MUNICIPAL SERVICE REVIEW

FOR THE

COLUSA COUNTY WATERWORKS DISTRICT #1

IN

GRIMES, CALIFORNIA

LOCAL AGENCY FORMATION COMMISSION

OF

COLUSA COUNTY

February 5, 2009
Resolution 2009-0001

MUNICIPAL SERVICE REVIEW FOR THE COLUSA COUNTY WATERWORKS DISTRICT #1

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1 INTRODUCTION

1.1 LAFCO's Responsibilities

This Municipal Service Review (MSR) has been prepared for the Colusa Local Agency Formation Commission (Colusa LAFCO). Local Agency Formation Commissions are quasi-legislative local agencies created in 1963 to assist the State in encouraging the orderly development and formation of local agencies. This MSR consists of a review of water service as provided by the Colusa County Waterworks District #1 in Grimes.

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000 et seq.) is the statutory authority for the preparation of an MSR, and periodic updates of the Sphere of Influence of each local agency. The Governor's Office of Planning and Research has issued Guidelines for the preparation of an MSR. This MSR adheres to the procedures set forth in the MSR Guidelines.

A Sphere of Influence is a plan for the probable physical boundaries and service area of a local agency, as determined by the affected Local Agency Formation Commission (Government Code §56076). Government Code §56425(f) requires that each Sphere of Influence be updated not less than every five years, and §56430 provides that a Municipal Service Review shall be conducted in advance of the Sphere of Influence update.

1.2 Municipal Service Review Requirements

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

1. Growth and Population

2. Capacity and Infrastructure

3. Financial Ability

4. Shared Facilities

5. Government Structure and Accountability

1.3 LAFCO Policies and Procedures Related to Municipal Services

The Colusa LAFCO adopted policies and procedures related to municipal services on February 5, 2004, which were subsequently amended on August 2, 2007.

1.4 Description of Public Participation Process

Colusa LAFCO is a legislative body authorized by the California Legislature and delegated powers as stated in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (the Act). The LAFCO proceedings are subject to the provisions California's open meeting law, the Ralph M. Brown Act (Government Code Sections 54950 et seq.) The Brown Act requires advance posting of meeting agendas and contains various other provisions designed to ensure that the public has adequate access to information regarding the proceedings of public boards and commissions. Colusa LAFCO complies with the requirements of the Brown Act.

The MSR Guidelines provide that all LAFCOs should encourage and provide multiple public participation opportunities in the municipal service review process. MSR policies have been adopted by the Colusa LAFCO. Colusa LAFCO has discussed and considered the MSR process in open session, and has adopted a schedule for completing the various municipal service reviews and sphere of influence updates for Colusa County. Each municipal service review will be prepared as a draft, and will be subject to public and agency comment prior to final consideration by the Colusa LAFCO.

1.5 California Environmental Quality Act (CEQA)

The Municipal Service Review is a planning study that will be considered by LAFCO in connection with subsequent proceedings regarding the Colusa County Waterworks District #1 Sphere of Influence. The Sphere of Influence review or update that would follow has not been approved, or adopted or funded by LAFCO.

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

1.6 Preparation of the MSR

Research for this Municipal Service Review (MSR) was conducted over several months from the fall of 2007 through October 2008. Since then, several modifications have been made reflecting dynamic circumstances. This MSR is intended to support preparation and update of Spheres of Influence, in accordance with the provisions of the Cortese-Knox-Hertzberg Act. The objective of this Municipal Service Review (MSR) is to develop recommendations that will promote more efficient and higher quality service patterns; identify areas for service improvement; and assess the adequacy of service provision as it relates to determination of appropriate sphere boundaries.

While LAFCO prepared the MSR document, LAFCO did not engage the services of experts in engineering, law enforcement, fire protection, recreation and other specialists in related fields, but relied upon reports and district staff for information. Therefore, this MSR reflects LAFCO's recommendations, based on available information during the research period and provided by district and county staff to assist in its determinations related to promoting more efficient and higher quality service patterns; identifying areas for service improvement; and assessing the adequacy of service provision for the District.

2 SERVICE AREA SETTING: GRIMES, CALIFORNIA

2.1 Grimes

The Community of Grimes is located on State Highway 45, south of Colusa and ten miles east of Interstate 5. Grimes was settled in 1851 and was named for Cleaton Grimes.[1] Grimes has a community hall, a post office, a trailer park, a community library, elementary school with a cafeteria, two bar/restaurants, and an industrial facility.[2]

The Colusa County Housing Element states that although this community "is not receiving the same level of housing development attention from the State Capitol region as those (communities) on Interstate 5, preparation will be made by the County to provide for a more diverse choice and availability of residential zoning."[3]

Seasonal changes in the Grimes area provide a view of rippling grass in the fall, icicles hanging in crystal stalactites from bare orchard branches in the winter, acres of snowy almond blossoms in the spring and golden browns and yellows of maturing grain and rice in the summer.

Agriculture is the basis for the economy in the Grimes area. Local farmers do careful preplanting ground preparation, and coordination of the scheduling of man power and equipment. There is an unending need to be watchful as the crop matures to determine nutrients and water needs as well as to be vigilant against weeds or pests hindering growth.[4]

Colusa County had 21,272 residents in 2006 with 3.01 persons per household.[5] Based on 100 residential water service connections[6] this would mean that the population of Grimes was 301. However, the District estimates the population at 450.[7]

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[1] McComish and Lambert, History of Colusa and Glenn Counties, Historic Record Company, Los Angeles, CA 1918. p174.

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

[3] Colusa County, "Final Housing Element", December 2003, page 4-12

[4] Pierce Joint Unified School District
http://www.pierce.k12.ca.us/education/components/scrapbook/default.php?sectiondetailid=400

[5] http://quickfacts.census.gov/qfd/states/06/06011.html

[6] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

[7] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

The Colusa County Housing Element shows “Vacant Residential Zoned Land in the 100-Year Flood Zone” in Table 4-4. For the area of Grimes the land that is in the Flood Zone is “all of Grimes”.[8] This will make it difficult to attract new development to Grimes.

2.2 Colusa County

Colusa County is located approximately thirty-five miles north of Sacramento, along the I-5 corridor. The County is approximately thirty-five miles long (north to south) and forty-five miles wide (east to west). It is bounded by Yolo, Sutter, Butte, Glenn and Lake Counties. It is primarily a rural agricultural county with 21,272 residents in 2006.[9]

There are two incorporated cities: Colusa (5,000) and Williams (3,000). Interstate 5 bisects the County running north and south. To the west of I-5 is flat agricultural land, running into the Coastal Mountain range. The highest point in the County is located in the Coastal Range, at over 7,000 feet. East of I-5, the topography is flat. The Sacramento River roughly forms the eastern boundary of the County.

Agriculture is the major industry in the County. Colusa was identified by UC Davis Extension Specialist Al Sokolow as having the highest percentage increase in agricultural growth in California during the period 1985-1995 (115% increase).The total on-farm agricultural value in the County in 1997 was $333 million. This increased to over $484 million in 2007.[10]

The major crops produced include rice, processing tomatoes, almonds, wheat, vegetable seeds, walnuts and prunes. Land is relatively inexpensive and water is both available and high quality, compared to other California locations. While the environment defines the breadth of crops produced locally, agriculture is clearly increasing in importance. Rice remains the number one crop, with acreage remaining fairly stable. There is currently a transition from row crops to perennial crops (almonds, grapes, walnuts) and from low-value agronomic crops to higher value vegetables or other row crops. Environmental issues (air quality, water quality, soil degradation, etc.), commodity marketing, and economic sustainability are the major challenges facing local producers.

The rural nature, low population, and ethnic makeup of Colusa County all contribute to "quality of life" issues. There are not many organized activities or employment opportunities for young people, so the local youth become bored with the community and emigrate after graduating from high school. Retention of young people is a problem because the current producers retire or exit farming.

[8] Colusa County, “Final Housing Element”, December 2003, page 4-11.

[9] http://quickfacts.census.gov/qfd/states/06/06011.html

[10] Colusa County Department of Agriculture, “2007 Colusa County Crop Report”, 100 Sunrise Blvd. Suite F, Colusa CA 95932, Phone: 530-458-0580.

Due to a small consumer base, local merchants have difficulty remaining in business and many residents export money out of Colusa by shopping in neighboring counties. Economic development is a high community priority.

The school-age youth in the County are over 50 percent Hispanic, one of the highest in the State. Cultural barriers, communication skills and community infrastructure to support this segment of the citizens are all major challenges. The Colusa County unemployment rate is often the highest in the State (reaching over 30% during the winter months).[11] The median household income in Colusa County in 2004 was $38,350 with 11.7% below the poverty level.[12]

2.3 Climate

The climate in Grimes is typical of Colusa County and the Sacramento Valley, and is generally described as having cold wet winters and warm dry summers. Rainfall of the region is confined mainly to winter months and varies between 15 to 20 inches per year. Winters can be very cold for short periods while summers are hot and dry, with practically no rain from May to September (Colusa County General Plan, 1994).

The principal agricultural uses in the Grimes area are tree and field crops due to the Community's proximity to the Sacramento River with rich soils.

2.4 Existing Municipal Services and Providers

The Colusa County Waterworks District #1 provides water service to the community of Grimes.

Other service providers in the Grimes area include the following:

- Sacramento River Fire Protection District
- Grand Island Cemetery District
- Reclamation District 108

The District has little interdependence with the surrounding area and is limited by the nature of its services. It does provide water for fire protection purposes for the Sacramento River Fire Protection District.

The County of Colusa provides streets, police protection, planning and administrative services.

[11] http://cecolusa.ucdavis.edu/profile.htm

[12] http://quickfacts.census.gov/qfd/states/06/06011.html

Grimes is part of the Pierce Joint Unified School District. The elementary school is Grand Island Elementary at 551 Leven Street, Grimes, CA 95950, Phone 530-437-2416, Fax 530-437-2296.[13] The students attend junior high school and high school in Arbuckle. The School District's student demographics include the following ethnicity: 69% Hispanic, 28% White and 2% African American. According to the School District, 67% of the students are on the free and reduced cost lunch program.[14]

Grand Island Elementary School, Grimes, California[15]

[13]Pierce Joint Unified School District
http://www.pierce.k12.ca.us/education/school/school.php?sectiondetailid=65
[14]Pierce Joint Unified School District
http://www.pierce.k12.ca.us/education/components/scrapbook/default.php?sectiondetailid=400
[15] NSF International, "Feasibility of an Economically Sustainable Point-of-Use/Point-of-Entry Decentralized Public Water System Final Report", March 2005, p18. nsf.org/business/.../pdf/GrimesFinalReport_Dec05.pdf

3 COLUSA COUNTY WATERWORKS DISTRICT #1

3.1 District Background

The Colusa County Waterworks District #1 was established in 1961.[16] The District operates under Sections 55000-55991 of the California Water Code providing water for domestic purposes in the area of Grimes.[17] The water system was constructed in 1964.[18]

The Colusa County Housing Element describes the District as follows:

> The town (Grimes) was served by individual wells until the late 1960's. The new water system (at that time) alleviated a water quality problem that had resulted from septic systems sited too close to individual wells. However, the current water quality does not meet proposed Federal standards for arsenic. The system presently has two wells with a combined pumping capacity of 1,700 gpm and a 5,000 gallon pressurized water storage tank. At this time, there appears to be adequate capacity to support the amount of growth shown in the year 2010 Community Plan for Grimes.[19]

Grimes was the subject of an EPA-funded Study in 2002 to install Point-of-Use (POU) water filtration devices (to remove arsenic) in the homes and businesses of the community. The Study described Grimes as follows:

> Grimes has no industry and many of its residents are farm laborers or commute to work. Many residents live in rental trailers or very small cabins. While there is no industry in Grimes there is, however, one welding shop, two restaurants, a small store and two daycare centers.[20]

3.2 Groundwater Background

3.2.1 Groundwater Introduction

Groundwater is subsurface water occurring in a zone of saturation. In that zone, water fills the pore spaces or openings in rock and sediments. Large basins in the Central Valley can contain thousands of vertical feet of sediments washed in over millions of years by runoff. The sediments are a randomly interfingered mixture of fine-grained material that can restrict movement of groundwater and

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[16] Colusa County Auditor. "Special District Audits Fiscal Year 2005-06".
[17] Colusa County Auditor. "Special District Audits Fiscal Year 2005-06".
[18] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, October 24, 2007.
[19] Colusa County, "Final Housing Element", December 2003, page 4-14
[20] NSF International, "Feasibility of an Economically Sustainable Point-of-Use/Point-of-Entry Decentralized Public Water System Final Report", March 2005, p18. nsf.org/business/.../pdf/GrimesFinalReport_Dec05.pdf

coarse-grained material that constitutes the aquifers within a zone of saturation. An aquifer is a geologic formation that stores, transmits, and yields significant quantities of water to wells and springs.

The depth of water in wells in California's groundwater basins differs considerably among basins and even in different parts of the same basin. The water levels are affected by many factors, including the amount of recharge that has occurred in previous years, the ratio of surface water to groundwater used, the total number and location of wells extracting groundwater from the basin, the amount of groundwater that flows out of the basin, and the total amount of groundwater extracted from the basin.[21]

3.2.2 Groundwater Law

California groundwater law is complicated. Groundwater is classified as either *percolating groundwater* or as a *subterranean stream*. Groundwater not flowing as a subterranean stream is classified as percolating groundwater. When the flow of groundwater is confined to a known and defined subsurface channel it is a subterranean stream.

The California Supreme Court established the doctrine of correlative water rights in 1903 that stated overlying users of percolating groundwater and riparian users of subterranean streams must share the available supply. If a shortage exists, each overlying or riparian right holder must cut their use to some degree. Overlying and riparian users have priority over appropriators who may take only surplus water.

Percolating groundwater is subject to different laws (known as groundwater law) and recognizes two general types of rights, overlying and appropriative. Subterranean streams are subject to surface water law that recognizes two general types of rights:

- Riparian: inherent with ownership of overlying land.

- Appropriative: based on the concept of 'first in time, first in right' with a priority date that determines the seniority of the right.

Groundwater also can be appropriated and diverted outside of groundwater basins by cities, water districts, and other users whose lands do not overlie a groundwater basin. In 1914, California created a water right permit process governing the appropriation of surface water and subterranean streams.

[21] http://rubicon.water.ca.gov/v1cwp/sgw.html

Appropriations of subterranean streams require a permit from the State Water Resources Control Board. The method for appropriating percolating groundwater is to simply pump the water and put it to reasonable beneficial use. No State permit is required.[22]

3.2.3 Sacramento Valley Groundwater Basin

The majority of Colusa County is considered part of the Sacramento River Hydrologic Region. Hydrologic regions are defined as "major drainage basins" in The California Water Plan. This means that most of the County's surface water drains to the Sacramento River, eventually feeding the Pacific Ocean through the Sacramento-San Joaquin Delta.[23] The Sacramento River Hydrologic Region consists of 17.4 million acres in its entirety. Groundwater provides 31 percent of the water supply from the 88 basins/subbasins delineated in the region. These basins underlie 5.053 million acres.

The reliability of groundwater varies greatly. The Sacramento Valley is recognized as one of the foremost groundwater basins in the State, and wells developed in the sediments of the Valley provide excellent supply of groundwater for irrigation, municipal and domestic uses.

3.2.4 Colusa Groundwater Subbasin

A. Colusa Groundwater Subbasin Overview

Contained within most of Colusa County is the Colusa Groundwater Subbasin, a portion of the Sacramento Valley Basin bounded on the east by the Sacramento River, on the west by the Coast Range and foothills, on the south by Cache Creek, and on the north by Stony Creek.

Precipitation in this basin ranges from 17 to 27 inches per year with higher precipitation occurring to the west. The Colusa sub-basin (basin 5-21.52) contains 918,380 acres with average well yields of up to 5,600 gallons per minute with an average well yield of 984 gallons per minute. (DWR Bulletin 118, 2003 page 159).

[22] http://www.sonoma-county.org/edb/regguide/reghistorygroundwtrlaw.htm

[23] http://www.nd.water.ca.gov/IndexFiles/WaterResources/Colusa/

B. Colusa Groundwater Subbasin Hydrogeologic Information

According to California's DWR Groundwater Bulletin 118[24]

The Colusa Subbasin aquifer system is composed of continental deposits of late Tertiary to Quaternary age. Quaternary deposits include the following:

- Holocene stream channel and basin deposits and
- Pleistocene Modesto and Riverbank formations.

The Tertiary deposits consist of the two formations as follows:

- Pliocene Tehama Formation and
- The Tuscan Formation.

These formations are described in detail below:

Holocene Stream Channel Deposits:

These deposits consist of unconsolidated gravel, sand, silt, and clay derived from the erosion, reworking, and deposition of adjacent Tehama Formation and Quaternary stream terrace deposits. The thickness varies from 1 to 80 feet. These deposits represent the upper part of the unconfined zone of the aquifer and are moderately-to-highly permeable; however, the thickness and aeration extent of the deposits limit the water-bearing capability.

Holocene Basin Deposits:

These deposits are the result of sediment-laden floodwaters that rose above the natural levees of streams and rivers and spread across low-lying areas. They consist primarily of silts and clays and may be locally interbedded with stream channel deposits along the Sacramento River. Thickness of the unit ranges up to 150 feet. These deposits have low permeability and generally yield low quantities of water to wells. The quality of groundwater produced from basin deposits is often poor.

[24] California Department of Water Resources: http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.52.pdf

Pleistocene Modesto and Riverbank Formations:

Terrace deposits include the Modesto Formation (deposited between 14,000 and 42,000 year ago) and the Riverbank formation (deposited between 130,000 and 450,000 year ago).

The Modesto deposits consist of moderately to highly permeable gavels, sands, and silts. Thickness of the formation ranges from less than 10 feet to nearly 200 feet across the valley floor.

The Riverbank deposits are the older terrace deposits that occur at a higher topographic level and consist of poorly to highly pervious pebble and small cobble gravels interlensed with reddish clay, sand, and silt. Thickness of the formation ranges from less than 1 foot to over 200 feet depending on location. The formation yields moderate quantities of water to domestic and shallow irrigation wells and also provides water to deeper irrigation wells that have multiple zones of perforation. Generally the thickness of the formation limits the water-bearing capabilities.

Pliocene Tehama Formation:

The Tehama Formation is the predominant water-bearing unit within the Colusa Subbasin and reaches a thickness of 2,000 feet. The formation occurs at depths ranging from a few feet to several hundred feet from the surface. The formation consists of moderately compacted silt, clay, and fine silty sand enclosing lenses of sand and gravel; silt and gravel; and cemented conglomerate. Occasional deep sands and thin gravels constitute a poorly to moderately productive, deep, water-bearing zone.

Pliocene Tuscan Formation:

The Tuscan Formation occurs in the northern portion of the Subbasin at an approximate depth of 400 feet from the surface and may extend to the Greenwood Anticline east of Interstate 5. The formation is composed of a series of volcanic mudflows, tuff breccia, tuffaceous sandstone, and volcanic ash layers.

The Arbuckle and Dunnigan Plains is a subarea of the Colusa Subbasin.

C. Colusa Subbasin Groundwater Level Trends

According to California's DWR Groundwater Bulletin 118[25]

> Review of hydrographs for long-term comparison of spring-spring groundwater levels indicates a slight decline in groundwater levels associated with the 1976-77 and 1987-94 droughts, followed by recovery to pre-drought conditions of the early 1970's and 1980's. Some wells increased in levels beyond the pre-drought conditions of the 1970's during the wet season of the early 1980's. Generally, groundwater level data show an average seasonal fluctuation of approximate 5-feet for normal and dry years. Overall there does not appear to be any increasing or decreasing trends in groundwater levels.

D. Colusa Subbasin Groundwater Storage

According to California's DWR Groundwater Bulletin 118[26]

> The storage capacity of the Colusa Subbasin was estimated based on estimates of specific yield for the Sacramento Valley as developed by DWR. Estimates of specific yield, determined on a regional basis, were used to obtain a weighted specific yield conforming to the subbasin boundary. The estimated specific yield for the subbasin is 7.1 percent. The estimated storage capacity to a depth of 200 feet is approximately 13,025,887 acre-feet.
>
> Estimates of groundwater extraction for the Colusa Subbasin are based on surveys conducted by the California Department of Water Resources during 1993, 1994, and 1999. Surveys included land use and sources of water. Estimates of groundwater extraction were as follows:

Use	Groundwater Extracted
Agricultural	310,000 acre-feet
Municipal and Industrial	14,000 acre-feet
Environmental Wetland	22,000 acre-feet

> Deep percolation from applied water is estimated to be 64,000 acre-feet.

[25] California Department of Water Resources: http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.52.pdf

[26] California Department of Water Resources: http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.52.pdf

E. Colusa Subbasin Groundwater Quality and Quantity

According to California's DWR Groundwater Bulletin 118[27]

Colusa Subbasin Groundwater Characterization:

Calcium-magnesium bicarbonate and magnesium-calcium bicarbonate are the predominant groundwater types in the Colusa Subbasin. Mixed character waters for different regions of the Colusa Subbasin occur as follows:

- Sodium bicarbonate waters from Wiliams-Colusa south to Grimes
- Magnesium-sodium bicarbonate or sodium-magnesium bicarbonate waters near Williams-Arbuckle area and locally near Zamora
- Magnesium bicarbonate waters locally near Dunnigan.

Total dissolved solids (TDS) values range from 120 to 1,220 mg/L, averaging 391 mg/L in the Colusa Subbasin.

Colusa Subbasin Groundwater Impairments:

High Electrical Conductivity (EC), Total Dissolved Solids (TDS), adjusted sodium absorption ratio (ASAR), nitrate, and manganese impairments occur near Colusa. High TDS and boron occur near Knights Landing. High nitrates occur in Arbuckle, Knights Landing, and Willows. Localized areas have high manganese, fluoride, magnesium, sodium, iron, ASAR, chloride, TDS, ammonia, and phosphorus.

The Sacramento River Basinwide Water Management Plan[28] states the following regarding water quality in the Colusa Subbasin:

Water quality problems exist in some portions of the Subbasin and are most likely associated with leaching of alkaline soils. The overall quality of groundwater is considered good to excellent for most agricultural purposes. The overall quality of groundwater is often poor for municipal purposes.

[27] California Department of Water Resources: http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.52.pdf

[28] California Department of Water Resources Northern District, "Sacramento River Basinwide Water Management Plan", January 2003, page 132.

According to California's DWR Groundwater Bulletin 118[29] Colusa Subbasin groundwater well yields are described as follows:

> In the Colusa Subbasin municipal and irrigation wells yield from 25 to 5,600 gallons per minute with and average of 1,967 gallons per minute based on 109 well completion reports.
>
> Domestic well depths range from 11 to 870 feet with an average depth of 155 feet based on 2,599 well completion reports. Municipal and Irrigation wells range from 20 to 1,340 feet deep with the average well 366 feet deep based on 1,515 well completion reports.
>
> There are 42 public water agencies and 5 private water companies in this Subbasin.

3.2.5 Colusa County Groundwater Management Plan

In September 2008, Colusa County released a Groundwater Management Plan (GMP) in accordance with the California Water code, Section 10750. The overall goal of the GMP is to ensure long-term sustainability of Colusa County's groundwater resources. The scope of this plan covers all of Colusa County although very limited in service areas such as Grimes. Funding for this work was provided by the California Department of Water Resources. The purpose of the GMP is to promote responsible stewardship, be eligible for future grant funding and to retain local control over water management decisions.[30]

3.3 Water Supply

The Colusa County Waterworks District #1 receives all municipal water exclusively from underground sources. The District uses 36 million gallons annually. The maximum day is 182,000 gallons, which is an average peak of 1,716 gallons per day (gpd) per connection compared to Princeton WWD at 2,545 gpd. The maximum month is July with 5 million gallons.[31] The District extracts groundwater from one main well 223 feet deep[32] and has one standby well.[33]

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[29] California Department of Water Resources:
http://www.dpla2.water.ca.gov/publications/groundwater/bulletin118/basins/pdfs_desc/5-21.52.pdf

[30] Colusa County Groundwater Management Plan Main Report, page 1, September 2008.

[31] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

[32] California Department of Water Resources Northern District, "Sacramento River Basinwide Water Management Plan", January 2003, page 85.

[33] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, October 24, 2007.

3.4 Water Treatment

According to the EPA Study

> Small community water treatment has posed an enormous problem for the drinking water regulatory community, drinking water professionals, and the people living in these communities. The Safe Drinking Water Act (SDWA) and subsequent regulations require that all water in the distribution system and at every tap connected to the distribution system comply.
>
> This essentially mandates central treatment prior to entering the distribution system. No water that exceeds a primary standard may be used for drinking water. Primary standards have been developed to protect human health and are rigorously enforced by the Department of Health Services. For very small communities, this may be a cost that poses an undue burden. Often it could be a cost that has negative public health implications. For a very low-income family, the money spent on water treatment may not be available for other essentials.
>
> Rather than spend that money, a community may apply for a variance or exemption. Exemptions and variances are intended to be temporary solutions to regulatory compliance. They may, however, extend indefinitely leaving a community with no water that meets the regulation.
>
> Point-of-use (POU) treatment provides an alternative by treating a portion of water for less cost. The new arsenic regulation mostly affects small communities. This may be the time when this alternative treatment technology may be the best choice.[34]

Secondary standards are intended to protect the taste, odor or appearance of drinking water. California Code requires that, if a community water system experiences an exceedance of certain secondary standard, quarterly sampling must be initiated. Compliance is then determined based upon the average of four consecutive quarterly samples. Non-compliant water must then be treated to meet the secondary standards.[35]

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

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

The Colusa County Waterworks District #1 water is treated with sodium hypochlorite for Coliform bacteria.[36]

3.5 Water Supply Infrastructure

Water distribution systems carry water for both domestic use and for fire protection. The distribution system should be sized to perform both functions simultaneously, delivering sufficient water volume and pressure. Pipes should be made of durable and corrosion-resistant materials, and alignments located in areas that are easy to access for repairs and maintenance.[37] Fire hydrants should be placed a maximum of 600 feet apart along the water mains and a maximum of 500 feet from the end of water lines.[38]

Some water loss in the distribution system can be expected. Water loss is the difference between the volume of water pumped from the water supply well and the volume of water sold to users. A loss of water from 5% to 15% is considered acceptable.[39]

The District has 106[40] connections (100 residential, 5 commercial and 1 agricultural). The District has 8-inch to 2-inch pipelines. The larger pipelines are made of transite (50% cement and 50% asbestos before 1980)[41] but the 2-inch lines are either plastic or metal.[42] There are 10 fire hydrants.[43]

3.6 Fire Flows

Urban water systems must maintain adequate water pressure in order to provide adequate fire flow. The Sacramento River Fire Protection District, assuming the role of County Fire Marshall in its district, uses State fire flow requirements, which identify fire flow requirements based on building are, constructions type and occupancy. There are no other requirements for water pressure, although customers expect adequate pressure for typical uses.

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[36] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

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

[38] Brelje & Race Consulting Civil Engineers, "Preliminary Engineering Report Bonanza Springs Water System CSA #7 Lake County Special Districts", December 2006, page 11

[39] Brelje & Race Consulting Civil Engineers, "Preliminary Engineering Report Starview Water System CSA #18 Lake County Special Districts", December 2006, page 4.

[40] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

[41] http://en.wikipedia.org/wiki/Transite

[42] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, October 24, 2007.

[43] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, October 24, 2007.

Fire flow requirements for one and two-family buildings is a minimum of 1,000 gpm depending on the size of the structure (2001 UFC, Division III. fire-flow requirements for buildings).

The Sacramento River Fire Protection District reports the following regarding the water available for fire protection in Grimes:

> The Sacramento River Fire Protection District cannot meet the required fire flow on the initial response in the town of Grimes due to the inadequate water system operated by Colusa County Water Works District #1.
>
> The Fire Protection District must rely on mutual aid response of water tenders. The problem arises to find an adequate water source to refill the water tenders.
>
> Presently the water source would be Thayer Aviation located one mile north of Grimes. It is estimated that the Fire Protection District could meet the required fire flows for the town of Grimes once a water shuttle is established with water tenders and the existing water system.[44]

3.7 Colusa County Waterworks District #1 Personnel

The District has no paid personnel but relies on the volunteer Board of Directors and independent contractors for all services.[45] The Board has Simon Robles handle the billing.[46] The treatment plant operator is Rex Monroe (operator Grade D2) who comes once per week. [47]

The Distribution system operator is Lance Swift (Operator Grade D1) from Grimes. He inspects the system once per month in return for free water.[48]

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[44] Winters, Jeffrey, Fire Chief, Sacramento River Fire Protection District, Questionnaire, February 10, 2006.

[45] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, October 24, 2007.

[46] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

[47] California Department of Health Services, "2006 Annual Report to the Drinking Water Program for Community Water Systems Under 200 Service Connections for Year Ending December 31, 2006 Colusa County Waterworks District #1-Grimes"

[48] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, November 13, 2007

3.8 Water Service Rates

The District charges $5.00 per connection per month. Bills are sent out twice per year so each bill is $30. There are no water meters.[49]

Rates for other water service providers in the area are shown below:

District/Agency	Monthly Service Charge- Water	Connection Fee
City of Colusa	$11.45 + extra if over 10,000 cu. ft.	$822 Meter Fee $21,360 Impact Fee
City of Williams	$8.00 + consumptive fee	$1,770
Arbuckle PUD	$12.00	$1,000
Maxwell PUD	$29.34	$1,750
Princeton Waterworks District	$25	$800

Source: Colusa Local Agency Formation Commission

The rates shown above are still low even though they are higher than the rate charged by Colusa County Waterworks District #1. For comparison, the median domestic water rate in Yuba County is $38.15 per month.[50]

The EPA-funded study states that

> The EPA affordability threshold of 2.5% of median household income indicates that the households of Grimes could afford as much as $60 per month for water service....The basic problem is that the residents of Grimes have become accustomed to paying only $5 per month for water service. The cost of water service combined with arsenic removal will produce what is termed in the regulatory environment as rate shock.... However, the unaddressed issue is the monthly charge for basic water service in Grimes that would maintain a viable distribution system infrastructure over the long-term and that would compensate for the costs of the service presently being provided in-kind.[51]

[49] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, October 24, 2007.
[50] Yuba LAFCO, "Final Municipal Service Review: County of Yuba", July 24, 2008, page72.
[51] NSF International, "Feasibility of an Economically Sustainable Point-of-Use/Point-of-Entry Decentralized Public Water System Final Report", March 2005, p50. nsf.org/business/.../pdf/GrimesFinalReport_Dec05.pdf

3.9 Colusa County Waterworks District #1 Finances

On June 30, 2006, the District had $72,985 on deposit with the Colusa County Treasurer, which included $56,146 in reserves. The District maintained a record of all expenditures. The Auditor had no recommendations.[52] The District had $13,533 revenue in 2005 which included $11,025 in water service charges and $2,508 in interest.[53]

The following information is provided by the Colusa County Auditor-Controller:[54]

Colusa County Waterworks Districts June 30, 2006	Fund Balance Unreserved/ Undesignated June 30, 2006	Estimated Additional Financing Sources	Total Available Financing	Estimated Financing Uses	Total Financing Requirements
Colusa County #1	$72,985	$14,000	$86,985	$13,350	$13,350
Princeton	$5,582	$67,065	$72,647	$62,310	$62,310

The Colusa County Auditor-Controller provides the following information regarding revenue to the Colusa County Waterworks District #1:[55]

Revenue Classification	Actual Revenue 2004-05	Actual Revenue 2005-06	Adopted Budget 2006-07	Adopted Budget 2007-08	Actual Revenue 2007-08[56]
Interest	$1,778	$ 2,508	$ 2,000	$2,000	$4,326.05
Water Charges/ Hook-ups	$9,053	$11,025	$12,000	$28,000	$29,361.75[57]

[52] Colusa County Auditor. "Special District Audits Fiscal Year 2005-06".
[53] Colusa County Auditor. "Special District Audits Fiscal Year 2005-06".
[54] Colusa County "Summary of Special District Budgets for Fiscal Year 2006-07"
[55] Colusa County, "Analysis of Revenue by Source Budget for Fiscal Year 2006-2007" Page 396.
[56] Colusa County Auditor, "Revenue Status Report 2007-2008" Colusa County Waterworks District #1, August 25, 2008
[57] Additional income was for one year only. Additional income was from selling extra water to gas well drilling companies. Colusa County Auditor's Office, Janet Daily, Phone 530-458-0400. August 26, 2008.

The Colusa County Auditor-Controller provides the following information regarding the budget for the Colusa County Waterworks District #1:[58]

Expenditure Classification	Actual Expenditure 2004-05	Actual Expenditure 2005-06	Adopted Budget 2006-07	Expenditure 2007-08[59]
Maintenance-Equipment	$3385	$4487	$5000	$3902.71
Maintenance-Structures	$129	$29	$200	0
Misc. Expense	$20	0	0	0
Office Expense	0	$271	$300	$78.31
Professional/ Specialized Services	$2887	$2434	$3000	$2965.00
Small Tools & Instruments				$224.12
Special Department Expenses	$738	$521	$500	$576.53
Utilities	$3336	$4236	$4300	$4921.70
Total	**$10,496**	**$12,005**	**$13,350**	**$12,668.37**

3.10 Review of District Management Structure

A 5-member Board of Directors governs the Colusa County Waterworks District #1. The Board of Directors meets at Art's Welding, 343 Main Street, Grimes (phone 530-2231) as needed.

The following are members of the Board of Directors:

Fred Durst: 530-437-2263
John Keller: 530-437-2528
Arlan Moore: 530-437-2482
Art Olivares[60]: 530-437-2283
vacant[61]

[58] Colusa County, "Analysis of Expenditure by Source Budget for Fiscal Year 2006-2007" Page 397
[59] Colusa County Auditor, "Expenditure Status Report 2007-2008" Colusa County Waterworks District #1, August 25, 2008.
[60] Colusa County Auditor, "Special District Audits Fiscal Year 2005-06".
[61] Colusa County Board of Supervisors Clerk, Yolanda Tirado, Phone: 530-458-0508, E-Mail: cocolusa@countyofcolusa.org

The Board members are appointed for indefinite terms and serve at the will of the Colusa County Board of Supervisors.

Contact Information for the District is as follows:

> Colusa County
> Waterworks District #1
> PO Box 131
> Grimes, CA 95950

The District maintains no liability insurance according to the Auditor[62]; however the Board states that they do have insurance through a local insurance company.[63]

The EPA-funded study stated the following:

> Their weakest attribute was administration. Their record keeping was inconsistent. They weren't aware of some connections....It was also recommended that they join the California Rural Water Association (CRWA). There are many issues they need to deal with....They need to implement a new rate structure....[64]

4. ZONING AND LAND USE

The Colusa County General Plan Land Use Designations within the Colusa County Waterworks District #1 are as follows:

AT	Agricultural Transition
C	Commercial
I	Industrial
PS	Public/Semi-Public Services
RR	Rural Residential
UR	Urban Residential

The special Agricultural Transition (A-T) designation is described in the Colusa County General Plan as follows:

> The intent of the A-T land use designation is two-fold: first, to recognize areas where land has already been subdivided into small parcels (less than 10 acres) for ranchettes, part-time farms, and orchards; and second,

[62] Colusa County Auditor. "Special District Audits Fiscal Year 2005-06".
[63] Colusa County Waterworks District #1, Fred Durst, Director, Phone 437-2263, November 13, 2007.
[64] NSF International, "Feasibility of an Economically Sustainable Point-of-Use/Point-of-Entry Decentralized Public Water System Final Report", March 2005, p52. nsf.org/business/.../pdf/GrimesFinalReport_Dec05.pdf

> to identify vacant areas which may be suitable for urban uses in the future but which are not suitable at this time due to a lack of urban service and their distance from the established community (Colusa County General Plan, 1989).

This A-T land serves as a buffer area until municipal services are feasible. These lands can be redesignated through a General Plan Amendment process if determined necessary by the County.

The Colusa County Housing Element states that "The vacant land designated for residential uses within the County could accommodate approximately 9,439 additional units....Ample vacant land is available in various zones for each of the communities in the County..."[65] The Colusa County Housing Element includes the following table to show the zoning in Grimes:[66]

[65] Colusa County, "Final Housing Element", December 2003, page 4-10
[66] Colusa County, "Final Housing Element", December 2003, page 4-6.

Table 4-1d GRIMES Number of Parcels by Zone						
	R-R Zone	**R-1-6 Zone**	**R-1-8 Zone**	**R-2 Zone**	**R-3 Zone**	**PD Zone**
Total Acres	18 acres	-	13 acres	-	-	-
Number of Parcels	6 parcels	-	15 parcels	-	-	-
Density of Development	1 DU/ acre	1 DU/ 6,000 square feet with public water/ sewer	1 DU/ 8,000 square feet with public water/ sewer	2 DU/ 8,000 square feet with public water/ sewer	2 DU/ 8,000 sq ft + add. DU per 2,000 sq ft with public water and sewer	Depends upon PD approval
Potential Maximum # of units	18 DU	-	70 DU	-	-	-
# of parcels vacant	4 parcels	-	11 parcels	-	-	-
Vacant Acreage	12 acres	-	5 acres	-	-	-
# or parcels underutilized	2 parcels	-	4 parcels	-	-	-
Underutilized Acreage	6 acres	-	8 acres			

The land surrounding the District is zoned “AG, Agriculture-General”.

Maps showing the General Plan Land Use Designations and the Zoning are at the end of this report.

5 MUNICIPAL SERVICE REVIEW
COLUSA COUNTY WATERWORKS DISTRICT #1

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

LAFCO will evaluate the present and long-term infrastructure demands and resources available to the District, analyze whether resources and services are, or will be, available at needed levels, and determine whether orderly maintenance and expansion of such resources and services are planned to occur in line with increasing demands.

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

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

5.1 Growth and Population Projections for the Grimes Area

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

5.1.1 Population Growth

The Colusa County population is expected to increase as follows:

Colusa County Population Projections

Year	Projected Population	Percentage Increase
2000	18,923	
2010	22,697	20%
2020	26,337	16%
2030	29,353	11%
2040	32,499	11%
2050	35,544	9%

(California State Department of Finance and The Great Valley Center)

It is unlikely that the population of Grimes will increase significantly because the land within the District is in the Flood Zone. However, the District should still be prepared for a population increase based on the information shown in the Colusa

County Housing Element. If the vacant parcels were developed to the maximum allowed by the County Zoning Designations, the District could have an additional 88 dwelling units, almost double the existing number of units.

5.1.2 MSR Determinations on Growth and Population for Colusa County Waterworks District #1

1-1) The District should establish requirements for future annexations.

1-2) The District should communicate with the Colusa County Planning Department to make sure that the District is involved in planning decisions which will affect the District.

5.2 Capacity and Infrastructure for Colusa County Waterworks District #1

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

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

It is important that such determinations of infrastructure availability occur when revisions to the Sphere of Influence and annexations occur.

5.2.1 Infrastructure Background

The Colusa County Waterworks District #1 infrastructure has changed little since its original construction in 1964. The water service is barely adequate but the District does not seem to be prepared for future maintenance, expansion or increased regulation.

An example of increased regulation could be that the State may require that all water systems be metered or double metered (with a separate meter for landscaping) to increase water conservation.

5.2.2 MSR Determinations Regarding Capacity and Infrastructure for Colusa County Waterworks District #1

2-1) The District should develop a Master Plan to show the existing capacity and how the water service infrastructure will be upgraded in the future.

2-2) The District should develop a Capital Improvement Plan for maintaining and improving the infrastructure as shown in the Master Plan.

2-3) The District does not have additional capacity to provide for more domestic customers since the fire flows are inadequate.

2-4) The District should make installation of water meters a high priority. A rate schedule should then be established that charges more for higher water use.

5.3 Financial Ability

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

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

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

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

5.3.1 Financial Ability of Colusa County Waterworks District #1 to Provide Services

A. Municipal Financial Constraints Overview

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

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

B. Financing Opportunities that Require Voter Approval

Financing opportunities that require voter approval include the following:

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

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

C. Financing Opportunities that Do Not Require Voter Approval

Financing opportunities that do not require voter approval include imposition of or increases in fees to more fully recover the costs of providing services, including user fees and development impact fees to recover the actual cost of services provided and infrastructure. Development impact fees and user fees must be based on reasonable costs, and may be imposed and increased without voter approval. Development impact fees may not be used to subsidize operating costs. Agencies may also finance many types of facility improvements through bond instruments that do not require voter approval.

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

5.3.2 Financial Considerations for Colusa County Waterworks District #1

Primary resources for the District include water service assessments and interest with primary disbursements going toward maintenance and utilities. Although the people within the District are primarily in the lower economic sector the unusually low water service charge of $5.00 per month severely limits the District's ability to provide adequate water service.

5.3.3 MSR Determinations on Financial Ability for Colusa County Waterworks District #1

3-1) The District maintains acceptable accounting practices.

3-2) The District should plan for the future and have a program of gradually increasing fees to cover increasing costs.

3-3) The District should maintain a connection fee for its water service to cover 100% of the costs associated with new development.

3-4) The District or County should explore the possibilities for any grants which could help the District.

3-5) The District should prepare a Capital Improvement Plan to be prepared for future capital expenditures.

3-6) The District should become familiar with Community Facilities Districts and Mello-Roos Bonds as a means for new development to pay infrastructure costs.

3-7) LAFCO recommends preparation of a Cost of Services Study to ensure that the fees charged bear a reasonable nexus to the cost of providing that service. This report should provide a comprehensive analysis of the services provided by the District and actual costs of those services to the residents.

3-8) Due to the scarcity of resources in the District, it is imperative that the Colusa County Waterworks District #1 set fees and charges in line with the services provided to allow for continuous operation and adequate maintenance.

3-9) The District has a small budget. Additional funds would be required to service additional territory.

3-10) LAFCO recommends establishing District ordinances that promote full cost recovery (cost neutral) for annexations so that the existing residents

shall not have to pay increased rates due to a new development being annexed to the District.

5.4 Opportunities for Shared Facilities

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

5.4.1 Facilities of Colusa County Waterworks District #1

In the case of annexing new lands into a District, LAFCO can evaluate whether services or facilities can be provided in a more efficient manner if the District or some other entity provides them (i.e., the County of Colusa, a County Service Area, or Community Services District). In some cases, it may be possible to establish a cooperative approach to facility planning by encouraging the District and County to work cooperatively in such efforts.

5.4.2 MSR Determinations on Shared Facilities for Colusa County Waterworks District #1

4-1) Grimes is isolated from other water systems in the County so shared facilities are not easy to achieve.

4-2) The District does provide fire hydrants so they do share this facility with the Sacramento River Fire Protection District.

4-3) Shared administration may provide cost-savings. Some counties administer many special districts through a single county department.

5.5 Government Structure and Accountability

Purpose:
To consider the advantages and disadvantages of various government structures that could provide public services, to evaluate the management capabilities of the organization and to evaluate the accessibility and levels of public participation associated with the agency's decision-making and management processes.

One of the most critical components of LAFCO's responsibilities is in setting logical service boundaries for communities based on their capacity to provide services to affected lands. LAFCO may consider the agency's record of local accountability in its management of community affairs as a measure of the ability

to provide adequate services to the Sphere of Influence and potential annexation areas.

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

1. evaluate employees annually,
2. prepare a budget before the beginning of the fiscal year,
3. conduct periodic financial audits to safeguard the public trust,
4. maintain current financial records,
5. periodically evaluate rates and fees,
6. plan and budget for capital replacement needs,
7. conduct advance planning for future growth, and
8. make best efforts to meet regulatory requirements.

Most of the professionally managed and staffed agencies implement many of these best management practices. Many of the smaller special districts serving the area are staffed by board members or volunteers, and do not implement such practices. LAFCO encourages all local agencies to conduct timely financial record-keeping and make financial information available to the public.

5.5.1 Government Structure for Colusa County Waterworks District #1

Restructuring the governmental operation may not be a feasible option for the Colusa County Waterworks District #1; however, continued examination of service delivery and cost may from time to time reveal opportunities for such changes.

A County Service Area could be considered even though there will be a loss of local control because the Colusa County Board of Supervisors would serve as the Board of Directors. County employees would provide maintenance functions. Efficiencies may or may not occur and could result in higher costs to the residents.

The Board could contact the County Public Works Department regarding the cost of a contract for maintenance of the District facilities to see if this would be a feasible option.

5.5.2 Management of Colusa County Waterworks District #1

In evaluating the District's capability to serve its Sphere of Influence, LAFCO can examine the District's ability to maintain management and budget efficiencies over the new lands. Using the Management Practices listed above the Colusa County Waterworks District #1 would be evaluated as follows:

Water Agency Management Practice	Colusa County Waterworks District #1
Evaluate employees annually	Adequate
Prepare timely budget	Adequate
Periodic financial audits	Adequate
Current financial records	Adequate
Evaluate rates	Not practiced
Capital planning	Not practiced
Advance growth planning	Not practiced
Compliance Efforts	Adequate

5.5.3 Public Participation Opportunities

The Colusa County Waterworks District #1 has a five member Board of Directors. The Board meets as needed.

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

The Brown Act establishes requirements for the following:

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

According to California Government Section 54959

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

Section 54960 states the following:

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

It is the responsibility of LAFCO to consider the record of the local agency when making determinations.

5.5.4 MSR Determinations on Government Structure and Accountability for Colusa County Waterworks District #1

5-1) The Board of Directors should work with the Board of Supervisors, the Local Agency Formation Commission and other districts in the County to see if establishment of a County Service Area would be a benefit.

5-2) The District could explore the possibility of contracting with another district for administrative services.

5-3) The District could develop more programs aimed at improving customer service such as development of a Mission Statement, distribution of a District Newsletter, or development of a website for increased dissemination of District information (such as meeting times, projects, etc.).

5-4) The District sends information to its customers on an as-needed basis.

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ABBREVIATIONS

AB Assembly Bill

ASAR adjusted sodium absorption ratio

CEQA California Environmental Quality Act

CIP Capital Improvement Plan

CKH Act Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000

CPA Community Planning Area

CSA County Service Area

CRWA California Rural Water Association

District Colusa County Waterworks District #1

DHS Department of Health Services

DWR Department of Water Resources (California)

EC Electrical Conductivity

EDU equivalent dwelling unit

EPA Environmental Protection Agency (US)

GMP Groundwater Management Plan

gpd gallons per day

gpm gallons per minute

LAFCO Local Agency Formation Commission

mgd million gallons per day

mg/L Milligrams per Liter

MSR Municipal Service Review

POU	Point-of-Use
psi	pounds per square inch
SDWA	Safe Drinking Water Act
SOI	Sphere of Influence SOI
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
UC	University of California
USDA	United States Department of Agriculture

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DEFINITIONS

acre-foot (acre-ft): The volume of water required to cover 1 acre of land (43,560 square feet) to a depth of 1 foot. Equal to 325,851 gallons or 1,233 cubic meters.[67]

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

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

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

California Environmental Quality Act (CEQA): A State Law requiring State and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for a significant adverse environmental impact, an environmental impact report (EIR) must be prepared and certified as to its adequacy before taking action on the proposed project.

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

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

domestic water use: Water used for household purposes, such as drinking, food preparation, bathing, washing clothes, dishes, and dogs, flushing toilets, and watering lawns and gardens. About 85% of domestic water is delivered to homes by a public-supply facility, such as a county water department. About 15% of the Nation's population supply their own water, mainly from wells.[68]

flood, 100-year: A 100-year flood does not refer to a flood that occurs once every 100 years, but to a flood level with a 1 percent chance of being equaled or exceeded in any given year.[69]

[67] http://ga.water.usgs.gov/edu/dictionary.html
[68] http://ga.water.usgs.gov/edu/dictionary.html
[69] http://ga.water.usgs.gov/edu/dictionary.html

Formation: A laterally continuous rock unit with a distinctive set of characteristics that make it possible to recognize and map from one outcrop or well to another. The basic rock unit of stratigraphy. [70]
Gravity flow: Flow of water in a pipe on a descending path.

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

Groundwater basin: A groundwater reservoir, defined by an overlying land surface and the underlying aquifers that contain water stored in the reservoir. In some cases, the boundaries of successively deeper aquifers may differ and make it difficult to define the limits of the basin.[71]

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

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

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

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

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

Maximum Contaminant Level (MCL): The designation given by the U.S. Environmental Protection Agency (EPA) to water-quality standards promulgated under the Safe Drinking Water Act. The MCL is the greatest amount of a contaminant that can be present in drinking water without causing a risk to human health.[72]

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

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[70] http://geology.com/dictionary/glossary-f.shtml
[71] http://rubicon.water.ca.gov/v1cwp/glssry.html
[72] http://ga.water.usgs.gov/edu/dictionary.html

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

Milligrams per liter (mg/L): The weight in milligrams of any substance dissolved in one liter of liquid; nearly the same as parts per million.

Municipal water system: A water system that has at least five service connections or which regularly serves 25 individuals for 60 days; also called a public water system.[73]

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

Per capita water use: The water produced by or introduced into the system of a water supplier divided by the total residential population; normally expressed in gallons per capita per day (gpcd).[74]

Percolation: The downward movement of water through the soil or alluvium to a groundwater table.[75]

Planning Commission: A body, usually having five members, created by the County in compliance with California law (Section 65100 of the Government Code) which requires the assignment of the planning functions of the County of a planning department, planning commission, hearing officers, and/or the Board of Supervisors itself, as deemed appropriate by the Board of Supervisors.

Pleistocene Epoch: The first epoch of the Quaternary Period, beginning 2 to 3 million years ago and ending approximately 10,000 years ago.[76]

Potable water: Water of a quality suitable for drinking.[77]

Quaternary: The second period of the Cenozoic era, following the Tertiary; also, the corresponding system of rocks. It began 2 to 3 million years ago and extends to the present. It consists of two grossly unequal epochs; the Pleistocene, up to about 10,000 years ago, and the Holocene since that time.[78]

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

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[73] http://ga.water.usgs.gov/edu/dictionary.html
[74] http://rubicon.water.ca.gov/v1cwp/glssry.html
[75] http://rubicon.water.ca.gov/v1cwp/glssry.html
[76] http://www.webref.org/geology/p/pleistocene_epoch.htm
[77] http://ga.water.usgs.gov/edu/dictionary.html
[78] http://www.webref.org/geology/q/quaternary.htm

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

Service area: The geographical land area served by a distribution system of a water agency.[79]

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

Total dissolved solids (TDS): A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution. Usually expressed in milligrams per liter.[80]

Turbidity: The amount of solid particles that are suspended in water and that cause light rays shining through the water to scatter. Thus, turbidity makes the water cloudy or even opaque in extreme cases. Turbidity is measured in Nephelometric Turbidity Units (NTU).[81]

Water quality: Used to describe the chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or use.[82]

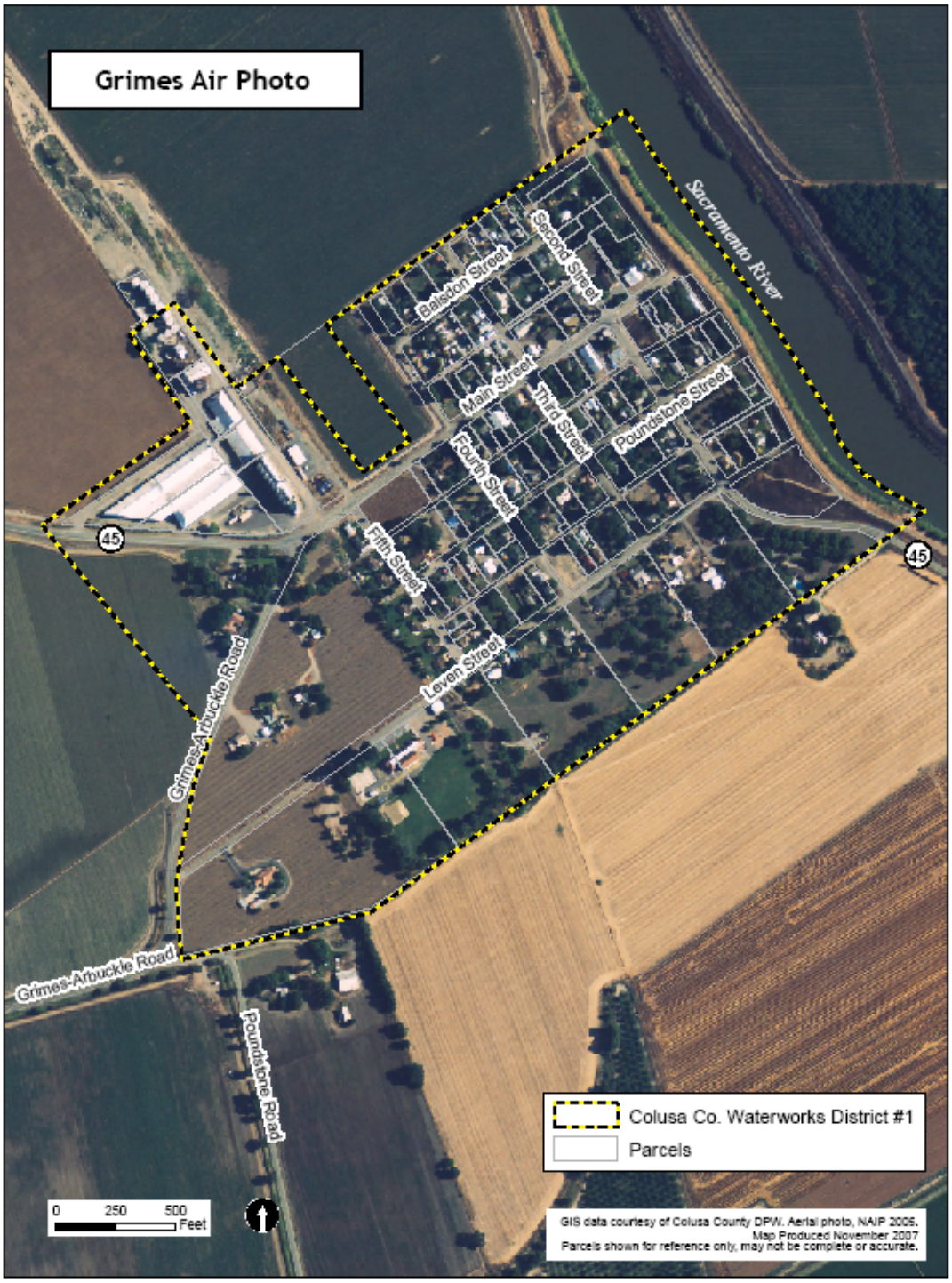
Water year: A continuous 12-month period for which hydrologic records are compiled and summarized. In California, it begins on October 1 and ends September 30 of the following year.[83]

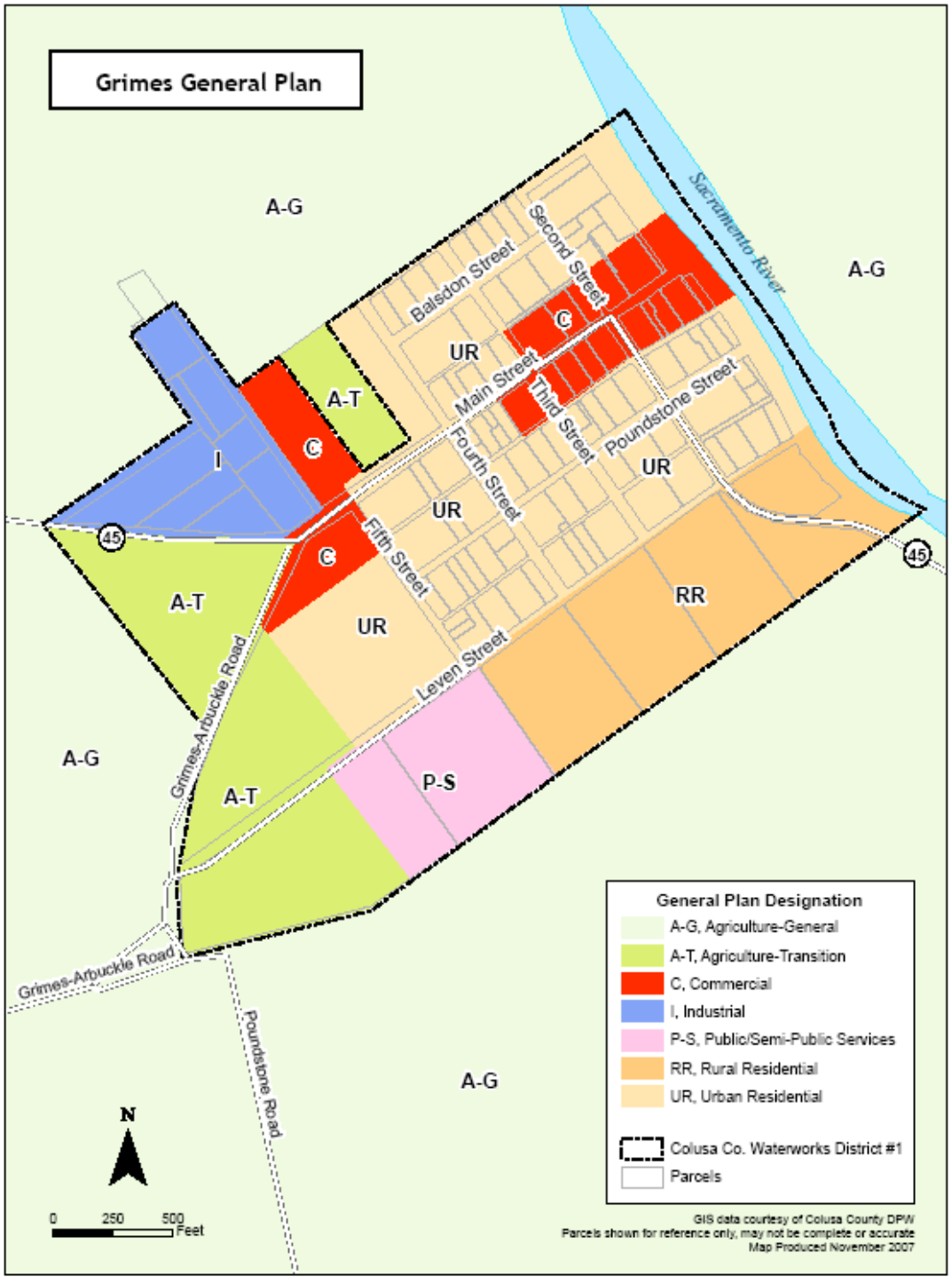
Urban: Of, relating to, characteristic of, or constituting a city. Urban areas are generally characterized by moderate and higher density residential development (i.e., three or more dwelling units per acre), commercial development, and industrial development, and the availability of public services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

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

[79] http://rubicon.water.ca.gov/v1cwp/glssry.html
[80] http://rubicon.water.ca.gov/v1cwp/glssry.html
[81] http://ga.water.usgs.gov/edu/dictionary.html#T
[82] http://rubicon.water.ca.gov/v1cwp/glssry.html
[83] http://rubicon.water.ca.gov/v1cwp/glssry.html

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


Grimes Air Photo
Sacramento River
Baisden Street
Second Street
Main Street
Third Street
Poundstone Street
Fourth Street
Fifth Street
Leven Street
Grimes-Arbuckle Road
Grimes-Arbuckle Road
Poundstone Road
45
45
0 250 500 Feet
Colusa Co. Waterworks District #1
Parcels
GIS data courtesy of Colusa County DPW. Aerial photo, NAIP 2006.
Map Produced November 2007
Parcels shown for reference only, may not be complete or accurate.


Grimes General Plan
A-G
A-G
A-G
A-G
A-T
A-T
A-T
I
C
C
C
UR
UR
UR
RR
P-S
Balsdon Street
Second Street
Main Street
Third Street
Fourth Street
Fifth Street
Poundstone Street
Leven Street
Grimes-Arbuckle Road
Grimes-Arbuckle Road
Poundstone Road
Sacramento River
45
45
N
0 250 500 Feet
General Plan Designation
A-G, Agriculture-General
A-T, Agriculture-Transition
C, Commercial
I, Industrial
P-S, Public/Semi-Public Services
RR, Rural Residential
UR, Urban Residential
Colusa Co. Waterworks District #1
Parcels
GIS data courtesy of Colusa County DPW
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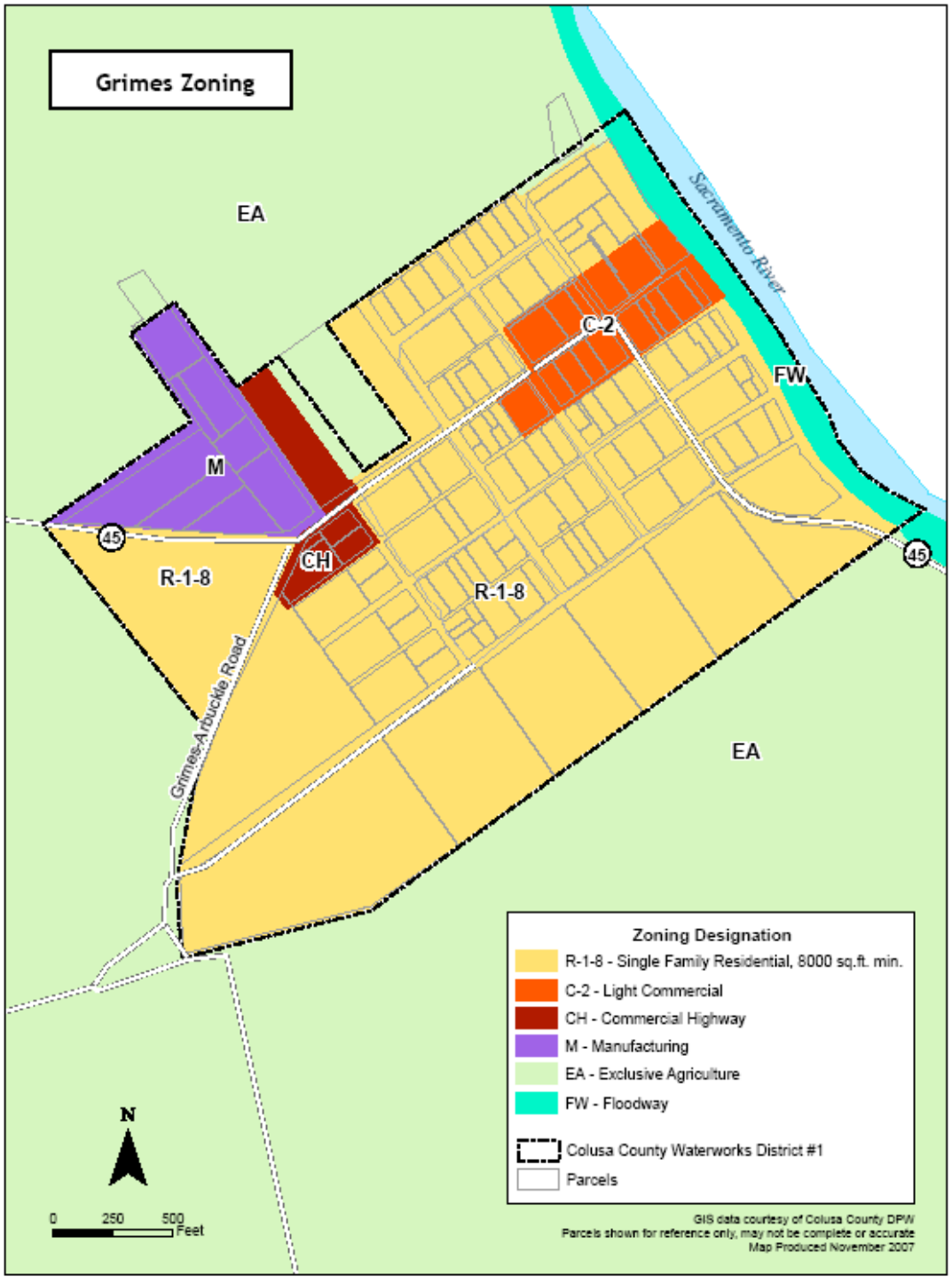
Map Produced November 2007


Grimes Zoning
EA
Sacramento River
C-2
FW
M
45
CH
R-1-8
R-1-8
Grimes-Arbuckle Road
45
EA
Zoning Designation
R-1-8 - Single Family Residential, 8000 sq.ft. min.
C-2 - Light Commercial
CH - Commercial Highway
M - Manufacturing
EA - Exclusive Agriculture
FW - Floodway
Colusa County Waterworks District #1
Parcels
N
0 250 500 Feet
GIS data courtesy of Colusa County DPW
Parcels shown for reference only, may not be complete or accurate
Map Produced November 2007