Draft Municipal Service Review & Sphere of Influence Update

Circle Oaks County Water District

Napa LAFCO

May 18, 2016

Resolution No. tbd

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Draft Municipal Service Review and Sphere of Influence Update

Circle Oaks County Water District

Prepared for:

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Prepared by:

SWALE inc

May 18, 2016

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Chapter 1: ROLE AND RESPONSIBILITY OF LAFCO

Local Agency Formation Commissions (LAFCOs) are independent agencies that were established by state legislation in 1963 in each county in California to oversee changes in local agency boundaries and organizational structures. It is LAFCO's responsibility to:

- oversee the logical, efficient, and most appropriate formation of local cities and special districts,
- provide for the logical progression of agency boundaries and efficient expansion of municipal services,
- assure the efficient provision of municipal services, and
- discourage the premature conversion of agricultural and open space lands (Government Code [GC] §§ 56100, 56301, 56425, 56430, 56378).

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) requires each LAFCO to prepare a Municipal Service Review (MSR) for its cities and special districts. MSRs are required prior to and in conjunction with the update of a Sphere of Influence (SOI). This review is intended to provide Napa LAFCO with the necessary and relevant information related to the Circle Oaks County Water District, specifically regarding the appropriateness of this service provider's existing and proposed boundaries and SOI.

1.1 ABOUT NAPA LAFCO

Although each LAFCO works to implement the CKH Act, there is flexibility in how these state regulations are implemented so as to allow adaptation to local needs. As a result, Napa LAFCO has adopted policies, procedures and principles that guide its operations. The policies and procedures can be found on Napa LAFCO's website (http://www.napa.lafco.ca.gov/).

This MSR/SOI Update is an information tool that can be used to facilitate cooperation among district managers and LAFCO to achieve the efficient delivery of services. Describing existing efficiencies in service deliveries and suggesting new opportunities to improve efficiencies is a key objective of this MSR, consistent with LAFCO's purposes. Since this MSR/SOI will be published on LAFCO's website, it also contributes to LAFCO's principle relating to transparency of process and information. A public hearing will be conducted by LAFCO on this MSR and SOI Update, thereby contributing to LAFCO's aim of encouraging an open and engaged process.

This MSR was written under the auspices of Napa LAFCO. Napa LAFCO has a public Commission with five regular Commissioners and three alternate Commissioners as follows:

Commissioners

- Diane Dillon, Chair, County Member
- Gregory Pitts, Vice Chair, City Member
- Juliana Inman, Commissioner, City Member
- Brian J. Kelly, Commissioner, Public Member
- Brad Wagenknecht, Commissioner, County Member
- Joan Bennett, Alternate Commissioner, City Member
- Keith Caldwell, Alternate Commissioner, County Member
- Gregory Rodeno, Alternate Commissioner, Public Member

Staff / Administrative

- Brendon Freeman, Executive Officer
- Kathy Mabry, Commission Secretary
- Jennifer Gore, Commission Counsel

1.2 PURPOSE OF THE MUNICIPAL SERVICE REVIEW & SPHERE OF INFLUENCE UPDATE

Municipal Service Reviews are intended to provide LAFCO with a comprehensive analysis of services provided by the special district identified within this MSR and that fall under the legislative authority of LAFCO. This review will provide Napa LAFCO with the information and analysis necessary to evaluate existing boundaries and consider spheres of influence for this service provider. The MSR makes determinations in each of seven mandated areas of evaluation, providing the basis for LAFCO to review proposed changes to a service provider's boundaries or SOI.

A Sphere of Influence (SOI) is defined in Government Code (GC) § 56425 as "a plan for the probable physical boundary and service area of a local agency or municipality as determined by the Commission." LAFCO is required to adopt an SOI for each city and each agency in its jurisdiction. When reviewing and determining SOIs for these service providers, LAFCO will consider and make recommendations based on the following information:

- The present and planned land uses in the area
- The present and probable need for public services and facilities in the area
- The present capacity of public facilities and adequacy of public services that the agency provides
- The existence of any social or economic communities of interest in the area if LAFCO determines that they are relevant to the service provider
- The presence of disadvantaged unincorporated communities for those agencies that provide water, wastewater, or structural fire protection services

Ideally, an MSR will support not only LAFCO but will also provide the following benefits to the subject agencies:

- Provide a broad overview of agency operations including type and extent of services provided
- Serve as a prerequisite for a sphere of influence update (included herein)
- Evaluate governance options and financial information
- Demonstrate accountability and transparency to LAFCO and to the public
- Allow agencies to compare their operations and services with other similar agencies

This MSR/SOI Update is designed to provide technical and administrative information on Circle Oaks County Water District to Napa LAFCO, so that LAFCO can make informed decisions based on the best available data for each service provider and area. Written determinations, as required by law, are presented in Chapter 6 *MSR Determinations* of this MSR for LAFCO's consideration and in Chapter 7 *SOI Determinations*. LAFCO is ultimately the decision maker on approval or disapproval of any determinations, policies, boundaries, and discretionary items.

1.3 METHODOLOGY FOR THIS MSR & SOI UPDATE

In accordance with GC § 56430, LAFCO must prepare municipal service reviews prior to or in conjunction with the mandated five-year schedule for reviewing SOIs for the agencies within its jurisdiction. This MSR evaluates the structure and operation of Circle Oaks County Water District and discusses possible areas for streamlining, improvement, and coordination. Key references and information sources for this study were gathered for the agency considered. The references utilized in this study include published reports; review of agency files and databases (agendas, minutes, budgets, contracts, audits, etc.); master plans; capital improvement plans; engineering reports; EIRs; finance studies; general plans; and state and regional agency information (permits, reviews, communications, regulatory requirements, etc.). Additionally, the consulting team, in coordination with the LAFCO Executive Officer, sent the District a Request for Information (RFI), and the District's responses were a key information source. Members of the consultant team also conducted site visits and personal interviews with the District.

This MSR forms the basis for specific judgments, known as determinations, about the District that LAFCO is required to make (GC § 56425, 56430). These determinations are described in the MSR Guidelines from the Office of Planning & Research (OPR) as set forth in the CKH Act, and they fall into seven categories, as listed below:

1. Growth and population projections for the affected area
2. Location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence
3. Present and planned capacity of public facilities and adequacy of public services including infrastructure needs or deficiencies
4. Financial ability of agency to provide services
5. Status of, and opportunities for, shared facilities
6. Accountability for community service needs, including government structure and operational efficiencies

7. Any other matter related to effective or efficient service delivery, as required by commission policy

An MSR must include an analysis of the issues and written determination(s) for each of the above determination categories.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) is contained in Public Resources Code §21000, et seq. Under this law public agencies are required to evaluate the potential environmental effects of their actions. This MSR Update report is exempt from CEQA under a Class 6 categorical exemption. CEQA Guidelines § 15306 states that "Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource."

It should be noted that when LAFCO acts to update an SOI for the District, CEQA requirements must be satisfied. The lead agency for CEQA compliance would most likely be LAFCO.

1.4 PUBLIC PARTICIPATION

LAFCO discussed the Draft MSR/SOI Update on June 6, 2016 at its regular meeting. Comments from the public were solicited; however xx comments from the public were received. The Commission held a public hearing on the Final MSR/SOI Update on (month) (date), 2016.

After this MSR/SOI Update is finalized, it will be published on the Commission's website (www.napa.lafco.ca.gov), thereby making the information contained herein available to anyone with access to an internet connection. A copy of this MSR may also be viewed during posted office hours at LAFCO's office located at 1030 Seminary Street, Suite B, Napa, CA 94559. In addition to this MSR/SOI Update, LAFCO's office maintains files for each service provider and copies of many of the planning documents and studies that were utilized in the development of this MSR/SOI Update. These materials are also available to the public for review.

Chapter 2: Overview of District

2.1 DISTRICT PROFILE

Type of District: Water District

Enabling Legislation: The California Water District Law: Water Code Sections 30000-33901

Functions/Services: Domestic water and sewer

Main Office: 380 Circle Oaks Drive, Napa, California 94558-6607

Mailing Address: same as above

Email: cocwd@circle-oaks.com or waterboard@circle-oaks.com

Phone No.: (707) 254-7796

Fax No.: (707) 254-9880

Web Site: www.cocwd.com

District Manager: Paul Quarneri

District Operator, WebMaster: Leslie Ellison

District Secretary: Anna Haley

Governing Body: Board of Directors (registered resident-voter system)

Director	Title	Appointment	Term Expiration
Jed Welsh	President	Appointed 10/15/13	12/6/2019
Christy Vough	Vice President	Appointed 12/4/15	12/6/2019
Brian Douglas	Director	Appointed 10/21/13	12/1/2017
Leslie Ellison	Director	Elected 11/5/13	12/1/2017
Ron Tamarisk	Director	Appointed 11/18/13	12/1/2017

Meeting Schedule: 2nd Tuesday of every month at 6:45 p.m.

Meeting Location: Circle Oaks County Water District Office, 380 Circle Oaks Drive, Napa, CA 94558

Date of Formation: 1962

Principal County: Napa County

2.2 SERVICES AND LOCATION

Type and Extent of Services

The Circle Oaks County Water District (COCWD) is organized as an independent special district under Division 13 of the California Water Code. COCWD provides domestic water and wastewater services to the Circle Oaks residential community.

Location and Size

The District is located in the unincorporated area of northeastern Napa County, approximately halfway between the City of Napa and Lake Berryessa and west of Monticello Road (Highway 121). The adopted service area for the District is comprised of four non-contiguous, unincorporated areas consisting of approximately 252 acres as shown in Table 2.1, below. The District consists of the Circle Oaks subdivision with an estimated residential population of approximately 466 persons (Table 3-1). A map of the District boundaries and sphere of influence (SOI) is provided as Figure 2-1.

Table 2.1: Geographic Summary for the Circle Oaks County Water District[a]	
Jurisdictional Boundary	252 acres
Sphere of Influence	214 acres

[a] Acreages are approximations calculated using information generated by Napa LAFCO and Napa County's Geographic Information Systems.

2.3 FORMATION AND BOUNDARY

The Circle Oaks County Water District (COCWD/District) was established in 1962 to provide potable water and sewer services to a planned resort/residential community in Cappell Valley, located in northeastern Napa County. The District's formation was sought by landowners to help facilitate the development of a proposed 2,200-lot community to be known as "Circle Oaks." In 1964, the Napa County Board of Supervisors approved a subdivision map submitted by the Circle Oaks Sales Company, Inc. resulting in the creation of 331 quarter-acre circular lots. That same year, general obligation bonds were issued to finance the construction of water and sewer facilities for the first phase of Circle Oaks, referred to as "Unit One."

Between 1964 and 1984, development within Unit One was tempered due to a change in market demand along with the identification of unstable soil conditions, which resulted in the elimination of several lots and roadways within the subdivision. Between September 2000 and April 2007, further development in Circle Oaks was temporarily prohibited as a result of two separate COCWD moratoriums on new water and sewer service connections. The moratorium

on new water service connections was adopted[1] by COCWD in September 2000 and lifted[2] in December 2006 and the moratorium on new sewer service connections was adopted[3] by COCWD in December 2006 and lifted[4] in April 2007.

Boundary History

In 1964, LAFCO authorized the annexation of 843 acres of land located adjacent to the COCWD boundary into the District to facilitate a planned residential subdivision. However, the District's jurisdictional boundary was later significantly reduced after development plans failed to materialize. In 1984, LAFCO authorized the detachment of 21 vacant parcels totaling 3,017 acres from the District. The detachment proceedings, which represented over 90 percent of the District, were originally filed with LAFCO in 1981 and were prompted following a dispute between the affected landowners and the District involving the collection of ad valorem property taxes. The ad valorem property taxes collected by the District were used to make payments on the general obligation bonds that were issued in 1964 to finance the construction of water and sewer systems serving Unit One. However, additional phases of the District's planned water and sewer system were never constructed. As a result, the landowners sought a release of their lands that were located outside of Unit One from any payments for past or future bonded indebtedness incurred by the District. The dispute was eventually resolved following a legal settlement in which the landowners agreed to pay $175,000, while the District agreed not to oppose the detachment proceedings.

Sphere of Influence

The Circle Oaks Water District's sphere of influence (SOI) was adopted by LAFCO in 1985 and covers nearly the entire jurisdictional boundary of the District. The 2007 LAFCO SOI Update excluded six non-contiguous parcels totaling 38 acres that are located within the District boundaries but outside the adopted SOI (Figure 2-1). LAFCO designated the sphere to include all contiguous residential parcels in or adjacent to Circle Oaks Unit One and certain common open-space areas owned by the Circle Oaks Homes Association.

Excluded from the sphere were those parcels within the District that were non-contiguous to Unit One, were owned by the District, and those that served as the site of the District's water and sewer service facilities. Further, portions of three parcels owned by the Circle Oaks Homes Association, which are used for greenbelt purposes, were also excluded from the District's sphere of influence. COCWD's sphere has remained unchanged since it was adopted by LAFCO in 1985.

[1] COCWD. 2000. Ordinance No. 00-1.
[2] COCWD. 2006. Ordinance No. 06-1.
[3] Ibid.
[4] COCWD. 2007. Ordinance No. 07-1.

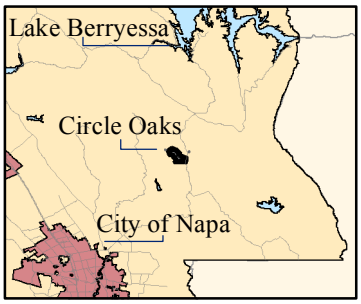
Circle Oaks County Water District

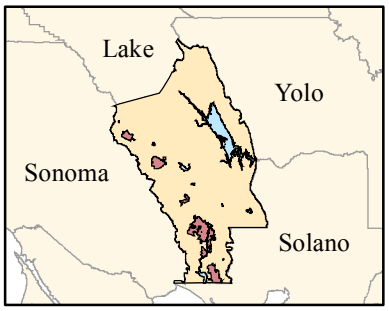
COCWD Water Treatment Plant
COCWD Spring Source
COCWD Groundwater Wells
COCWD Sewer Ponds
Chance Ranch
Longhorn Ridge
Monticello
Catalpa
Boxelder
Ironwood
Dogwood
Ridgecrest
Circle Oaks
Sunny Hill
Redbud
Country Club
Glen
Zinnia
Juniper
Fawn
Chestnut
Driveway
Deer Run
Waters

Legend

Circle Oaks County Water District

Circle Oaks County Water District Sphere of Influence





May 2016
Prepared by BF

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(707) 259-8645
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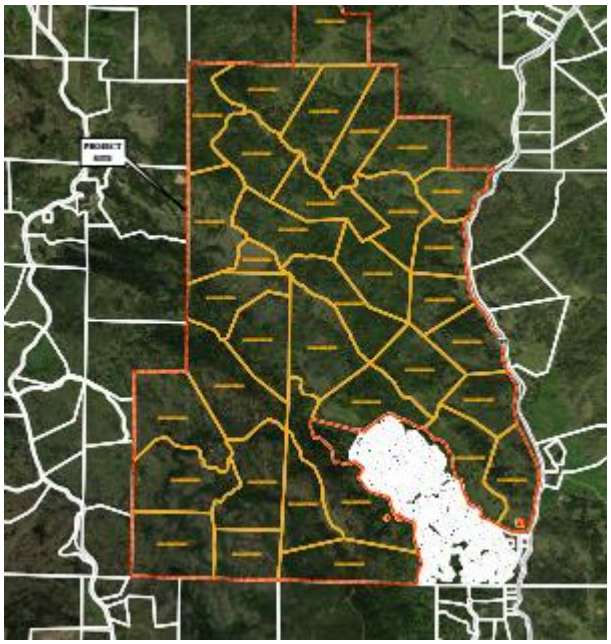
Extra-territorial Services

One parcel, known as "Chance Ranch," is partially located in the district boundaries and currently receives water service from COCWD but is located outside the District's sphere. The District is requesting to amend its sphere to add this property which is located adjacent to the District sewer ponds. Beyond the Chance Ranch parcel, no further service connections are provided outside the District's boundaries and no requests for water or sewer services have been received from anyone outside the District boundaries.

Areas of Interest

As detailed in the *Extra-territorial Services* discussion above, the District is requesting to amend its sphere to add the Chance Ranch property. This property currently receives water service from COCWD but does not receive wastewater service since the property utilizes an on-site sewage disposal system.



Another area of interest is a potential commercial development known as the "Walt Ranch Vineyard Conversion proposal," which is adjacent to the COCWD service area on three sides of the Circle Oaks residential community. The property owners of Walt Ranch Vineyard project are not proposing to connect to the District's services. This proposed development is an area of interest to the District due to potential, but unknown, impacts to groundwater resources available to the District.

2.4 GOVERNMENT STRUCTURE AND ACCOUNTABILITY

The District is governed by a five-member Board of Directors. Directors are typically elected at-large to staggered four-year terms based on a registered resident-voter system. However, Board Members may be appointed by the Napa County Board of Supervisors in lieu of election if there are insufficient candidates to require an election. Currently, the Board consists of one elected member and four appointed members. The current Board of Directors is listed in Section 2.1 *District Profile*.

Regularly scheduled District Board meetings are held on the second Tuesday of the month. Meetings are located in the District's administration office at 380 Circle Oaks Drive, Napa. All Board meetings are publicly posted at least three days prior to the meeting. Postings are located on the Circle Oaks Subdivision bulletin boards and the District website. Meeting minutes are also posted on the District's website. All meetings are open to the public in accordance with the Brown Act (GC §§ 54950-54926).

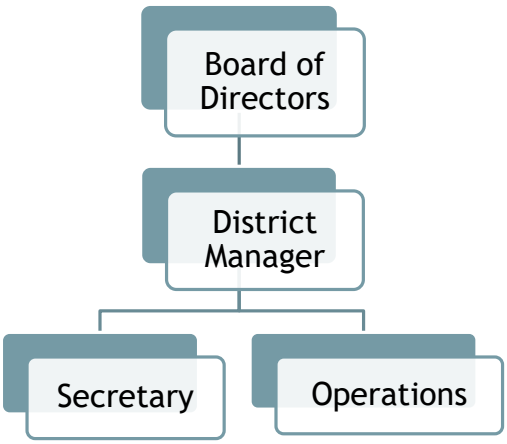
The agenda for each District Board meeting includes a public comment item so that the public may address any issues not listed on the agenda that are of interest to the public and within the jurisdiction of the Circle Oaks County Water District. In addition, the public may also express comments on agenda items at the time of Board consideration. The District's website (http://www.cocwd.com) is a communication tool for District meeting agendas, meeting minutes, and information on the District's services and programs. The District and its representatives have a solid record of adherence to the requirements of the Brown Act, the Political Reform Act, and similar laws.

2.5 MANAGEMENT EFFICIENCIES AND STAFFING

The COCWD operates under the direction of the Board of Directors. Between 2001 and 2014, the operations of COCWD's domestic water and wastewater systems were provided by an independent contractor, Phillips and Associates. Phillips and Associates provided on-site supervision of the District's water and sewer systems seven days a week and was on call 24 hours a day to respond to emergencies. In addition, the District employed one full-time General Manager and a part-time secretary who are responsible for day-to-day business on behalf of the Board.

Circle Oaks County Water District changed its business model in November 2014 to bring District operations in-house. The District Board approved three staff positions. The District Manager position is filled by an independent contractor (as of November 2015) and the District operators and District secretary positions are filled by part- and full-time employees. The District Manager is responsible for water and sewer systems, personnel, purchasing, accounts payable, and all plant functions. The current District staff is listed in Section 2.1 *District Profile*. See Figure 2-2 below for the COCWD Organizational Chart.

Figure 2-2 District Organizational Chart - Circle Oaks County Water District



Chapter 3: Socio-Economics

3.1 PRESENT AND PLANNED LAND USES

Existing land use

Land uses within the District boundaries are single-family residential, rural residential, agricultural, and open space. There are no commercial or industrial uses within the District. Land outside and adjacent to COCWD is primarily characterized by open-space with limited rural residential uses.

General Plan, Zoning, and Policies

Because COCWD is located within the unincorporated area of the county, it is under the land use authority of the County of Napa. The County designates land located within and adjacent to COCWD as *Agriculture, Watershed and Open Space*. The County General Plan specifies the intent of this designation as:

> *"To provide areas where the predominant use is agriculturally oriented; where watershed areas, reservoirs, floodplain tributaries, geologic hazards, soil conditions and other constraints make the land relatively unsuitable for urban development; where urban development would adversely impact on all such uses; and where the protection of agriculture, watersheds, and floodplain tributaries from fire, pollution, and erosion is essential to the general health, safety, and welfare."*

Development densities for the County are identified within its Zoning regulations. All land located within Circle Oaks Unit One is zoned *Residential Single: B-10* and requires a minimum parcel size of 10 acres. Based on the current average lot size of 0.25 acres, this zoning standard precludes additional subdivision and related growth from occurring in Unit One. All lands adjacent to Unit One are zoned *Agricultural Watershed* which requires a minimum parcel size of 160 acres, and limits additional subdivision and related growth from occurring near COCWD. There is, however, a proposal for a vineyard development known as Walt Ranch Vineyard Development in the area of COCWD, see *Areas of Interest* for more detail.

Regional Transportation Plans & Sustainable Community Strategies

All regions in California must complete a Sustainable Communities Strategy (SCS) as part of a Regional Transportation Plan (RTP), consistent with the requirements of state law, Senate Bill (SB) 375. Senate Bill 375 requires California's 18 metropolitan areas to integrate transportation, land-use, and housing as part of an SCS to reduce greenhouse gas emissions from cars and light-duty trucks. In the San Francisco Bay Area, the Metropolitan Transportation Commission (MTC)

and the Association of Bay Area Governments (ABAG) work together, along with local governments, to develop a SCS that meets greenhouse gas reduction targets adopted by the California Air Resources Board. The RTP and SCS for the Bay Area is called "Plan Bay Area: Strategy for A Sustainable Region" and was adopted on July 18, 2013[5].

Senate Bill 215 (Wiggins) was approved by California legislature in 2009 and chaptered in 2010 as part of Government Code Section 56668, relating to local government. This bill requires LAFCOs to consider regional transportation plans and sustainable community strategies developed pursuant to SB 375 before making boundary decisions.

Napa County is the local agency responsible for planning regional growth patterns through adoption and implementation of a General Plan and Zoning Regulations. Circle Oaks County Water District was established to provide domestic water and sewer services to a residential subdivision that was approved by the Napa County Board of Supervisors in 1964. Future growth within the District is currently limited to the remaining undeveloped residential lots in this subdivision. Circle Oaks County Water District does not have the legal authority to make land use policy decisions that would impact growth in Napa County. Therefore, the activities of the District are not connected with regional growth beyond the buildout of their subdivision.

Napa LAFCO has a policy to consider the effect of any proposal to establish new services or divest existing service powers within a special district in supporting planned and orderly growth within the affected territory. Therefore, any changes to the COCWD service area would need to be approved by Napa LAFCO and would include consideration of Plan Bay Area pursuant to SB 215.

Future Development Potential

Future growth within the District is limited to vacant lots as shown in Table 3-1. Although there are 143 vacant lots, not all are suitable for building single family homes due to steep slopes. At maximum build-out of the Circle Oaks Unit One subdivision, the community would hold an additional 372 persons[6]. However, in the past 15 years, there has only been one permit to build a new home in the Circle Oaks residential community and COCWD anticipates a continued low demand for future housing. Circle Oaks County Water District estimates the addition of one to four homes in the next five years.[7]

Table 3-1: Summary of Vacant Lots Within COCWD

No. of lots approved in Subdivision[a]	No. of lots built out	No. of vacant lots
331	188	143

[a] Number of lots does not include any open space/community lots within the subdivision

[5] ABAG. 2013. *Plan Bay Area: Strategy for a Sustainable Region*. Available at: http://www.planbayarea.org/the-plan/adopted-plan-bay-area-2013.html.

[6] Maximum buildout would add 143 single family homes at 2.48 persons per household

[7] COCWD. 2016. *Response to LAFCO Request for Information: COCWD MSR/SOI Study.*

The development density established for land adjacent to COCWD limits additional subdivisions and related growth from occurring near COCWD. Further, the land use designation established for land adjacent to COCWD discourages Napa LAFCO from approving an expansion of COCWD's service area based on its policy to direct the extension of municipal services away from land designated for agriculture unless it is in response to a health or public safety concern.

COCWD is anticipating potential vineyard development outside its service area located on three sides of the Circle Oaks residential community for the Walt Ranch Vineyard Conversion proposal. The Napa County Planning Division is processing an application for approval of the Walt Ranch Vineyard – Erosion Control Plan P11-00205-ECPA.[8] The plan proposes earthmoving activities on slopes greater than five percent in connection with the development of 356 net acres of vineyard within 507 gross acres on the approximately 2,300-acre Walt Ranch property. The water demand for this proposed new vineyard use has generated concern from the District related to potential groundwater impacts to the District's water supply; COCWD's water system is supplied by a single source well and seasonal springs. The property owners of the Walt Ranch Vineyard project are not proposing to connect to the District's services. The District is doing its due diligence to monitor this proposed project and understand the implications of their shared groundwater resources.

Future growth within the COCWD service area is expected to continue to be limited during the timeframe of this MSR/SOI due to the continued slow rate of development within Circle Oaks Unit One and due to land use restrictions that effectively preclude new residential subdivisions near the Circle Oaks residential community.

3.2 POPULATION AND GROWTH

Population

This section describes the existing population and future growth projections for the Circle Oaks County Water District, including factors that must be considered when planning for the provision of services and for making the required determinations. Background information has been collected for this report including a population study of Napa County (Appendix A) and an Economic Forecast for Napa County (Appendix B).

Circle Oaks is a small unincorporated rural community in Napa County. Circle Oaks is not a census-designated place, so actual population statistics for the District are not available. Therefore, the current population in the Circle Oaks County Water District was estimated based on available data. Based on recent figures provided by the District Manager, COCWD currently

[8] Napa County Planning Division. 2016. Walt Ranch Vineyard Conversion application. Available at: http://www.countyofnapa.org/PBES/WaltRanch/.

has 188 domestic water service connections, 187 wastewater service connections, and estimates serving a population of 500 residents.[9]

Napa LAFCO staff calculated a population estimate for COCWD during the 2007 SOI Update process based on the current number of COCWD's service connections (189) multiplied by the average population per-household estimate for Napa County of 2.57 as determined by the California Department of Finance. This resulted in an estimated population for the District of 486 in 2007.

COCWD currently serves 188 developed single-family residences and based on the 2013 Association of Bay Area Governments (ABAG) Population Estimates for Unincorporated Napa County, the average household size for unincorporated Napa County is 2.48 (Appendix A). Therefore, the current estimated population for COCWD is 466, a decrease of 20 persons since 2007. The decrease in estimated population is due primarily to the U.S. Census Bureau's reduction in estimated persons per household within the unincorporated area of Napa County rather than a loss of residents. The District has a "buildout" of approximately 330[10] service connections, which translates to an estimated population size for COCWD of 818 persons, based on the current average household sizes.

Projected Growth and Development

The Association of Bay Area Governments (ABAG) makes population projections at the County level. Projecting future population growth for a small district is problematic due to a variety of unknown factors associated with the annexation rate. Based on the ABAG 2013 population projections, between 2015 and 2025 the projected average annual growth rate for the unincorporated areas of Napa County is calculated at 0.6 percent[11] as shown in Table 3-2, below.

Table 3-2: Projected Population Growth (2015–2025)

	2015	**2020**	**2025**	**2030**
Unincorporated Napa County	26,900	27,600	28,400	29,400
COCWD	466	480	494	509
Assumes an annual growth rate of 0.6 percent within the unincorporated areas of Napa County.				

Based on this slow growth rate, there will be minimal population growth within the District over the next 10 years. Therefore, it is unlikely that the District will have a significant increase in demand for water or wastewater services during the time frame of this MSR.

[9] COCWD. 2016. *Response to LAFCO Request for Information: COCWD MSR/SOI Study.*

[10] Napa LAFCO. 2005. *Sanitation and Wastewater Treatment Municipal Service Review;* page 7-4. September.

[11] Napa LAFCO. 2016. *Napa County Resource Conservation District Municipal Service Review and Sphere of Influence Update;* page 3. April. Available at: http://www.napa.lafco.ca.gov/uploads/documents/NCRCD_MSR-SOI_FinalReport.pdf.

3.3 DISADVANTAGED UNINCORPORATED COMMUNITIES

LAFCO is required to evaluate disadvantaged unincorporated communities as part of this service review, including the location and characteristics of any such communities. A disadvantaged unincorporated community (DUC) is defined as any area with 12 or more registered voters where the median household income is less than 80 percent of the statewide median household income.

No DUCs have been identified within the COCWD, its SOI, or adjacent areas. The median household income (MHI) in the unincorporated areas of Napa County was $69,717 (Appendix A). This is higher than the DUC threshold MHI of less than $49,191 (80 percent of the statewide MHI of $61,489). Additionally, the District provides sufficient water and wastewater service. No health or safety issues have been identified.

Chapter 4: District Services and Infrastructure

4.1 DISTRICT SERVICES

Service Overview

The District provides water treatment and distribution, and wastewater collection, treatment, and disposal services within the service area.

Water Service

The water system currently serves 188[12] metered residential connections. In addition, water is also provided as needed for fire suppression. The District holds a state water permit for treatment and delivery of drinking water used for municipal and fire suppression purposes. The water system and the raw water treatment plant are inspected annually by the State Water Resources Control Board (SWRCB). The Napa County Department of Public Health annually reviews the District's permit for the water treatment plant (WTP). Based on the Department of Water Resources Groundwater Basin Maps (Bulletin 118), COCWD is not located in a formally designated Groundwater Basin; however it does directly utilize groundwater as its primary water source. COCWD is located in the Upper Putah Watershed.

Water Supply

Circle Oaks County Water District's water supply was originally generated from three wells located along the western edge of Circle Oaks Unit One and a seasonal spring source located along an easement on the northwestern edge of Unit One. Two of the three wells are no longer in production. The spring source is an underground aquifer comprised of three horizontal wells that flow into a common galley. Under normal conditions, the District draws water from its spring source during the summer and fall months, while the well is used primarily during the winter and spring months.

Table 4.1: Available Water Supply (2015) [13]

Source	Firm Yield (gallons per minute)
Well	75 gpm
Spring	10 – 50 gpm
Total	**85 - 125 gpm**

[12] COCWD. 2016. *Response to LAFCO Request for Information: COCWD MSR/SOI Study.*

[13] COCWD. 2016. *Response to LAFCO Request for Information: COCWD MSR/SOI Study.*

Water Demand

District demand is measured by the amount of water processed through the District's WTP and supplied to households through metered connections. Between January 2015 and January 2016, COCWD delivered approximately 23,484,500 gallons (72 acre-feet) of potable water, resulting in a daily average of 63,341 gallons (0.19 acre-feet). The District's peak water demand for the summer was 1,418,051 gallons (4.3 acre-feet) and the peak water demand for the winter was 1,501,995 gallons (4.6 acre-feet).[14]

Table 4.2: COCWD Water Demand Summary (2015 – 2016)	
Annual Water Demand	23,484,500 gallons (72 acre-feet)
Summer Total Water Demand (June – August)	2,881,330 gallons (8.8 acre-feet)
Peak Summer Water Demand (August)	1,418,051 gallons (4.3 acre-feet)
Winter Total Water Demand (October – December)	2,733,358 gallons (8.4 acre-feet)[a]
Peak Winter Water Demand (December)	1,501,995 gallons (4.6 acre-feet)

[a] Winter demand was higher due to fire hydrant flushing activities.
Note: Significant pipeline breaks and leakages resulted in approximately 400,000 gallons of water lost during the 2015/2016 winter months. Most of the breaks and leakages occurred to vacant homes/absentee owners. (January 12, 2016 COCWD Meeting Minutes: https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxjb2N3ZHdlYnNpdGV8Z3g6NmJjNjcwMWI3MDcyNjdkZQ)
Source: COCWD, 2016.

Distribution and Transmission of Water

Circle Oaks County Water District provides treatment of raw water generated from local groundwater and spring sources at the Circle Oaks Water Treatment Plant (WTP). Constructed in 1995, the Circle Oaks WTP filters and disinfects raw water prior to entering into the District's distribution system. The treatment process begins as raw water is conveyed to the Circle Oaks WTP through an integrated conveyance system consisting of four- and six-inch water lines. Alum, polymer (coagulants), and chlorine (disinfectant) are added and mixed as raw water is conveyed into a clarifier. Raw water is detained in the clarifier to facilitate the sedimentation of solids in the water. Solids are removed as water is cycled through a filtering tank and conveyed into a 104,000 gallon clearwell tank. The clearwell tank completes the disinfection process by allowing the treated water to complete its necessary contact time with the chlorine. Finished water remains in the clearwell tank until storage levels within the distribution system require recharge. The Circle Oaks WTP has a treatment capacity of approximately 100 gallons per minute, resulting in a daily treatment capacity of 144,000 gallons. The District has a new Supervisory Control and Data Acquisition (SCADA) system that allows staff to monitor the water system remotely from their computers and cell phones on the weekends and from home.

[14] COCWD. 2016. *Response to LAFCO Request for Information: COCWD MSR/SOI Study.*

Table 4.3: COCWD Water Treatment Plant Capacity	
Treatment Capacity	144,000 gallons per day; 100 gpm[15]
Clearwell Tank Capacity	104,000 gallons

Circle Oaks County Water District's water distribution system receives and distributes treated water generated from the Circle Oaks WTP. The distribution system consists of a network of six, eight, ten, and twelve inch water lines. The distribution system overlays two water pressure zones and is served (recharge and system pressure) by two storage tanks. Due to the topography of the service area, a pump station is required to lift treated water from Circle Oaks WTP's 104,000 gallon clearwell tank into the primary pressure zone, "Zone One."

The distribution system operates on a supply and demand basis and responds to storage levels within Zone One. Zone One includes 108 service connections and is served by a 200,000 gallon storage tank (Storage Tank 1). When storage levels within Storage Tank 1 fall below a designated operating level, treated water is discharged from the clearwell tank by means of a pump station. As water enters Zone One, water levels inside Storage Tank 1 are recharged. "Zone Two" includes 80 service connections and is served by a 176,000 gallon storage tank (Storage Tank 2). A second pump station is required to lift potable water from Zone One to Zone Two, which recharges Storage Tank 2. The two storage tanks work in conjunction with one another to maintain adequate pressure throughout the distribution system by utilizing gravity.

Table 4.4: Distribution Storage Capacity[16]	
Facility	**Capacity (gallons)**
Storage Tank 1	200,000
Storage Tank 2	176,000
Total	**376,000**[a]
[a] Total does not include storage capacity at Circle Oaks WTP's clearwell tank (104,000 gallons)	

Water storage for fire emergencies is an important issue for the District. To boost their storage capacity for fire suppression operations, a new 176,000-gallon water storage tank (Tank 2) has been installed with a 600 gallon per minute rating.[17]

Wastewater Service

The primary services provided by the District for the wastewater system are collection, treatment, and disposal. Circle Oaks County Water District currently has a total of 187 connections to its sewer system, as shown in Table 4.5 below. None of the connections serve commercial or industrial users.

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[15] COCWD. 2016. *Response to LAFCO Request for Information: COCWD MSR/SOI Study.*

[16] COCWD. 2012. *176K Gallon Water Tank Completion Historical Tank Images: February 2012*. Available at: http://www.cocwd.com/Home/infrastructure-upgrade-photos.

[17] COCWD. 2016. Personal interview by Kateri Harrison and Brendon Freeman.

Table 4.5: Number of Sewer Connections in District, 2015	
Type of Sewer Connection	**Number of Connections**
Connections for commercial/industrial	0
Connections for dwelling units	187
Total Number of Sewer Connections	187

The wastewater treatment system (WWTS) was installed when the Circle Oaks subdivision was first built in the 1960's and 1970's and is categorized as a secondary treatment system. The collection system consists of approximately 10 miles of pipe, which depends on gravity flow to move wastewater to three percolation/evaporation ponds located on the eastern side of State Route 121. Sludge from the ponds degrades on site.

The Central Valley Regional Water Quality Control Board (CVRWQCB) (Region 5) regulates water quality in the northeast portion of Napa County and this includes COCWD's wastewater system. COCWD is subject to Waste Discharge Requirements Order No. 94-097, dated April 29, 1994.[18] The facility is permitted and designed to have a monthly average dry weather discharge flow not to exceed 72,000 gallons per day. The treatment facility must be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year frequency.

Factors that can influence the District's ability to deliver wastewater service to customers include treatment system capacity and CVRWQCB regulations. Capacity in the collection system far exceeds buildout projections, but the current treatment system limits service capacity. The wastewater collection, treatment, and disposal systems would require significant modifications to serve the buildout projection of 330 dwelling units.

Supply/Demand

Supply and demand for domestic water and wastewater services are typically impacted by development occurring within the District that could result in an increase in the demand for these services and the need for additional infrastructure. Other factors that impact supply in the District are prolonged drought and aging facilities. One factor that reduces demand is water conservation efforts employed by the District, necessitated by the drought and related Executive Orders by Governor Brown. The District currently limits the time of outdoor watering from between 7 pm and 7 am on a schedule of two days a week; even number houses may water on Tuesday and Saturday and odd number houses may water on Wednesday and Sunday.

Very little development is expected to occur in the future within the District due to the continued slow rate of development within Circle Oaks Unit One and the projected annual growth rate of 0.6 percent for unincorporated areas of Napa County.

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[18] CVRWQCB. 1994. *Waste Discharge Requirements Order No. 94-097*. Available at: https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxjb2N3ZHdlYnNpdGV8Z3g6MWM4YWFmMjEwMDY1ZGVlNQ

4.2 INFRASTRUCTURE AND PUBLIC FACILITIES

In 2001, COCWD hired Triad/Holmes Associates to evaluate its water service system to meet current and future system demands. The consultant concluded in their Engineering and Design Report prepared in September 2001 that the District needed to immediately expand its storage and water treatment capacity as well as secure additional water supplies once development within Unit One exceeded 300 lots.

In 2005, the District received Cleanup and Abatement Order No. R5-2005-0720[19], dated December 16, 2005, from the CVRWQCB. Circle Oaks County Water District submitted a plan to address the cleanup and abatement order and received a $350,000 loan[20] from the California Special Districts Association (CSDA) to install monitoring wells around the sewer ponds and new pumps at the booster station. Additionally, in 2006, the District replaced approximately 1,500 feet of water line from the well to the raw water treatment plant, which was severely restricted. In 2007, the District upgraded the booster station which brought the upper zone into compliance with fire regulations, and in 2009 the District replaced the manual gas pumps with automated electric pumps at the ponds. These improvements were necessary for addressing critical restrictions in the water and sewer systems.

In 2005, the COCWD Board of Directors decided that the District's water and sewer infrastructure was aging to the point of obsolescence and they hired Triad/Holmes Associates to update the 2001 Engineering and Design Report. The Final Engineer's Report was adopted on July 12, 2010 and this report confirmed that the District's water and wastewater systems were originally designed to accommodate full buildout of the service area; however, a number of the components that comprise the systems were at or beyond their useful life, which impacted the District's ability to provide reliable service in accordance with applicable State regulations and to maintain its obligation to serve the entire constituency.

The Final Engineer's Report identified facility upgrades that would help the District to continue to provide adequate water and wastewater services to its existing customers and to meet anticipated future demands in conformance with State and local health and safety requirements. The water system improvements identified by the consultant included new or improved water storage tanks, raw water treatment plant expansion, a new administrative office, installing a monitoring and alarm system (SCADA system) for the raw water treatment plant, water distribution lines, and new fire plugs with fire hydrants. The wastewater system improvements identified by the consultant included replacing sewer pipes and mains. These improvements are further described below based on the Final Engineer's Report[21].

The District hired Brelje and Race Consulting Civil Engineers (B&R) to assist the District to obtain funding from the US Department of Agriculture, Rural Utility Services (RUS) for the utility

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[19] CRWQCB. 2005. *Cleanup and Abatement Order No. R5-2005-0720.* Available at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/napa/r5-2005-0720.pdf

[20] COCWD. 2010. *Public Information Meeting Water and Sewer Upgrades Project Assessment District PowerPoint Presentation*; slide 4. June.

[21] Triad Holmes Associates. 2010. *Final Engineer's Report.*

system upgrades project. B&R met with the COCWD Board of Directors and issued a memorandum on July 16, 2009, entitled, "Utility System Improvements" that provided a summary of the District's water and wastewater system facilities and a project cost estimate for the proposed Upgrades Project identified by Triad/Holmes Associates in the Final Engineer's Report. This first memorandum from B&R also included suggestions for an alternative set of project upgrades (Alternative 1) that differed from the original project scope, along with a cost estimate for the Alternative 1 upgrades. At the request of the District, B&R issued a second memorandum on July 29, 2009, entitled, "Utility Systems Upgrades Project – Estimated Costs for Project Alternatives" that included an estimate of the project costs for a second alternative set of project upgrades (Alternative 2).

The professional services provided by Triad/Holmes Associates and Brelje and Race Consulting Civil Engineers, and the formation of the COCWD Assessment District, approved by the voters on July 12, 2010, helped the District secure Improvement Bonds financed by the U.S. Department of Agriculture-Rural Development in the amount of $3,147,894 for domestic water system improvements and $393,487 for wastewater system improvements to implement project upgrades Alternative 2.[22] The water and sewer improvement projects were completed as of June 30, 2013, at a total cost of $3,302,499.[23]

Water Services

Only one of the District's three original wells is currently usable. The District therefore relies on treated surface water derived from springs to satisfy water demands during peak usage periods, which typically occurs during the summer months. The surface water treatment facility must be operated continuously during the summer to accommodate demands. As a result, the facility cannot be taken off-line for maintenance or repair during this period. To address these limitations, improvements made as part of the "Utility System Improvements" project (financed by the U.S. Department of Agriculture-Rural Development) added a second treatment unit and related facilities to provide the redundancy and operational flexibility that is both desirable and recommended by the California Department of Public Health.

Additional infrastructure needs include replacement of two of the District's original redwood water tanks, which are currently in a deteriorated condition. Their age, condition, and lack of modern seismic restraint makes them vulnerable to sudden and catastrophic failure. The District intends to replace the tanks with three new tanks designed and constructed in accordance with the current building code. Together the replacement tanks will have a greater capacity than the original tanks, which will enhance both system reliability and fire protection. Also, the fire protection capability of the distribution system will be further enhanced by the installation of fire hydrants to replace the existing smaller diameter standpipes.

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[22] Robert W. Johnson, CPA. 2013. *COCWD Financial Statements and Independent Auditor's Report for the years ended June 30, 2013 and 2012;* page 15. October.

[23] Robert W. Johnson, CPA. 2013. *COCWD Financial Statements and Independent Auditor's Report for the years ended June 30, 2013 and 2012;* page 15. October.

Wastewater Services

In addition to the water system improvements, the District will also need to make repairs to a portion of the wastewater system. Portions of the sewer collection system are prone to inflow and infiltration due to mainline and lateral breaks. The excessive inflow and infiltration stresses the wastewater system to the point where there is a risk of a discharge violation and utilizes capacity in the treatment facilities that should otherwise be available for existing and future customers. The District intends to replace the most problematic portion of the collection system to reduce system inflow and infiltration.

Table 4-6: Improvement Projects Completed with the Improvement Bond Funds

Improvement	Project Cost
Water Treatment Plant Upgrades	$ 929,000
Upper Storage Tank	693,000
Lower Storage Tank	354,000
Water Distribution	222,000
Sewer System Upgrades	212,000
Incidental Expenses (engineering, studies, environmental, surveys, geotechnical, etc.)	891,499
Total	$3,301,499

Source: COCWD Assessment District No. 2008-1: Final Engineer's Report.

Adequacy and Challenges in Provision of Service and Infrastructure

Water System

COCWD's continued operation with only one well and seasonal springs is a risk. Very little development is expected to occur within the District due to the continued slow rate of growth within Circle Oaks Unit One. The District has decided to defer development of a second reliable source of water until there is considerable new development in Circle Oaks that would warrant the expense.

COCWD is anticipating potential vineyard development outside its service area, which surrounds the Circle Oaks residential community on three sides, as part of the Walt Ranch Vineyard Conversion proposal. The water demand for this proposed new vineyard use has generated concern from the District related to potential groundwater impacts and what effect that may have on the District's water supply; COCWD's water system is supplied by a single source well and seasonal springs. The property owners of Walt Ranch Vineyard project are not proposing to connect to the District's services. The District is doing its due diligence to monitor this proposed project and ensure their ability to continue to provide the necessary services to their customers.

Wastewater System

Portions of the sewer collection system are prone to inflow and infiltration due to mainline and lateral breaks. The original sewer lines were constructed of clay pipes and have substantially degraded, allowing stormwater to infiltrate the collection system and enter the three percolation/evaporation ponds. The ponds have berms to increase the holding capacity of wastewater, but there is a potential risk of the ponds filling up or overflowing after a large rainstorm. The District replaced the most problematic portion of the wastewater collection system as part of the COCWD 2008 Assessment District capital improvement project. The District will need to continue monitoring the areas where clay pipes remain and ultimately will need to plan a capital improvement project to upgrade all the pipes in the wastewater collection system.

The District has identified the presence of an invasive plant called duckweed in the wastewater percolation/evaporation ponds which is problematic because it spreads rapidly and can prevent evaporation from occurring. The District has installed sprinklers to circulate the pond water, which increases evaporation and limits the proliferation of duckweed; the situation is now improving. The District will need to continue monitoring and maintaining the percolation/evaporation ponds to prevent a reduction in the capacity of the wastewater treatment system.

The District has expressed concern about potential damage to its 50-year old water pipes and sewer lines during the construction phase of the Walt Ranch Vineyard project. The District's infrastructure is located within Circle Oaks Drive that would be utilized for ingress and egress by logging trucks, heavy equipment, and/or contractor vehicles, as well as the increased traffic generated from employees travelling to and from work once the vineyard is developed and operational.

Summary

The provision of domestic water and wastewater services to the customers located in the District's boundaries appears to be sufficient. There have been no major service outages reported since completion of the COCWD 2008 Assessment District capital improvement project, no recent violations issued from the Regional Water Quality Control Board, and no complaints received from customers related to service provision issues. Based on the slow growth rate anticipated for the District, the existing water and sewer facilities are sized to accommodate the existing and new service connections within the time frame of this MSR.

Opportunities for Shared Facilities

Due to the remote location of the District in relation to other service providers, and the steep terrain characteristic of the service area which requires the use of costly pumps to provide service, the District has very limited opportunities to form partnerships with other agencies for the benefit of joint-use facilities and projects.

The District does not currently jointly own or share facilities or services with other agencies. There are no areas in or near the District boundaries that would be better served by a different agency. The District does not participate in any mutual aid agreements. The District does not currently participate in the Bay Area Integrated Regional Water Management (IRWM) Plan. Participation in these types of joint planning activities often offers opportunity to pursue joint grant applications and to leverage other community resources, and it might be beneficial to the District to consider participation in future IRWM efforts. The District participates in a joint power authority for liability insurance purposes.

Chapter 5: Financing

5.1 FINANCIAL OVERVIEW

Circle Oaks County Water District prepares an annual budget but does not have an adopted management or budget policy. The financial balance sheets for each fiscal year and independent audit reports are available to the public via the District's website. The most recent independent financial report was prepared by Robert W. Johnson for two years including Fiscal Year (FY) 2013/2014 and FY 2014/2015 and dated September 11, 2015. The audit found that there were no issues of noncompliance with financial regulations that could have an effect on the financial statement.

Revenues and Expenses

This section describes sources of revenues and expenses associated with the District's provision of domestic water and wastewater services. The District receives revenue from water and wastewater service fees and property taxes. The accounts of the District are organized on the basis of funds. All operations are accounted for in an enterprise fund where the fees collected as customers pay their service bills can be accounted for separately. This ensures that charges for services are used to pay for the costs of providing those services. Following is a summary of the independent financial audits for last three fiscal years.

Table 5-1: COCWD Financial Audit Summary Table						
Fiscal Year	***2012/2013***		***2013/2014***		***2014/2015***	
Reserves (checking & savings)	$94,942		$70,564		$116,416	
Revenues						
OPERATING REVENUES						
Water Service	$216,470	57%	$200,914	57%	$190,792	55%
Sewer Service	$132,386	35%	$116,955	33%	$117,285	34%
NON-OPERATING REVENUES						
Property Taxes	$28,321	8%	$35,565	10%	$40,201	12%
Property Assessment	$0	0%	$0	0%	$0	0%
Interest Income	$120	0%	$43	0%	$45	0%
Intergovernmental	$0	0%	$0	0%	$0	0%
Total Revenues	***$377,297***	*100%*	***$353,477***	*100%*	***$348,323***	*100%*
Expenses						
OPERATING EXPENSES						
Administration & General	$68,543	15%	$65,473	13%	$73,306	18%
Pumping	$34,133	7%	$33,078	7%	$33,489	8%
Water Treatment	$114,096	25%	$107,665	22%	$72,966	17%
Transmission & Distribution	$61,835	13%	$56,147	11%	$31,985	8%
Collection	$87,563	19%	$95,940	20%	$74,124	18%
Depreciation	$80,800	18%	$124,615	25%	$124,780	30%
NON-OPERATING EXPENSES						
Interest Expense	$9,749	2%	$7,114	1%	$6,347	2%
Loss on Disposal	$2,362	1%	$0	0%	$0	0%
Total Expenses	***$459,081***	*100%*	***$490,032***	*100%*	***$416,997***	*100%*
Income *(or Loss)* ***Before Transfers***	***-$81,784***		***-$136,555***		***-$68,674***	
Transfers	***$3,384,283***		***$0***		***$0***	
Net Income *(or Loss)*	***$3,302,499***		***-$136,555***		***-$68,674***	
Current Year Depreciation	***$80,800***		***$124,615***		***$124,780***	
Accumulated Depreciation	**$947,723**		**$1,071,073**		**$1,195,853**	

Comparing revenues to expenses provides an analysis of the overall fiscal health of the enterprise fund and serves to assess the financial ability of the District to provide domestic water and wastewater services. In FY 2014/2015 expenses exceeded revenue by $68,674. This indicates that under current levels of maintenance and capital improvements, the customer service fees did not cover existing costs.

The District has been in financial recovery since the 1990s when the lack of development within Unit One, coupled with the abandonment of the other planned phases of Circle Oaks, resulted in the District operating at a loss as expenses outpaced revenues. The District's financial difficulties were exacerbated when increased federal and state drinking water standards necessitated the construction of a water treatment plant in 1995. To cover annual losses during the 1995-2005 timeframe, reserves were used to subsidize the cost of operations; the District lacked a reserve fund to pursue capital improvements and there was no cushion for unexpected expenses. When the District implemented a rate increase in 2005, the District was three months from insolvency[24]. Since then, the District has established an Assessment District and completed capital improvements to the water and sewer systems, decreased operating expenses by eliminating the contract operators and hiring employee operators, and is currently saving money to replenish the reserve fund.

Asset Maintenance and Replacement

The District owns the water and wastewater infrastructure, and these capital assets are depreciated over their estimated useful lives. Asset maintenance is a significant issue for the District, given the age of the water and wastewater facilities that were not upgraded as part of the 2008 COCWD Assessment District capital improvements.

Capital Improvements

On July 12, 2010, the voters approved the formation of the Circle Oaks County Water District Assessment District No. 2008-1 under the Improvement Bond Act of 1915 to provide assistance to the District in the issuance of debt. The Assessment District levies annual assessments against property owners who benefit from the improvements financed by the Assessment District. The Assessment District is legally separate from the Circle Oaks County Water District. On June 22, 2011, the Assessment District adopted a resolution authorizing the issuance of Improvement Bonds financed by the U.S. Department of Agriculture, Rural Development. The proceeds of such bonds were used to finance the construction of water and wastewater system improvements. The water and sewer projects were complete as of June 30, 2013 and the total project cost was $3,302,499[25].

Long-term Liabilities and Debts

Upgrading the domestic water and wastewater systems represents a significant capital improvement. To finance these capital expenditures, the District encumbered a loan from the issuance of Improvement Bonds financed by the U.S. Department of Agriculture, Rural Development. The assessment of approximately $10,539.82[26] per Circle Oaks lot owner,

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[24] COCWD. 2010. *Public Information Meeting Water and Sewer Upgrades Project Assessment District PowerPoint Presentation*; slide 4. June.

[25] Robert W. Johnson, CPA. 2013. *COCWD Financial Statements and Independent Auditor's Report for the years ended June 30, 2013 and 2012;* page 15. October.

[26] Ibid.

including both developed and undeveloped lots, will be financed at approximately $606 per lot per year until July 2051[27], divided into two payments and assessed and paid concurrent with property tax payments.

Cost Avoidance

COCWD changed its business model in November 2014 to bring District operations in-house. The District Board approved three staff positions including one independent contractor and two employees. The District Manager position is filled by an independent contractor and the District Operator and District Secretary positions are filled by full-time employees. This change in personnel has resulted in a considerable decrease in operating costs which can be applied to much needed sewer line repairs.

Rate Restructuring

The current domestic water and wastewater rates were established by District Ordinance 05-1 on August 18, 2005. All accounts are billed on or about the 5th day of the month and accounts are due and payable upon receipt. Any bill paid after the last day of the billing month is delinquent and is subject to late charges and disconnection of service.

With anticipated water demands increasing, the District has now reached a new stage in water management planning with the reintroduction of tiered water rates as an incentive to achieve further levels of water conservation.

Circle Oaks County Water District customers are charged two monthly fees for water service: a tiered usage charge and a fixed availability fee. Circle Oaks County Water District adopted a tiered rate structure in 2008 when the moratorium on building was lifted and in response to increased development pressures outside the District. The usage charge is based on the amount of water delivered and is measured in units of 1,000 gallons. The availability fee is charged to every parcel located within the District's service area metered for water service. The District also charges a one-time connection fee for water service.

Table 5-2: COCWD Water Rate Schedule[28]	
Water Usage Fee	
0-10,000 gallons	$6.50 per 1,000 gallons
10,001-15,000 gallons	$8.00 per 1,000 gallons
15,001-20,000	$10.00 per 1,000 gallons
20,001-25,000	$12.50 per 1,000 gallons
25,001 and above	$15.50 per 1,000 gallons
Water Availability Fee	$52.00
Water Connection Fee[29]	$14,722

[27] Ibid., page 17.

[28] COCWD. 2005. Rates and Billing. Available at: http://www.cocwd.com/Home/tiered-water-rates.

[29] COCWD. 2007. Resolution No. 07-5.

Establishing an appropriate sewer fee is a complex task and requires predicting the fixed and variable costs of providing collection and treatment services and translating such costs into a rate structure. The cost of providing sewer services can be impacted by such things as topography, geology, infrastructure age, deferred maintenance, capacity of treatment facilities, and the weather.

The current monthly rate for wastewater services is $52.15. With 187 existing service connections, the current wastewater rate generates approximately $117,024.60 per year. This amount does not provide sufficient funding to provide necessary upgrades to the wastewater system.

Table 5-3: COCWD Wastewater Rates[30]

Type of Customer	Monthly Rate
Residential	$52.15

Both the domestic water and wastewater services are operating at a loss. In the future, rates established for water and sewer services should account for the long-term costs of making the capital improvements necessary for aging facilities.

[30] COCWD. 2005. Rates and Billing. Available at: http://www.cocwd.com/Home/tiered-water-rates.

Chapter 6: MSR Determinations

6.1 MSR DETERMINATIONS

Based on the information included in this report, the following written determinations make statements involving the service factors the Commission must consider as part of a municipal service review.[31] The determinations listed below are recommendations from the consultant to the Commission. The Commission's final MSR determinations will be part of a Resolution, which the Commission formally adopts during a public meeting.

Growth and Population Projections

1. The current (year 2015) population of the Circle Oaks County Water District (COCWD) is calculated to be 466 permanent residents. The slight decline in population from the previous year (4.3 percent) is a result of the reduced estimates of persons per household prepared by ABAG, which form the basis for the population calculation.

2. Future growth within COCWD is limited to vacant residential lots within the subdivision. In the past 15 years, there has only been one permit to build a new home in Circle Oaks Unit One and COCWD anticipates a low demand for future housing with the addition of one to four homes in the next five years. Further, ABAG projects an annual growth rate of 0.6 percent for unincorporated areas of Napa County.

3. Circle Oaks County Water District is under the land use authority of the County of Napa. All land located within Circle Oaks Unit One is zoned *Residential Single: B-10* and requires a minimum parcel size of 10 acres. Based on current lot sizes, this zoning standard effectively precludes additional subdivision and related growth from occurring in Circle Oaks Unit One.

4. All lands adjacent to Circle Oaks Unit One are zoned *Agricultural Watershed* which requires a minimum parcel size of 160 acres, and limits additional subdivision and related growth from occurring near the District. Further, this land use designation discourages the Commission from approving annexation proposals to the District based on its policy to direct the extension of municipal services away from land designated for agriculture unless it is in response to a health or public safety concern.

[31] The service factors addressed in this report reflect the requirements of California Government Code §56430(a) as of January 1, 2008.

Disadvantaged Unincorporated Communities

5. The median household income (MHI) in unincorporated areas of Napa County (including the COCWD) in 2010 was $69,717. This is higher than the DUC threshold MHI of less than $49,191 (80 percent of the Statewide MHI).

6. No disadvantaged unincorporated communities have been identified within COCWD's boundaries, its SOI, or adjacent areas.

Present and Planned Capacity of Public Facilities

7. Circle Oaks County Water District currently has 188 domestic water service connections and 187 wastewater service connections. Based on the slow growth rate anticipated for COCWD, the existing water and sewer facilities are sized to accommodate the existing and new service connections within the time frame of this MSR.

8. The COCWD Assessment District secured Improvement Bonds financed by the U.S. Department of Agriculture, Rural Development in the amount of $3,147,894 for domestic water system improvements and $393,487 for wastewater system improvements. The water and sewer improvements were complete as of June 30, 2013 at a total cost of $3,302,499.

9. The provision of domestic water and wastewater services to the customers located in the COCWD boundaries appears to be sufficient. There has been no major service outages reported since completion of the COCWD 2008 Assessment District capital improvement project, no recent violations issued from the Regional Water Quality Control Board, and no complaints received from customers related to service provision issues.

Financial Ability of Agency to Provide Services

10. Circle Oaks County Water District develops and adopts a comprehensive budget and receives an independently audited financial statement biennially.

11. Circle Oaks County Water District has made significant progress since completion of the prior MSR to replenish financial reserves and reduce the District's dependency on loans, grants, and special assessments to fund emergency repairs and capital improvements.

12. The current monthly rate for wastewater services is $52.15. With 187 existing service connections, the current wastewater rate generates approximately $117,024.60 per year. This amount does not provide sufficient funding to provide necessary upgrades to the wastewater system.

13. Both the domestic water and wastewater services are operating at a loss. In the future, rates established for water and sewer services should account for the long-term costs of making the capital improvements necessary for aging facilities.

14. Circle Oaks County Water District has been successful in achieving its original service objective to provide water and sewer services to the Circle Oaks residential community. The District continues to serve as an appropriate instrument in meeting the service needs of the community by localizing costs for the direct benefit of its constituents.

Opportunities for Shared Facilities

15. Due to the remote location of the District in relation to other service providers, and the steep terrain characteristic of the service area which requires the use of costly pumps to provide service, the District has very limited opportunities to form partnerships with other agencies for the benefit of joint-use facilities and projects.

Accountability for Community Service Needs

16. Circle Oaks County Water District has a five-member Board of Directors elected at-large to staggered four-year terms. The COCWD Board meets in the District's administration office at 380 Circle Oaks Drive on the second Tuesday of the month. COCWD meetings are noticed according to the Brown Act and the meetings provide ample opportunities for public comment.

Any Other Matters Related to Service Delivery as Required by LAFCO Policy

17. There are no other aspects of domestic water and wastewater service required to be addressed in this report by LAFCO policies that would affect delivery of services.

Chapter 7: Sphere of Influence Analysis and Determinations

7.1 SPHERE OF INFLUENCE UPDATE OPTIONS

This report represents Napa LAFCO's scheduled sphere review of the Circle Oaks County Water District (COCWD). The most recent comprehensive review of COCWD's sphere was adopted by the Commission in August 2007.

Among LAFCO's primary planning responsibilities is the determination of a sphere of influence for each city and special district under its jurisdiction. California Government Code §56076 defines a sphere as "a plan for the probable physical boundaries and service area of a local agency, as determined by the commission." LAFCO establishes, amends, and updates spheres to indicate to local agencies and property owners that, at some future date, a specific area will likely require the services provided by the subject agency. The sphere determination also indicates the agency LAFCO believes to be best positioned to serve the subject area. LAFCO is required to review each agency's sphere by January 1, 2008 and every five years thereafter as necessary.

To help inform the sphere review process, the Cortese-Knox-Hertzberg Act requires LAFCO to prepare a municipal service review. The municipal service review culminates in the preparation of written determinations that address seven specific factors enumerated under California Government Code §56430(a). The municipal service review is a prerequisite to updating an agency's sphere and may also lead LAFCO to take other actions under its authority.

Drawing from information collected as part of the municipal service review and required determinations presented in chapters 1-6 of this document, this chapter represents the sphere review of the District pursuant to California Government Code §56425. The report considers whether changes to the sphere are warranted to plan the orderly development of the District in a manner that supports the provisions of California Government Code and the policies of the Commission.

Summary of Sphere Update Process

The Commission's "General Policy Determinations" provide direction with respect to establishing and amending a city or special district's sphere in relationship to local conditions and circumstances. In establishing, amending, or updating a city or special district's sphere, LAFCO is required to consider and prepare written statements addressing five specific planning factors. These planning factors, which are enumerated under California Government Code §56425(e), are intended to capture the legislative intent of the sphere determination with regard to promoting the logical and orderly development of each local agency. These planning factors are:

- The present and planned land uses in the area, including agricultural and open space lands.
- The present and probable need for public facilities and services in the area.
- The present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide.
- The existence of any social or economic communities of interest in the area if the commission determines that they are relevant to the agency.
- The present and probable need for public water and sewer facilities and services of any disadvantaged unincorporated communities within the existing sphere of influence.

In addition, when reviewing a sphere for a special district, LAFCO must also do the following:

- Require the special district to file a written statement with the Commission specifying the functions or classes of services it provides.
- Establish the nature, location, and extent of any functions or classes of services provided by the existing special district.

Overview of SOI Options

A special district's SOI is generally used as a guide for annexations within a five-year planning period. However, inclusion of land within an SOI does not automatically approve an annexation proposal; any annexation is considered on its own merits with deference to timing.[32]

The following SOI options for the COCWD are based on a five-year planning period.

1. **Retain the Existing SOI**

The COCWD's sphere was first adopted by LAFCO in 1985 and reaffirmed with no changes in 2007. LAFCO designated the sphere to include all residential parcels in or adjacent to Circle Oaks Unit One and certain common open-space areas owned by the Circle Oaks Homes Association.

Excluded from the sphere were those parcels within the District that were non-contiguous to Unit One, were owned by the District, and those that served as the site of the District's water and sewer service facilities. Further, portions of three parcels owned by the Circle Oaks Homes Association, which are used for greenbelt purposes, were also excluded from the District's sphere of influence.

2. **Inclusion of one additional parcel within the SOI**

One parcel may merit addition to COCWD's SOI since it is partially located within the District's jurisdictional boundary and currently receives domestic water service from the District. The District is requesting to amend its sphere to add the parcel, referred to as Chance Ranch, which is located adjacent to the District's sewer ponds but is not contiguous to the SOI (Figure 2-1).

[32] Napa LAFCO. *General Policy Determinations*: page 9. Amended October 2011.

Analysis and Discussion of Options

1. Retain the Existing SOI

In adopting the COCWD sphere in 1985, LAFCO established a set of policies designating the District as an urban service provider and specified that future sphere expansions be limited to areas that are developed or planned for development at a "suburban density." The Commission also specified that sphere expansions be limited to areas that receive an adequate level of water and sewer services.

The District has generally developed sufficient supply and infrastructure capacities to adequately meet current water and sewer service demands. However, COCWD will need to prepare facility plans to help identify future capital improvement projects with respect to effectively accommodating future service demands associated with buildout of the Circle Oaks Unit One subdivision.

The option to retain the existing SOI for the District recognizes that the existing sphere designates an appropriate service area for COCWD that generally reflects the District's present and planned service capacities, supports existing and planned urban uses, and does not encroach on surrounding agricultural or open-space uses.

The option to make no changes to the sphere does not address an existing inconsistency related to the District's sphere encompassing less territory than its jurisdictional boundary. This type of designation is referred to as a "smaller-than-agency sphere" and is consistent with the Commission's SOI Policy B(5)b in that there is no need for services from the agency in the affected area. Maintaining the smaller-than-agency sphere designation for COCWD is based on the following factors:

- The majority of areas located in COCWD's jurisdictional boundary that lie outside the sphere are owned by the District or the Circle Oaks Homes Association and are used for utility services or as common open-space, respectively. These land uses indicate that that there is no present or planned need for water and sewer services in the affected areas.
- Including residential parcels located in COCWD's jurisdictional boundary that are non-contiguous to Circle Oaks Unit One into the District's sphere would be consistent with the policy of the Commission to emphasize the delivery of services in determining the location of special district sphere. However, including these areas in the District's sphere conflicts with the policy of the Commission to prohibit adding additional land designated and zoned for agricultural and open-space uses or creating more than one sphere boundary.

2. Add the one additional parcel within the District boundaries that is not currently in the SOI

There is one parcel that the District refers to as Chance Ranch, which is partially located in the District boundaries and currently receives water service from COCWD but is located outside the

District's sphere. The District is requesting to amend its sphere to add this property which is located adjacent to the District sewer ponds.

SOI Issues

Table 7-1 Circle Oaks County Water District Sphere Issues

Issue	Comments
SOI Update Recommendation	Consultants recommend that the Commission fully consider both options #1 and #2 described above.
Services Provided	Circle Oaks County Water District provides domestic water and wastewater services to residents and customers within its boundaries.
Urbanizing effect of services	Circle Oaks County Water District provides domestic water and wastewater services to the Circle Oaks residential community. There will be no urbanizing effect as a result of its services.
Present and planned land uses in the area	The District consists of single-family residential, rural residential, agricultural, and open space uses. Existing development is consistent with land use designations contained within the County's General Plan and Zoning regulations, which are 10-acre and 160-acre minimum densities. No substantial development within the District is anticipated over the next five years.
Potential effects on agricultural and open-space lands	Lands within the District and its SOI are zoned Residential Single: B-10 and Agricultural Watershed. The District's services were established for the Circle Oaks Unit One residential community approved by Napa County in 1964. No impacts to agricultural and open space lands are anticipated for the existing SOI.
Projected growth in the District	The annual growth rate within the District is estimated to be 0.6 percent by the Association of Bay Area Governments (ABAG). Further, since the previous MSRs, the District noted only one permit to build a new home in Circle Oaks Unit One.
Present and probable need for public facilities and services in the area related to water and sewer services	Circle Oaks County Water District provides water and sewer services within the area. These services are vital in supporting existing and future residential uses and protecting public health and safety in the area.
Present capacity of public facilities and adequacy of public services related to water and sewer services	The provision of domestic water and wastewater services to the customers located in the COCWD boundaries appears to be sufficient. There has been no major service outages reported since completion of the COCWD 2008 Assessment District capital improvement project, no recent violations issued from the Regional Water Quality Control Board, and no complaints received from customers related to service provision issues.

The existence of any social or economic communities of interest in the area	The area includes the entire Circle Oaks residential community. This community shares social and economic interdependences that are distinct from neighboring areas and enhanced by its relatively isolated location.
The present and probable need for water and sewer of any Disadvantaged Unincorporated Community within the existing SOI	No DUCs have been identified within COCWD, its SOI, or adjacent areas. The median household income (MHI) in the unincorporated areas of Napa County was $69,717. This is higher than the DUC threshold MHI of less than $49,191 (80 percent of the statewide MHI of $61,489).
Effects on other agencies	The established SOI does not have an effect on other agencies.
Potential for consolidations or other reorganizations when boundaries divide communities	The District's boundaries do not divide communities. The raw water treatment plant and wastewater system infrastructure is owned and operated by the District. No other districts in the area have expressed interest in providing water and sewer services for the area.
Location of facilities, infrastructure and natural features	The District's facilities are located on non-contiguous parcels, identified as within the jurisdictional boundaries, but separate from the contiguous boundaries and located outside the SOI.
Willingness to serve	The District wishes to continue to provide water and sewer services within its boundary.
Potential environmental Impacts	The District is currently operating in compliance with all applicable state and local permits.

7.2 DRAFT SOI DETERMINATIONS

The following determinations are provided for Option #1 described above as "Retain the Existing SOI". Under this option the District would continue to include all current areas within its SOI. If the Commission would like to implement option #2, the draft determinations provided below can be modified to reflect the Commission's direction.

Present and planned land uses in the area:

1. The present and future land uses in the area are planned for by the County of Napa as the affected land use authority. The County General Plan and associated Zoning regulations provide for the current and future residential uses that characterize the majority of the area. These policies help to ensure that future land uses adjacent to the area will remain agricultural and open space within the foreseeable future.

Present and probable need for public facilities and services in the area:

2. The Circle Oaks County Water District provides water and sewer services within the area. These services are vital in supporting existing and future residential uses and protecting public health and safety in the area.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide:

3. The Circle Oaks County Water District has demonstrated its ability to provide an adequate level of water and sewer service to the area. These services were comprehensively evaluated by LAFCO as part of the municipal service review (Chapters 1-6, above).

Existence of social or economic communities of interest in the area if the Commission determines that they are relevant to the agency:

4. The area includes the entire Circle Oaks residential community. This community shares social and economic interdependences that are distinct from neighboring areas and enhanced by its relatively isolated location.

Present and Probable need for Public Facilities and Services of Disadvantaged Unincorporated Communities:

5. No DUCs have been identified within the Circle Oaks County Water District, its SOI, or adjacent areas.

Chapter 8: Acknowledgements

Assistance and Support

Several people contributed information that was utilized in this Municipal Service Review and Sphere of Influence Update. Napa LAFCO and SWALE Inc. wish to acknowledge the support received from the following individuals and organizations.

LAFCO Staff	Brendon Freeman, Executive Officer, GIS mapping Kathy Mabry, Commission Clerk
Circle Oaks County Water District	Paul Quarneri, Manager

Report Preparers

A team of consultants authored this MSR and SOI Update and provided an independent analysis. The expertise and contributions provided by this consulting team are greatly appreciated. The names and roles of the individual experts responsible for writing this MSR are provided below.

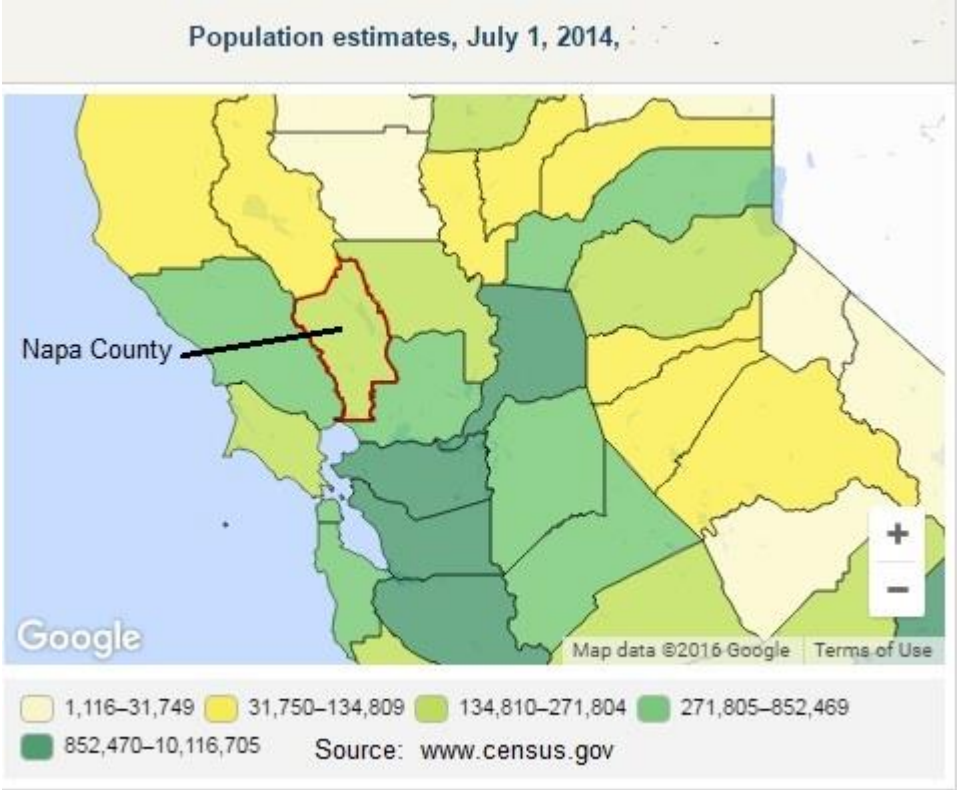
SWALE Inc.	Kateri Harrison, Project Manager
Uma Hinman Consulting	Uma Hinman, Author, Principal Larkyn Feiler, Author, Planner
Baracco & Associates	Bruce Baracco, Project Advisor

Appendices

Appendix A

Population Study for Napa County

This appendix analyzes the existing and projected population in Napa County. This information is provided as context to the City of Calistoga as studied in this MSR/SOI.



Napa County has the smallest population of any of the nine bay area counties that participate in Association of Bay Area Governments (ABAG). The population of Napa County is approximately 140,300 persons in 2015. The second smallest county in the ABAG region is Marin County at 258,972 persons and this is 84% larger than Napa County (DOF, 2015). Figure A.x, below depicts the general population of Napa County in relation to the surrounding counties.

ABAG provides analysis of population data for local governments throughout the nine county region it serves. Projections 2013 is the most recent in the Association of Bay Area Governments' series of statistical compendia on demographic, economic, and land use changes in coming decades. This current version covers the period between 2010 and 2040. Table A.1, below lists ABAG's projected population for Napa County in the years 2020, 2025, 2030, 2035, and 2040. Between the years 2015 to 2040, Napa County's population will grow by 23,400 persons or an overall increase of 17%. Currently, most (56%) of the population of Napa County resides within the City of Napa, making Napa the largest city in the County. Nineteen percent live in the unincorporated area of the County.

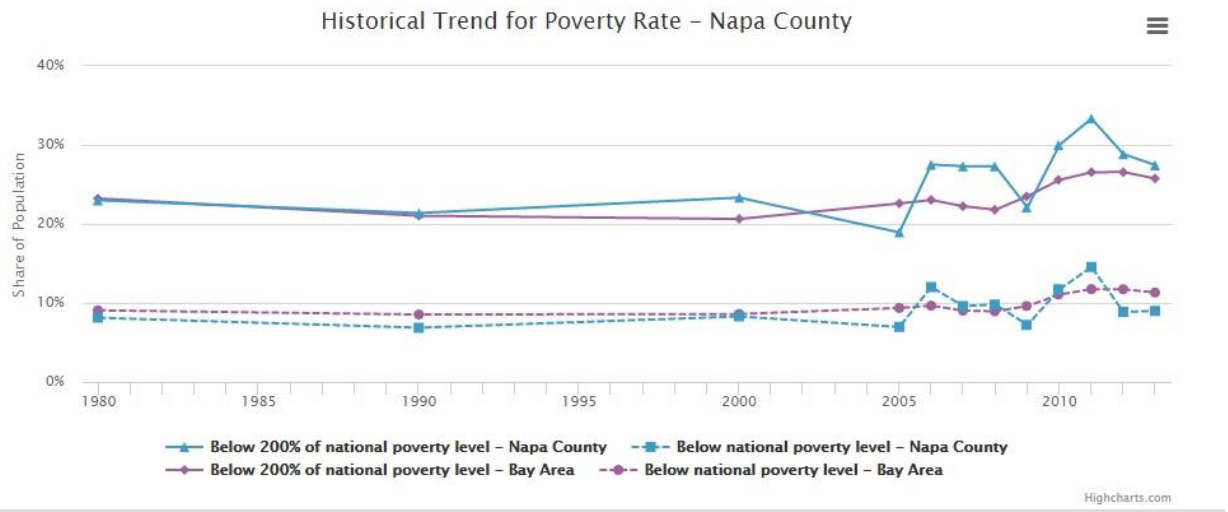
Table A.1: Projected Total Population Napa County						
	2015	**2020**	**2025**	**2030**	**2035**	**2040**
AMERICAN CANYON	20,500	21,500	22,600	23,700	25,000	26,200
CALISTOGA	5,200	5,300	5,400	5,500	5,500	5,600
NAPA	78,800	80,700	82,800	85,100	87,700	90,300
ST. HELENA	5,900	6,000	6,100	6,100	6,200	6,300
YOUNTVILLE	3,000	3,100	3,300	3,400	3,600	3,800
UNINCORPORATED	26,900	27,600	28,400	29,300	30,400	31,500
NAPA COUNTY	**140,300**	**144,200**	**148,600**	**153,100**	**158,400**	**163,700**

Source: ABAG Projections 2013 for Napa County

The number of persons sharing a household is projected to increase slightly by the year 2040 to 2.77, on average as shown in Table A.2, below (ABAG, 2013).

Table A.2: Persons Per Household in Napa County						
	2015	**2020**	**2025**	**2030**	**2035**	**2040**
AMERICAN CANYON	3.41	3.40	3.40	3.40	3.41	3.43
CALISTOGA	2.53	2.54	2.55	2.56	2.58	2.60
NAPA	2.69	2.69	2.71	2.72	2.74	2.76
ST. HELENA	2.39	2.39	2.40	2.41	2.43	2.45
YOUNTVILLE	1.86	1.86	1.87	1.88	1.89	1.91
UNINCORPORATED	2.48	2.49	2.50	2.51	2.53	2.55
NAPA COUNTY	**2.70**	**2.70**	**2.72**	**2.73**	**2.75**	**2.77**
Source: ABAG Projections 2013 for Napa County						

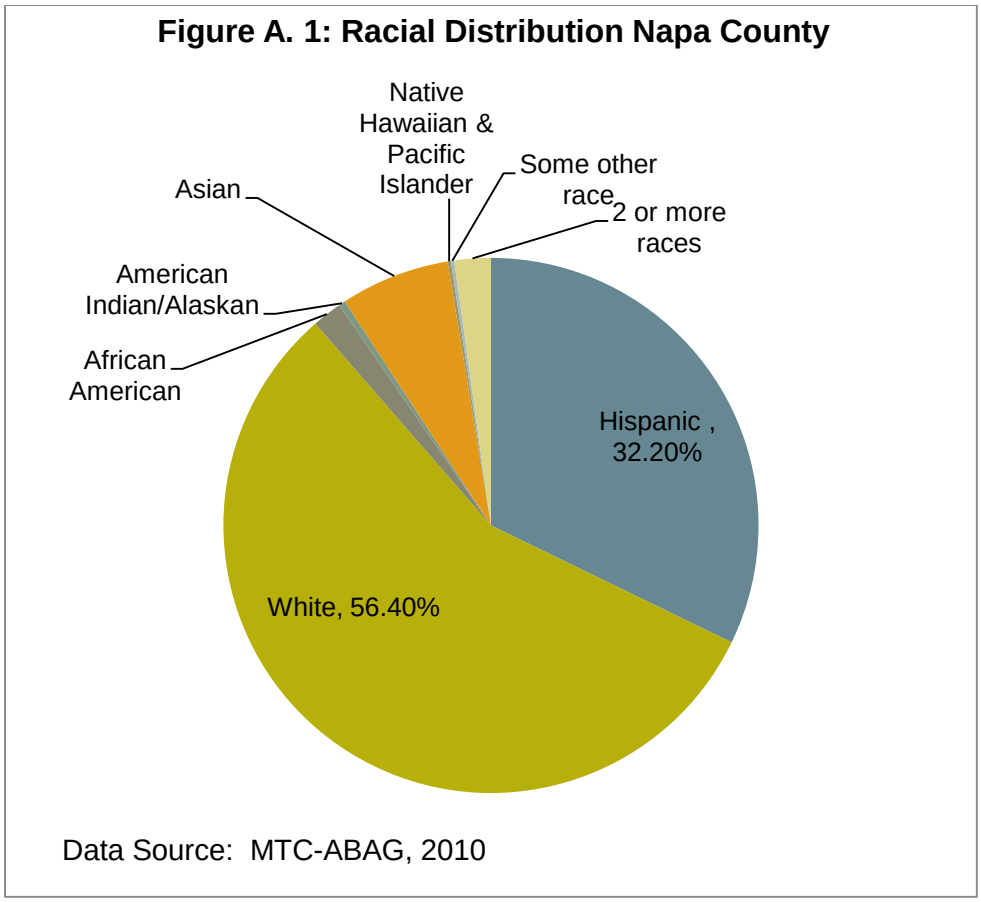
The Metropolitan Transportation Commission analyzes and publishes various statistics about local counties as part of their transportation planning process. The historical trend of poverty rates is shown in Figure below. Napa County is shown as a blue line and it indicates that poverty in Napa County has become more variable and has increased during the past decade.



Data Source: Metropolitan Transoprtation Commission

The U.S. Census collects data on race and this provides background information about ancestry and ethno-linguistic categories. This data also provides contextual information on the historical role of immigration, race and inequality in American society. The Bay Area Census[1] reports this data for Napa County. California is a racially diverse state and Napa County somewhat reflects this diversity. White and Hispanics are the two largest racial categories in Napa County as shown in Figure A below. Other categories include African American (1.20%); American Indian/Alaskan (0.50%); Asian (2.90%); and Native Hawaiian & Pacific Islander (0.20%). 0.20% of people self-identify as belonging to some other race and 2.10% identify as belonging to two or more races (MTC-ABAG, 2010).

[1] The Bay Area Census is a project and website provided jointly by provided by the Metropolitan Transportation Commission and the Association of Bay Area Governments and it contains selected Census data for the San Francisco Bay Area.



Age distribution

The Median age in Napa County is 39.7 years. There are 20,594 senior citizens living in the County, as shown in Table A.3 below.

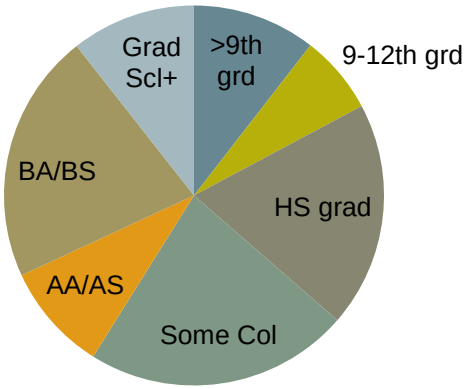
Table A.3: Age Distribution in Napa County	
Age Category	**# of residents**
Under 5 years	8,131
5 to 17 years	23,355
18 to 64 years	84,404
65 years and over	20,594
Data Source: http://www.bayareacensus.ca.gov/counties/NapaCounty.htm	

Average household size was 2.69 persons in 2010. There were a total of 54,759 housing units in Napa County in 2010. Approximately 11% or 5,883 of these units were vacant or used as vacation homes. Of the occupied homes, approximately 63% or 30,597 were owner-occupied and 37% (18,279 units) were rental homes (MTC-ABAG, 2010).

The total number households in the County in 2014 was 49,631. The median household income was $70,925. The Mean household income was estimated to be $95,454 in 2014. The percentage of people whose income in the past 12 months is below federal poverty level was 10.30% (approximately 13,000 people) (US Census, 2014).

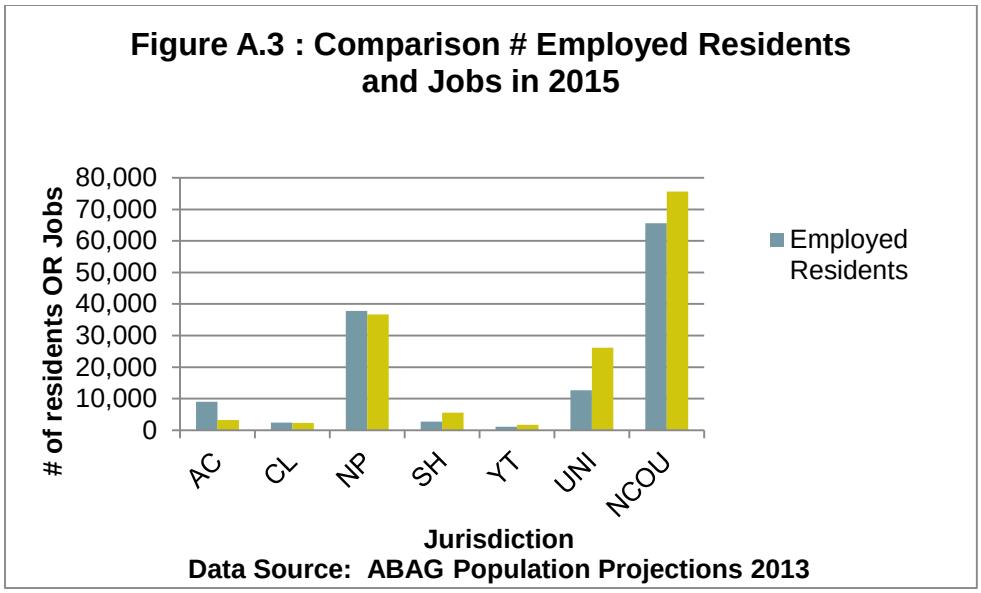
The Educational Attainment In the population aged 25 years and over is that 82.80% of the county's population is a high school graduate or higher. Almost 32% of the county's population has attained a bachelor's degree or higher, as shown in Figure A.2, below (US Census, 2014).

Figure A.2 : Educational Attainment in Napa County, 2014

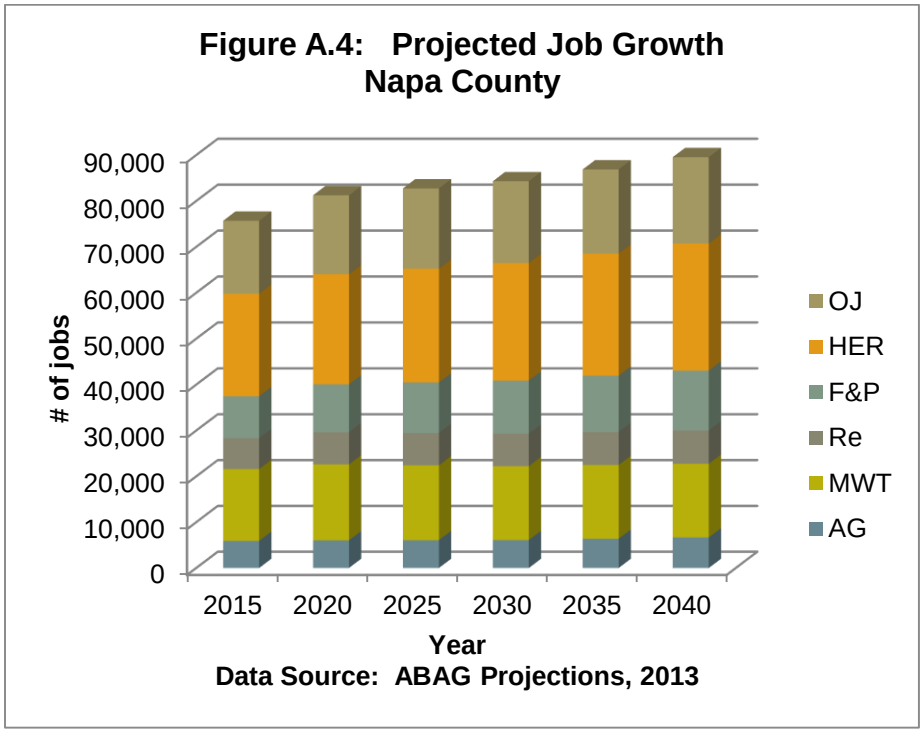


US Census, 2014

Figure A depicts a comparison between the number of employed residents an area has to the total number of jobs that area provides, as of 2015. In the Figure, abbreviations for the jurisdictions along the horizontal access are as follows: City of American Canyon, AC; City of Calistoga, CL; City of Napa, NP; City of St. Helena , SH; City of Yountville, YT; Unincorporated, UNI; and Napa County, NCOU. Three cities, such as American Canyon and Calistoga, and Napa have more employed residents and fewer jobs, in comparison. This indicates that many people commute out of the city to work. The cities of St. Helena and Yountville along with the unincorporated area provide more jobs than employed residents. This indicates that these areas provide jobs that attract people to commute there for work. By the year 2040, the number of employed residents in Napa County is expected to rise to 74,690 persons (ABAG, 2013).



There are 75,700 jobs in Napa County as of the year 2015, as shown in Figure A.3, according to ABAG. The number of jobs is expected to increase to 89,540 by the year 2040, an overall increase of almost two percent. The jobs cover a range of economic sectors. In the Figure below, these economic sectors are given the following abbreviations: Agriculture and Natural Resources Jobs, AG; Manufacturing, Wholesale and Transportation Jobs, MWT; Retail Jobs, Re; Financial and Professional Service Jobs, F&P; Health, Educational and Recreational Service Jobs, HER; and Other Jobs, OJ.



Although the agricultural sector represents only a small fraction of the number of current and projected jobs, this sector does provide many other ancillary benefits. For example, many of the retail jobs in Napa County are related to the wine industry. The scenic vineyards and pastures create an attractive visual amenity which increase the quality of life and helps other businesses and industries attract workers. The agricultural sector also supports the creation and protection of green open space which is one of LAFCO's goals.

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Appendix B

Napa County Economic Forecast

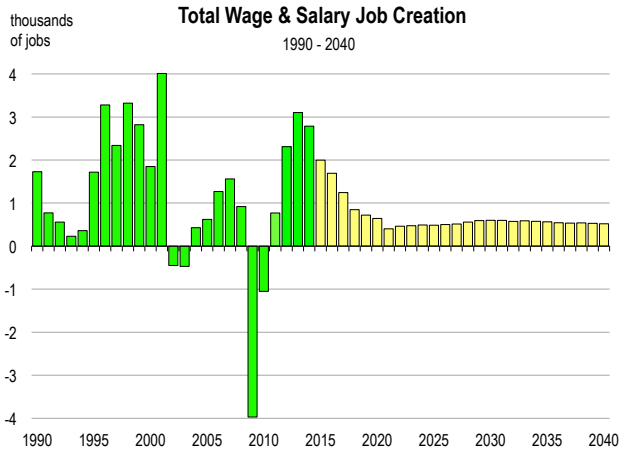
Napa County is home to the Napa Valley, a popular tourist destination known for wine grapes and premium wine production. Napa County has a population of 140,300 people and a total of 74,200 wage and salary jobs. The per capita income in Napa County is $60,576, and the average salary per worker is $58,557.

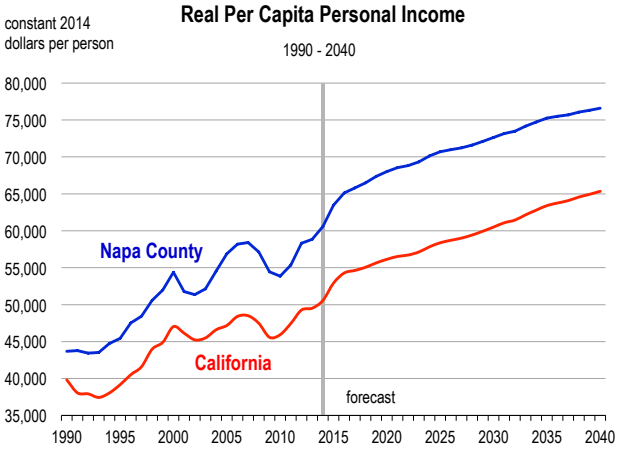
Wine grapes account for 99 percent of all agricultural output in Napa County. Red grapes are dominant in the region, with a total value that is almost 5 times than that of white grapes. The viticulture industry also attracts a large number of tourists to the county each year, generating a substantial amount of economic activity.

In 2014, employment in Northern California increased by 3.4 percent, whereas employment in the greater Bay Area grew by 4.0 percent. In Napa County, a total of 2,800 jobs were created, representing a growth rate of 3.9 percent. Non-farm employment increased by 4.1 percent, while farm employment increased by 1.8 percent. The unemployment rate improved substantially, falling from 6.8 percent in 2013 to 5.6 percent in 2014.

During 2014, the largest employment increases were observed in leisure and hospitality (+670 jobs), manufacturing (+670 jobs), education and healthcare (+420 jobs), and construction (+410 jobs). No industries were characterized by jobs losses.

Between 2009 and 2014, the population of Napa County grew at an annual average rate of 0.7 percent. Net migration accounted for more than 60 percent of this growth, with an average of 600 net migrants entering the county each year.





Forecast Highlights

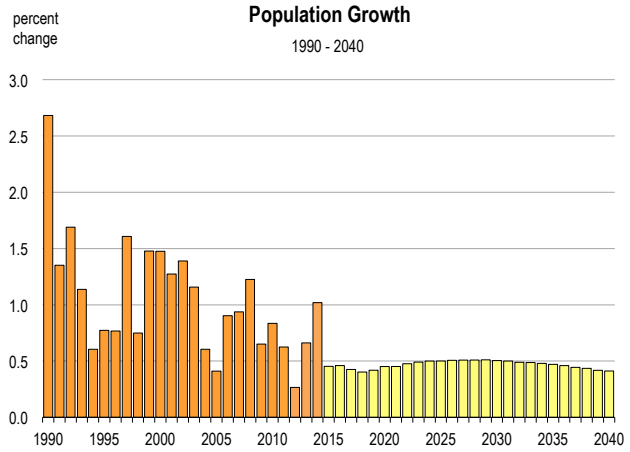
- Job growth of 2.7 percent is forecasted for 2015. Between 2015 and 2020, the annual growth rate for total wage and salary jobs will average 1.3 percent.
- Average salaries are below the California average, and will remain so over the foreseeable future. In Napa County, inflation-adjusted salaries are forecasted to rise by 0.6 percent per year from 2015 to 2020.
- Between 2015 and 2020, job creation will be concentrated in leisure services (+1,700 jobs), professional and business services (+1,000 jobs), education and healthcare (+530 jobs), and wholesale and retail trade (+500 jobs). Together, these industries will account for 71 percent of net job creation in the county.
- Population growth is expected to average 0.4 percent per year from 2015 to 2020.
- During the 2015-2020 period, an average of 470 net migrants will enter the county each year, accounting for 77 percent of total population growth.
- Real per capita income will rise by 4.8 percent in 2015. From 2015 to 2020, real per capita income is forecasted to increase by 1.4 percent per year.
- Total taxable sales, adjusted for inflation, are expected to increase by an average of 2.7 percent per year between 2015 and 2020.
- Industrial production is expected to rise by 4.1 percent in 2015. From 2015 to 2020, industrial production will grow at an average rate of 2.6 percent per year.
- Farm production is forecasted to increase by 1.2 percent per year between 2015 and 2020. Wine grapes will continue to account for the vast majority of all output.

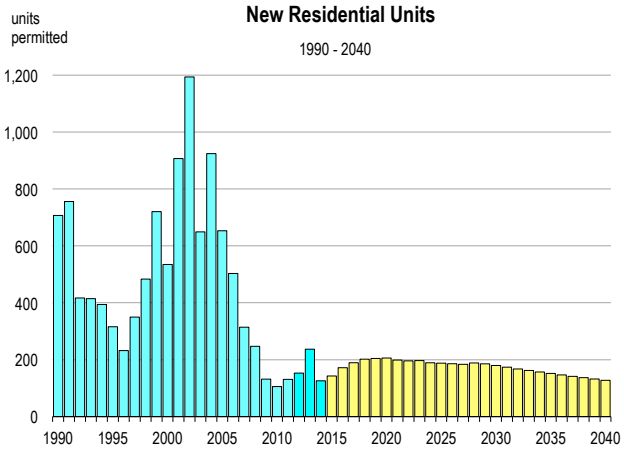
This Forecast was prepared by Caltrans, Economic Analysis Branch. On-line at: http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic_files/2015/Final%20Forecasts/Napa.pdf

Napa County Economic Forecast

2006-2014 History, 2015-2040 Forecast

	Population (people)	Net Migration (people)	Registered Vehicles (thousands)	Households (thousands)	New Homes Permitted (homes)	Total Taxable Sales (billions)	Personal Income (billions)	Real Per Capita Income (dollars)	Inflation Rate (% change in CPI)	Real Farm Crop Value (millions)	Real Industrial Production (billions)	Unemploy-ment Rate (percent)
2006	131,920	630	138	48.4	503	$2.4	$6.4	$58,181	3.2	576.3	2.4	3.9
2007	133,155	701	138	48.8	314	$2.6	$6.7	$58,407	3.4	562.1	2.6	4.0
2008	134,786	1,170	139	48.9	247	$2.5	$6.8	$57,124	2.9	463.4	3.0	5.1
2009	135,664	321	138	48.9	132	$2.2	$6.6	$54,441	0.8	564.0	2.7	8.6
2010	136,798	648	138	48.9	106	$2.3	$6.6	$53,865	1.3	511.5	2.6	10.3
2011	137,653	496	137	49.0	131	$2.5	$7.1	$55,359	2.7	464.8	2.5	9.8
2012	138,019	-43	137	49.1	153	$2.7	$7.7	$58,326	2.7	699.7	2.8	8.4
2013	138,932	742	141	49.2	237	$2.9	$7.9	$58,830	2.3	681.0	2.9	6.8
2014	140,348	1,149	143	49.2	126	$3.1	$8.5	$60,576	2.8	682.0	3.1	5.6
2015	140,984	537	144	49.4	143	$3.3	$9.1	$63,464	1.2	696.6	3.2	5.1
2016	141,633	542	146	49.5	172	$3.6	$9.6	$65,126	3.2	700.0	3.3	4.3
2017	142,235	477	147	49.7	189	$3.8	$10.1	$65,791	3.2	708.1	3.4	4.1
2018	142,808	434	147	49.9	202	$4.0	$10.5	$66,499	3.0	711.2	3.5	4.0
2019	143,405	438	148	50.1	204	$4.2	$11.0	$67,355	2.8	720.5	3.6	3.9
2020	144,053	468	148	50.3	206	$4.4	$11.5	$68,033	2.9	739.1	3.7	3.9
2021	144,704	455	149	50.5	199	$4.6	$12.0	$68,562	3.0	737.9	3.8	3.9
2022	145,393	473	149	50.7	196	$4.8	$12.5	$68,824	3.1	750.1	3.9	3.9
2023	146,107	477	149	50.9	197	$5.0	$13.0	$69,327	2.7	754.3	4.0	3.8
2024	146,837	479	150	51.1	189	$5.2	$13.5	$70,149	2.6	762.4	4.1	3.8
2025	147,572	474	150	51.3	188	$5.4	$14.1	$70,699	2.8	768.9	4.2	3.8
2026	148,320	475	150	51.5	186	$5.6	$14.6	$70,990	2.8	776.2	4.4	3.8
2027	149,074	472	151	51.6	184	$5.8	$15.2	$71,230	2.8	783.3	4.5	3.8
2028	149,833	470	151	51.8	189	$6.0	$15.7	$71,598	2.7	790.6	4.6	3.8
2029	150,599	465	152	52.0	186	$6.2	$16.3	$72,096	2.5	797.9	4.8	3.8
2030	151,359	454	152	52.2	180	$6.4	$16.9	$72,628	2.4	805.5	4.9	3.8
2031	152,116	442	152	52.4	174	$6.6	$17.5	$73,177	2.3	813.1	5.1	3.8
2032	152,860	426	153	52.6	167	$6.8	$18.1	$73,480	2.5	820.7	5.3	3.8
2033	153,604	420	153	52.7	162	$7.1	$18.8	$74,152	2.1	828.3	5.4	3.8
2034	154,341	411	154	52.9	157	$7.3	$19.4	$74,725	2.3	836.2	5.6	3.8
2035	155,068	404	154	53.0	152	$7.6	$20.1	$75,264	2.4	844.0	5.8	3.8
2036	155,781	395	154	53.2	147	$7.8	$20.8	$75,501	2.8	851.9	5.9	3.8
2037	156,473	387	155	53.3	142	$8.1	$21.6	$75,702	2.8	860.1	6.1	3.8
2038	157,154	382	155	53.5	137	$8.4	$22.4	$76,071	2.7	868.0	6.3	3.8
2039	157,811	375	155	53.6	132	$8.6	$23.2	$76,311	2.8	876.4	6.4	3.8
2040	158,460	368	156	53.8	128	$8.9	$24.0	$76,587	2.8	884.6	6.6	3.8

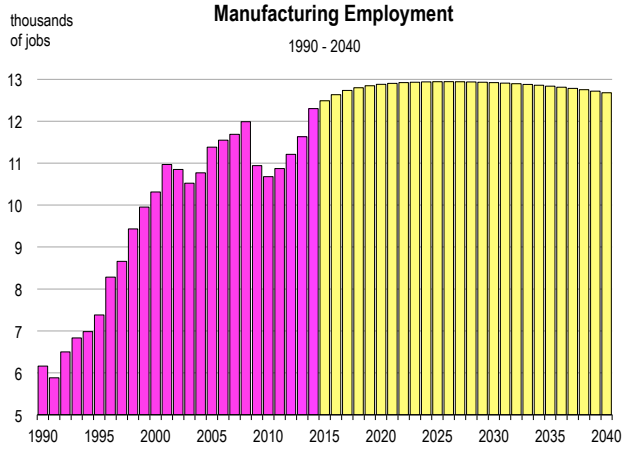


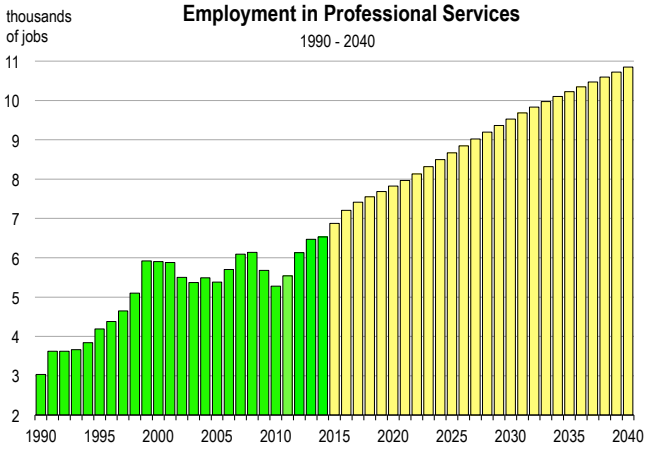


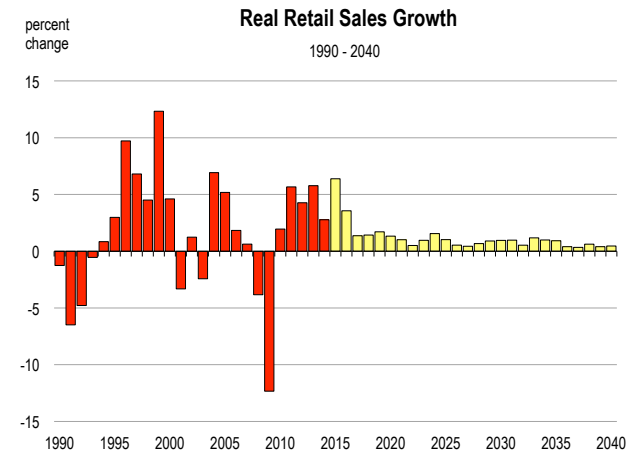
Napa County Employment Forecast

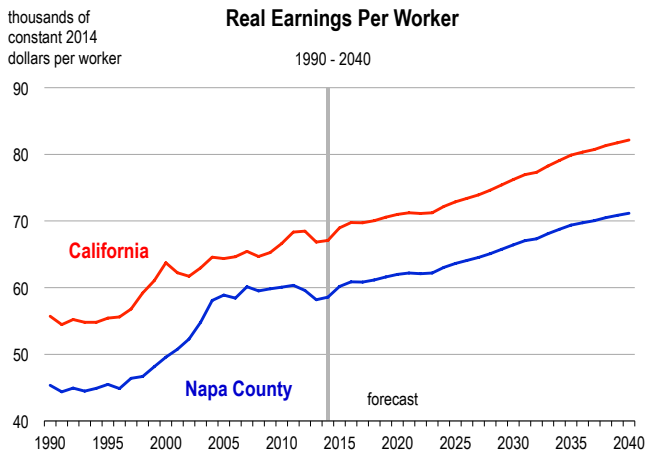
2006-2014 History, 2015-2040 Forecast

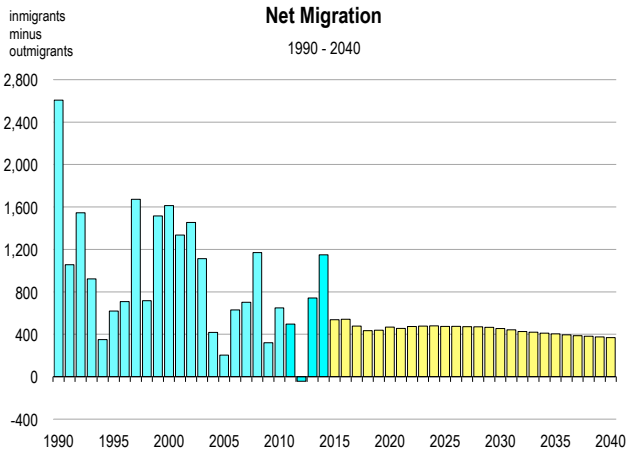
	Total Wage & Salary	Farm	Construction	Manufac-turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Information	Health & Education	Leisure	Government
	employment (thousands of jobs)											
2006	67.8	4.74	5.1	11.6	1.4	7.6	2.8	5.7	0.7	8.0	8.5	10.0
2007	69.4	4.91	4.6	11.7	1.6	7.8	2.6	6.1	0.7	8.4	9.1	10.2
2008	70.3	4.87	4.0	12.0	1.7	7.7	2.6	6.1	0.7	8.6	9.3	10.6
2009	66.3	4.93	3.0	10.9	1.6	7.3	2.4	5.7	0.6	8.5	8.8	10.7
2010	65.3	4.67	2.6	10.7	1.5	7.3	2.3	5.3	0.6	8.7	9.3	10.4
2011	66.0	4.80	2.5	10.9	1.6	7.1	2.3	5.5	0.6	8.8	10.0	10.1
2012	68.3	4.81	2.7	11.2	1.8	7.3	2.3	6.1	0.6	9.1	10.7	9.9
2013	71.4	4.95	3.2	11.6	1.9	7.7	2.2	6.5	0.6	9.6	11.3	10.0
2014	74.2	5.04	3.6	12.3	2.0	7.9	2.2	6.5	0.6	10.0	12.0	10.1
2015	76.2	5.09	3.6	12.5	1.9	8.1	2.3	6.9	0.6	10.2	12.8	10.2
2016	77.9	5.12	3.7	12.6	2.0	8.2	2.2	7.2	0.6	10.4	13.4	10.3
2017	79.2	5.17	3.7	12.7	2.0	8.3	2.2	7.4	0.6	10.5	13.9	10.4
2018	80.0	5.19	3.7	12.8	2.0	8.4	2.2	7.6	0.6	10.6	14.2	10.4
2019	80.7	5.25	3.7	12.8	2.0	8.5	2.3	7.7	0.6	10.7	14.4	10.5
2020	81.4	5.38	3.7	12.9	2.0	8.6	2.3	7.8	0.7	10.7	14.4	10.5
2021	81.8	5.37	3.7	12.9	2.1	8.7	2.3	8.0	0.7	10.8	14.5	10.5
2022	82.2	5.45	3.7	12.9	2.1	8.7	2.3	8.1	0.7	10.9	14.5	10.5
2023	82.7	5.48	3.7	12.9	2.1	8.8	2.3	8.3	0.7	11.0	14.5	10.6
2024	83.2	5.53	3.7	12.9	2.1	8.8	2.3	8.5	0.7	11.1	14.5	10.6
2025	83.7	5.57	3.7	12.9	2.1	8.9	2.3	8.7	0.7	11.1	14.6	10.6
2026	84.2	5.62	3.6	12.9	2.2	8.9	2.4	8.8	0.7	11.2	14.6	10.7
2027	84.7	5.67	3.6	12.9	2.2	9.0	2.4	9.0	0.7	11.3	14.7	10.7
2028	85.3	5.72	3.6	12.9	2.2	9.0	2.4	9.2	0.7	11.4	14.8	10.7
2029	85.9	5.77	3.6	12.9	2.2	9.1	2.4	9.4	0.7	11.5	14.9	10.8
2030	86.5	5.82	3.6	12.9	2.3	9.1	2.4	9.5	0.7	11.7	15.0	10.8
2031	87.1	5.87	3.6	12.9	2.3	9.2	2.5	9.7	0.7	11.8	15.2	10.8
2032	87.6	5.92	3.6	12.9	2.3	9.2	2.5	9.8	0.7	11.9	15.3	10.8
2033	88.2	5.97	3.6	12.9	2.3	9.3	2.5	10.0	0.7	12.0	15.5	10.9
2034	88.8	6.02	3.6	12.9	2.4	9.4	2.5	10.1	0.7	12.1	15.6	10.9
2035	89.4	6.07	3.6	12.8	2.4	9.4	2.5	10.2	0.7	12.3	15.7	10.9
2036	89.9	6.12	3.6	12.8	2.4	9.5	2.5	10.3	0.7	12.4	15.9	11.0
2037	90.4	6.18	3.6	12.8	2.4	9.5	2.5	10.5	0.7	12.5	16.0	11.0
2038	91.0	6.23	3.6	12.8	2.4	9.5	2.6	10.6	0.7	12.6	16.2	11.0
2039	91.5	6.29	3.6	12.7	2.5	9.6	2.6	10.7	0.7	12.7	16.3	11.0
2040	92.0	6.34	3.6	12.7	2.5	9.6	2.6	10.9	0.7	12.8	16.5	11.1

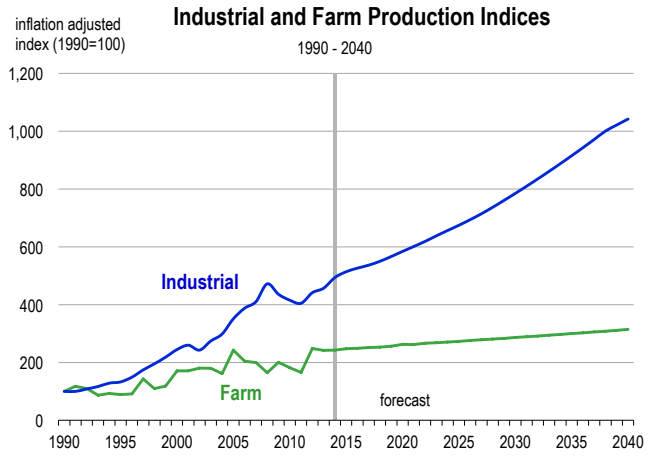












County Economic and Demographic Indicators

Projected Economic Growth (2015-2020)

Expected retail sales growth:	16.8%
Expected job growth:	9.6%
Fastest growing jobs sector:	Leisure Services
Expected personal income growth:	15.3%

Expected population growth:	2.6%
Net migration to account for:	76.8%
Expected growth in number of vehicles:	3.8%

Demographics (2015)

Unemployment rate (March 2015):	4.6%
County rank* in California (58 counties):	6th
Percent of population working age:(16-64)	63.6%

Population with B.A. or higher:	30.8%
Median home selling price (2014):	$485,000
Median household income:	$69,717

Quality of Life

Violent crime rate (2013):	262 per 100,000 persons
County rank* in California (58 counties):	15th
Average commute time to work (2015):	26.1 minutes

High School drop out rate (2014):	9.3%
Households at/below poverty line (2015):	7.3%

* The county ranked 1st corresponds to the lowest rate in California