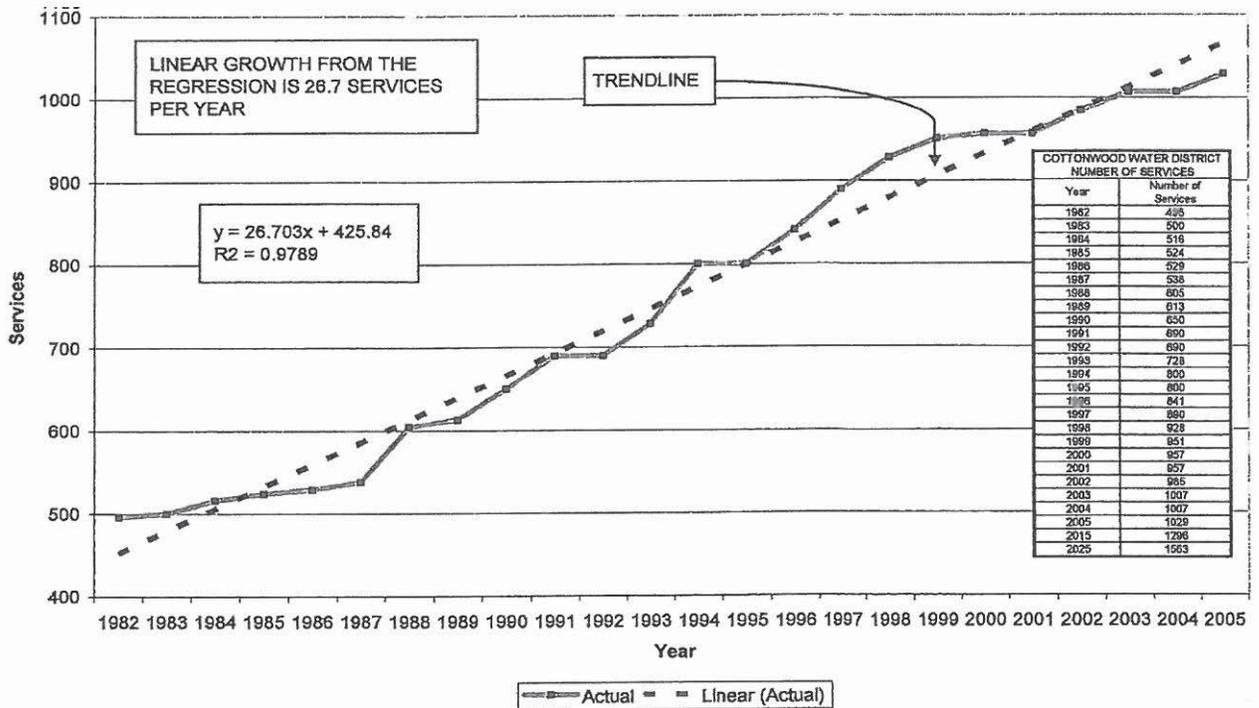
Fire storage is usually based on the theoretical amount that could be used to combat a major fire in a high value area within the community. The Insurance Services Office (ISO)

¹ Telephone communication on January 13, 2006.

recommends fire storage be a function of computed fire demands. Shasta County Fire Safety Standards would require a minimum fire flow capacity of 2,500 GPM for two hours because of the schools. ISO recommendations could be up to 3,500 GPM for two hours. It seems impractical to design the entire water system to meet every possible fire demand, which can change with building reconstruction, sprinkler installation, or building demolition. A 2,500 GPM demand for two hours corresponds to a storage quantity of 0.30 MG and has been used herein as the minimum design value. Fire storage capable of meeting ISO's 3,500 GPM capacity has a corresponding storage requirement of 0.63 MG, which would be a desirable fire storage capacity. Future large buildings having fire flow demands in excess of about 2,500 GPM should be required to be sprinklered, which reduces the fire demand flow.

FIGURE 3

COTTONWOOD WATER DISTRICT
ESTIMATED GROWTH RATE



Emergency storage is the amount of water necessary to continue service in the event of power failure or some other failure of the supply system. This is usually assumed to be the MDD times some interval of time such as might occur during a power outage. Six hours is normally used, which represents 1.4 MG (25 percent of 5.7 MGD).

Where supply system failures are uncommon, it seems unreasonable to imagine a major fire coincident with both a supply failure and with a period of water consumption equal to the maximum daily demand. For this reason, it is recommended that the District's minimum storage will be equalizing storage (1.4 MG) plus the larger quantity of either Shasta County fire storage (0.30 MG) or emergency storage (1.4 MG), for a total of 2.8 MG.

The District has two water storage tanks. Tank 1 adjacent to Arroyo Manor Subdivision has a 0.1 MG capacity and is limited by an isolation valve to serving only that area. Tank 2, located within the District's Sphere of Influence boundary at the north end of Rhonda Road, it provides 1.0 MG of storage.

The District has equipped Wells 3 and 5 with emergency generators. The District can consider these wells equipped with emergency power as emergency storage. Well 3 is isolated and provides limited backup to only a small portion of the District, however Wells 1 and 5 provide a firm (largest well out of service) backup to storage in the approximate amount of 0.5 MG. Thus one could conceivably consider that the majority of the District will soon have approximately 1.5 MG of reliable, useable storage. This should provide the District with enough storage to meet a MDD of 3 MGD, which at the current growth projection could occur sometime around year 2023, if the historical growth rate remains constant. At that time the District will want to have installed another tank with a volume of approximately 1 to 1.3 MG. As an alternative, the District should consider constructing at least one of its new wells with an emergency generator. Construction of new wells and the tank will need to be accelerated if the growth rate exceeds the average 26.7 services per year.

6.2 GROWTH AND POPULATION PROJECTIONS FOR AFFECTED AREAS

Growth within the District is not measured in terms of population, but rather in terms of Household Equivalents and water demand as discussed in Section 6.1. However, based on 1,021 residential service connections, current population within the District totals The 1989 Cottonwood Water District Master Plan (Appendix D) guided District improvements over the last 24 years, however, the Plan will be revised to reflect the area proposed for annexation. The ultimate water demand for the District was estimated based upon acreage and typical water demand per acre as summarized in Table 3. Land use designations were taken from the Cottonwood Community Plan as adopted by the Board of Supervisors, October 4, 1988 (Figure 4). The total acreage was reduced by 25 percent to account for roads and non-developable parcels. HE determinations were made for parcels already being developed, such as the new Cottonwood School and or in the tentative map stage. Figure 5 illustrates the locations of proposed development and the new school in addition to proposed tank and well sites necessary to serve areas within the proposed SAB.

The SAB for the Cottonwood Water District totals approximately 2,545 acres. An ultimate water demand of 5.7 MGD was determined for the MDD based upon the land use designations. An ultimate HE count of 3,400 was determined based upon this demand divided by the standard 1,700 GPD/HE.

6.3 FINANCING CONSTRAINTS AND OPPORTUNITIES

Had the District not imposed the Capacity Charge of \$6,900 per connection, the District may have been placed in a precarious fiscal position. The District recently funded construction of the Rhonda Road water tank and pipeline at a cost of approximately \$924,000. The cost was absorbed by District reserves. Future funding will be needed to construct Well No. 6 and a 0.25 million gallon water tank to provide required water and minimum storage volume over the next 10 years for an estimated new 350 service connections. Without the Capacity Charge there could have been a potential moratorium for future connections unless a future development absorbed the entire cost of future District expansion. Based on the projected growth, maintenance personnel may require an increase from two to three full time positions, however, additional water sales may cover additional personnel costs.

The District Board approved an increase to the water sales in February, 2012. Water charges are a base rate of \$18.00 per 800 cubic feet of consumption. In addition for each 100 cubic feet of water used above the 800 cubic feet the fee increased from 50 cents to 70 cents.

TABLE 3
COTTONWOOD WATER DISTRICT
ESTIMATED ULTIMATE MAXIMUM DAY DEMAND WITHIN 2006 PROPOSED DISTRICT

Land Use Designation	Total Area		Net Area (Acres)	Maximum Day Demand		HEs ¹
	(Sq Ft)	(Acres)		(Gal/Acre/Day)	(GPD)	
A-cg	3,918,000	90	67	2,000	135,000	79
C	8,055,000	185	139	5,000	693,000	408
I	5,249,000	121	90	3,750	339,000	199
MU	59,000	1	1	2,000	2,000	1
N-H-40	1,148,000	26	20	875	17,000	10
PF	4,107,000	94	71	4,375	309,000	182
RA	8,131,000	187	140	2,000	280,000	165
RB	13,657,000	314	235	875	206,000	121
SR-1	13,890,000	319	239	3,125	747,000	439
SR-2	6,929,000	159	119	2,000	239,000	141
SR-3	8,943,000	205	154	1,438	221,000	130
UR-16	146,000	3	3	12,500	31,000	18
UR-5	8,064,000	185	139	7,500	1,041,000	612
UR-8	2,021,000	46	35	10,000	348,000	205
Nelson Subdivision	21,133,000	485	364	2800	1,020,000	600
New Elementary School	2,546,000	58	44	1160	51,000	30
PROPERTIES WITHIN THE DISTRICT NEXT TO THE SCHOOL BUT NOT IN COMMUNITY PLAN						
SR-1	419,000	9.6	7	2,500	18,000	11
RA	646,000	14.8	11	1,600	18,000	11
TOTALS	109,062,000	2,500	1875		5,715,000	3,400
Notes						
1. Total area reduced by 25% to account for non-developable lands and roads. HE = Maximum Day Demand = 1,700 GPD/HE January 2006 HE's are estimated at 1,290						

It is District policy that proposed development must provide, pipelines, distribution systems, water facilities, booster pumps, water tanks, regulating valves, chlorinators, supplemental water with capacities, connecting lines, in-tract improvements, and well systems as necessary to serve the proposed development. Annexation policies were revised in 2005 which also require future annexation areas to provide infrastructure (Appendix E).

6.4 COST AVOIDANCE

The District utilizes cost avoidance techniques that increase efficiency and decrease operating costs. Techniques include eliminating duplicate services, reducing high-administrative-to-operational-cost ratios, reducing inventories of inefficient and/or outdated equipment, implementing economies of scale and creative use of personnel resources.

6.5 OPPORTUNITIES FOR RATE RESTRUCTURING

The District primarily currently utilizes water sales and the Capacity Charge for maintenance and the construction of improvements. The Capacity Charge of \$6,900 per connection replaced the previous Connection Fee of \$1,618 and \$15 front footage fee. The Charge will be updated yearly to keep up with inflation and increased costs.

6.6 OPPORTUNITIES FOR SHARED FACILITIES

There currently exists no opportunities to share facilities with the City of Anderson due to topographic considerations and also due to the fact that the City is urban in nature and the District, even though there are urban land uses in the core of the District, is semi-rural in nature. Neither is there an opportunity to share facilities with the Clear Creek Community Services District due to distance. The closest facilities (water lines) between the two districts are more than four miles. The sharing of facilities between County Service Area #17 is not practical due to the completely separate function of the services. Equipment and facilities for wastewater collection and treatment is different than equipment and facilities for the provision of potable water.

6.7 GOVERNMENT STRUCTURE OPTIONS

The District Board has determined that the District works effectively with other public water systems or other organizations in exploring inter-governmental options that have the potential to achieve economies of scale and greater efficiencies in the delivery of services.

The Board has determined that District personnel and the Board of Directors have developed an understanding of the various governmental restructuring and jurisdictional change options provided under the LAFCO statute as they would pertain to and affect water districts.

6.8 EVALUATION OF MANAGEMENT EFFICIENCIES

The District has established an effective internal organization to provide efficient, high-quality public water service. It is an on-going effort of the District to improve services, reduce waste, eliminate duplications of effort, contain costs, maintain qualified employees, build and maintain adequate contingency reserves, encourage and maintain open dialogues with public and other public and private agencies. The District maintains an on-going analysis of agency functions, operations and practices and the ability to serve current and future service demands.

6.9 LOCAL ACCOUNTABILITY AND GOVERNANCE

The District Board has determined that their local accountability is good, with recognition by other water agencies as well as industry insurance and worker's compensation groups. The Board has determined that the District personnel, in particular the District Manager, recognize the importance of fostering local accountability. District decision makers are accessible and accountable to the public. Public participation is actively encouraged and valued. Programs, plans, and fiscal decisions are disclosed publicly and public input is solicited when considering program and infrastructure plans and making final determinations before public.

APPENDIX A – COTTONWOOD WATER DISTRICT BUDGET

**COTTONWOOD WATER DISTRICT
BUDGET REPORT**

	FY-2012-2013 PROPOSED	FY 2012- 2013 ACTUALS	FY 2013-2014 PROPOSED
REVENUE			
Capacity Charge	0.00	27,600.00	34,500.00
Meter Charge Fee	0.00	880.00	500.00
Water Sales	413,500.00	439,735.00	439,000.00
Hydrant Meter Rental Fee	100.00	(29.00)	0.00
No Money Credit	0.00	2,853.00	1,000.00
Backflow test fee	875.00	875.00	955.00
Other Income	1,500.00	3,831.00	3,000.00
TOTAL	415,975.00	475,745.00	478,955.00
 INTEREST INCOME			
Operations	1,900.00	1,540.00	1,500.00
Map deposit	10.00	6.00	6.00
Water Trust Acct	20.00	4.00	4.00
Capacity Charge	1,250.00	1,332.00	1,400.00
Total Interest Oncome	3,180.00	2,882.00	2,910.00
 TOTAL INCOME	 419,155.00	 478,627.00	 481,865.00

GENERAL & ADMINISTRATIVE

Administration	1,250.00	3,524.00	3,000.00
Bad Debt Expense	600.00	708.00	300.00
Computer Consulting	100.00	604.00	200.00
Contract Labor Expense	100.00	0.00	100.00
Dept Health Services	6,000.00	6,312.00	6,500.00
Dues Expense	3,300.00	3,370.00	3,400.00
Equipment	500.00	1,455.00	2,500.00
Insurance General	7,500.00	13,517.00	14,000.00
Insurance Health	34,500.00	42,224.00	39,000.00
Lab Fees	1,750.00	4,339.00	3,000.00
Legal and accounting Fees	3,800.00	4,040.00	4,500.00
Materials	3,000.00	3,772.00	4,000.00
Office Supply	14,000.00	12,197.00	13,000.00
Telephone	3,000.00	2,515.00	2,600.00
Utilities General	2,500.00	2,018.00	2,500.00
OTAL	81,900.00	100,595.00	98,600.00

PAYROLL

Workman`s Compensation	7,200.00	8,985.00	9,000.00
Employee Benefits	15,000.00	15,076.00	16,000.00
Payroll Tax	11,000.00	10,209.00	11,000.00
Wages General	61,200.00	60,893.00	61,000.00
TOTAL	94,400.00	95,163.00	97,000.00

TRANSMISSION AND DISTRIBUTION

Utilities Pumping	90,000.00	106,639.00	107,000.00
T&D Utilities	1.00	969.00	1,000.00
T&D Expense	10,000.00	8,746.00	9,000.00
T&D Legal Engineering	0.00	0.00	200.00
T&D Training	200.00	125.00	300.00
T&D Telephone	1,500.00	1,332.00	1,400.00
T&D Truck & Auto	15,000.00	9,988.00	9,000.00
T&D Wages	63,550.00	59,680.00	61,000.00
TOTAL	180,251.00	187,479.00	188,900.00

INCOME TOTAL	419,155.00	478,627.00	481,865.00
EXPENSE TOTAL	356,550.00	383,237.00	384,500.00
	62,605.00	95,390.00	97,365.00

DEPRECIATION	70,225.00	65,055.00	66,000.00
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NET INCOME	(8,850.00)	30,335.00	31,365.00
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