Draft Municipal Service Review & Sphere of Influence Update

Los Carneros Water District

Napa LAFCO

May 24, 2016

Resolution No. tbd

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Draft Municipal Service Review and Sphere of Influence Update

Los Carneros Water District

Prepared for:

Napa LAFCO

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Prepared by:

SWALE inc

May 24, 2016

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Chapter 1: ROLE AND RESPONSIBILITY OF LAFCO

Local Agency Formation Commissions (LAFCO) 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 to determine the appropriateness of the Los Carneros Water District'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 is an information tool that can be used to facilitate cooperation among agency 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

Municipal Service Reviews (MSRs) are intended to provide LAFCO with a comprehensive analysis of services provided by each of the special districts and other service providers within Napa County 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 to consider an update to the SOI for Los Carneros Water District (LCWD/District). The MSR makes determinations in each of seven mandated areas of evaluation, providing the basis for LAFCO to review proposed changes to the District's boundaries or SOI.

An 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 special district within its jurisdiction. When reviewing and determining SOI's 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 is designed to provide technical and administrative information on LCWD to Napa LAFCO, so that LAFCO can make informed decisions based on the best available data for the District. Written determinations, as required by law, are presented in Chapter 6 *MSR Determinations* of this MSR for LAFCO's consideration. LAFCO is ultimately the decision maker on approval or disapproval of any determinations, policies, boundaries, and discretionary items.

Also included in this document are Sphere of Influence Update options (Chapter 7 *Sphere of Influence Analysis and Recommendations*) for LCWD. The analysis is based on the MSR portion of this document and makes recommendations on the future service potential of the District.

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 LCWD and discusses possible areas for streamlining, improvement, and coordination. Key references and information sources for this study were gathered and utilized in this study, including published reports; review of agency files and databases (agendas, minutes, budgets, contracts, audits, etc.); 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 LCWD a Request for Information (RFI), and the District's responses to these requests were a key information source. Members of the consultant team also conducted a site visit and personal interview with LCWD.

This MSR forms the basis for specific judgments, known as determinations, about each agency 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 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

Napa LAFCO received a presentation for discussion of the Preliminary Draft MSR on June 6, 2016. Comments from the public were solicited; however, xx comments from the public were received. The Commission held a public hearing on the Final MSR on August XX, 2016.

After this MSR is finalized, it will be published on the Commission's website (http://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, 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. These materials are also available to the public for review.

Chapter 2: Overview of District

2.1 AGENCY PROFILE

Type of District: Water District

Enabling Legislation: The California Water District Law: Water Code Sections 34000 et seq.

Functions/Services: Distribution of recycled water for irrigation purposes

Main Office: 2111 Las Amigas Road, Napa, California 94559-9717

Mailing Address: Same as above

Email: JStewart@RSACivil.com

Phone No.: (707) 738-4600

Fax No.: None

Web Site: http://carneroswater.org

General Manager: None (*Note: Water Master/Manager function provided by Napa Sanitation District under a mutual agreement*)

Legal Counsel: Chris Apallas, Deputy Napa County Counsel

Governing Body: Board of Directors (land-owner based voting)

Director	Title	Term Expiration
John Stewart	President	12/31/2017
Cass Walker	Vice President	12/31/2019
Bob Mueller	Director/Secretary	12/31/2017
Mark DeSoto	Director	12/31/2017
Jennifer Thomson	Director	12/31/2017
Robert Jones	Director	12/31/2019
Matt Wilkinson	Director	12/31/2019

Meeting Schedule: 2nd Tuesday of every month at 6:00 p.m.

Meeting Location: Staff Development Room, Stonebridge School Elementary Room, 1680 Los Carneros Avenue, Napa, CA 94559

Date of Formation: 1978

Principal County: Napa County

2.2 SERVICES AND LOCATION

The Los Carneros Water District (LCWD/District) is organized as an independent special district under Division 13 of the California Water Code.

Type and Extent of Services

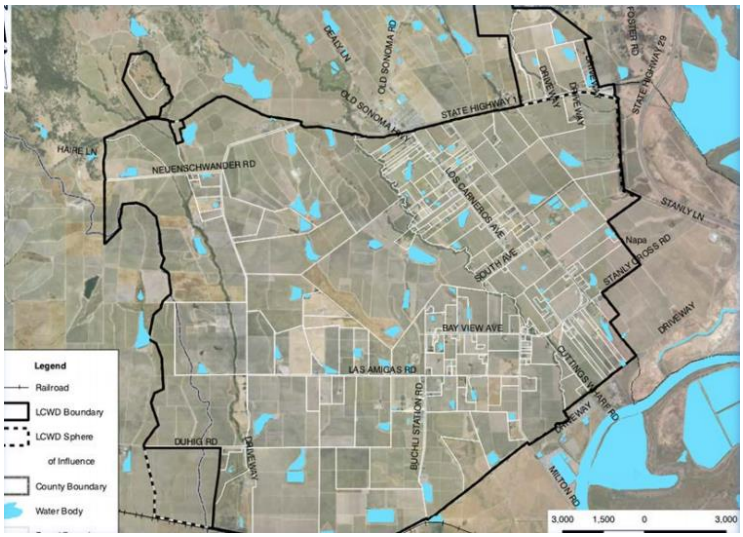
The Los Carneros Water District was formed in 1978 to provide reclaimed water service to the unincorporated area known as "Carneros" in southwest Napa County. LCWD's formation was engendered by local property owners for the purpose of facilitating an agreement with the Napa Sanitation District (NSD) to plan, construct, and operate projects necessary to deliver reclaimed water for agricultural use. In 2014, the District obtained funding for the Carneros Recycled Water Pipeline Project, which is scheduled for completion in spring 2016. The project will serve 107 agricultural and residential parcels totaling approximately 4,127 acres of agricultural land within LCWD.

Pursuant to the California Water District Law (Water Code 34000 et. seq.), the District is authorized to provide the following municipal services:

- The production, storage, and distribution of water for irrigation, domestic, industrial, and municipal purposes and/or any associated reclamation works (WC §35401)
- The acquisition, construction, and operation of facilities for the collection, treatment, and disposal of sewage, waste, and storm water (WC §35550)
- The construction, operation, and/or maintenance of facilities for the generation of hydroelectric power (WC §35570)

With the completion of the recycled water pipeline that ties into NSD's recycled water system, LCWD will provide reclaimed irrigation water to its customers. The District does not currently provide raw or potable water, or generate electricity. Therefore, these services are categorized as 'latent powers' and would require approval from LAFCO to be activated.

Location and Size



Los Carneros Water District is located in the unincorporated area of southwest Napa County and encompasses approximately 5,700 acres. The District is dominated by agriculture, primarily vineyards, and single family residences. The nearest socioeconomic center is the City of Napa to the northeast of the District. There are currently 263 assessor parcels included within the LCWD boundary, with an estimated

residential population of 535. For purposes of this MSR/SOI, the service area is defined as the area that actually receives reclaimed water, as shown in Table 2.1 below.

Table 2.1: Geographic Summary		
Geographic Area	Acres	No. of Parcels
District Boundary	5,772 acres	263
District Sphere of Influence	5,614 acres	250
Service Area	4,127 acres	107

A map of the Agency boundaries and sphere of influence is provided as Figure 2.1.

2.3 FORMATION AND BOUNDARY

Established in 1978, LCWD was formed to provide reclaimed water to a southwest portion of Napa County known as "Carneros." The District's formation was purposely sought by local landowners to facilitate an agreement with NSD for the planning, construction, and operation of projects necessary for the delivery of reclaimed water for agricultural use.

LCWD's jurisdiction boundary is comprised of a contiguous, unincorporated area consisting of approximately 5,772 acres.[1] The District's adopted sphere of influence encompasses the majority of its jurisdictional boundary with one notable exception: land located north of State Highway 12.

Land located within the District is subject to the land-use authority of the County of Napa. Land within the District's adopted boundary and sphere of influence is designated under the County's General Plan as "Agriculture Watershed and Open Space" and "Agricultural Resource."

Boundary History

LCWD's formation followed several years of local efforts with respect to identifying suitable water supply alternatives to creek diversions and groundwater withdrawals. In 1976, a group of landowners organized the "Carneros Area Water Committee" and petitioned the Napa County Board of Supervisors to authorize a study evaluating potential agricultural water supply projects for the Carneros area. The study was conducted by the Napa County Flood Control and Water Conservation District and examined irrigation requirements for the Carneros area relating to topography, soil, and climate conditions. Noting that the predominant land use within Carneros was devoted to dry farming, and to a lesser extent vineyards and orchards, the study concluded that the approximately 7,000-acre area would be best served with treated wastewater from an advanced wastewater facility that was under construction by NSD.

[1] Napa LAFCO. 2004. *Comprehensive Water Service Study Municipal Service Review; page 50.* October.

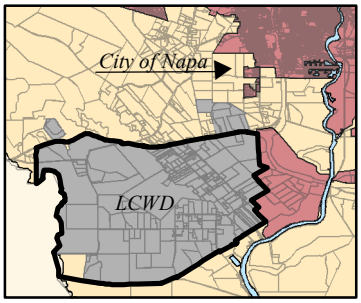
Los Carneros Water District

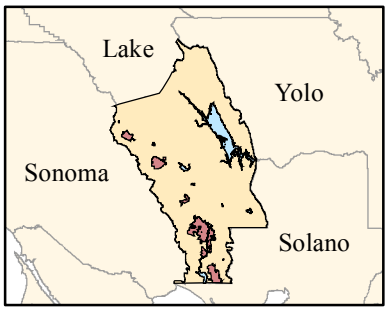
Dealy Ln
Old Sonoma Rd
Foster Rd
12
12
29
Los Carneros Ave
Cuttings Wharf Rd
Duhig Rd
Las Amigas Rd
Milton Rd

Legend

Los Carneros Water District

Los Carneros Water District Sphere of Influence





February 2016
Prepared by BF

0 1 2 4 Miles

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Following the release of the study, meetings were convened between the Carneros Area Water Committee and NSD to discuss possible supply arrangements involving reclaimed water. NSD agreed to negotiate a reclaimed water supply agreement once the landowners formed a public agency capable of executing a contract agreement.

In 1977, following several public meetings with the Carneros Area Water Committee, LAFCO approved the proposal to form LCWD under the California Water District Act. Notably, LAFCO conditioned its approval by requiring the District to voluntarily dissolve if an agreement was not reached with NSD for the delivery of no less than 2,000 acre-feet of reclaimed water by January 1, 1980.

In 1983, after receiving a deadline extension by LAFCO, the District reached a 40-year agreement with NSD providing it the right to obtain up to 2,000 acre-feet of secondary (restricted) treated wastewater annually for agricultural use. The District agreed to be responsible for the design, planning, financing, and construction of all improvements necessary to convey and distribute reclaimed water from NSD's Soscol Wastewater Treatment Plant to LCWD. In exchange for taking reclaimed water, the District would receive an annual payment from NSD. This payment would be equal to the amount in savings incurred by NSD for not having to expend on additional storage and treatment for the treated wastewater used by the District for each calendar year. NSD agreed to manage its wastewater facilities such that 2,000 acre-feet of reclaimed water would remain available to the District. Water quality would be consistent with standards established by federal, state, and local authorities. The agreement included a timetable allowing NSD the right to contract with others for the amount and/or portion of reclaimed water entitled to LCWD in the event the District was not utilizing its entitlement by January 1, 1989.

In response to NSD's requirement that LCWD utilize its allocation of reclaimed water by January 1, 1989 or risk the loss of entitlement, LAFCO issued its own timetable for the District. LAFCO required that the District dissolve unless a conveyance and distribution system was in place by the aforementioned date. By 1989, the District completed design plans for a distribution and conveyance system as well as secured required permits with the San Francisco Bay – Regional Water Quality Control Board. After receiving an extension from LAFCO to pursue financing, the District secured a low-interest loan from the State of California to begin construction on its reclamation project. Implementation of the District's reclamation project, however, was suspended due to design and oversight concerns expressed by NSD.

Beginning in the early 1980s, much of the agricultural land in the Carneros region became vineyards, prompting a change in water quality requirements within LCWD. Rather than requiring only secondary treated wastewater for irrigating dry farming crops, the influx of vineyards prompted the District to procure tertiary (unrestricted) treated wastewater to meet stricter federal and state water quality requirements. In order to produce tertiary treated wastewater, NSD would incur additional treatment expenses not covered under the 1983 agreement with the District. To assess interest in unrestricted reclaimed water in the Carneros area, NSD convened several meetings with local landowners. Following a strong show of support by landowners and the approval of a working group formed by LCWD, the District and NSD reached agreement on a new reclaimed water supply contract in 1995. This agreement

terminated the terms and conditions of the 1983 agreement and transferred the responsibility for the planning, financing, construction, operation, and maintenance of a reclaimed water distribution system to NSD.

The distribution system, referred to as the "Carneros Recycled Water Service Project," was planned to include a network of 18-inch to 36-inch pipelines conveying unrestricted treated wastewater from the Soscol Wastewater Treatment Plant to Carneros. The project proposed constructing a pipeline under the Napa River, through the Stanly Ranch area, and along county roads and easements until entering into the District's service area. NSD's willingness to execute the agreement with the District, however, was predicated on reaching agreements with individual landowners. NSD wanted assurances that there were a sufficient number of committed users before commencing on a project anticipated to cost approximately $3,500,000. During the course of the negotiations, three prominent landowners raised concerns regarding the potential for negative public reaction to the use of reclaimed wastewater on vineyards. These property owners wanted the ability to terminate their agreements with NSD for reclaimed water at their discretion. At the same time, other landowners in the District wavered on the need for reclaimed water service.

When the District was formed, California was a year removed from a drought that severely taxed local water supplies. By the 1990s, many landowners were less concerned with existing and future water supplies as they were 15 years earlier. Unwilling to meet the conditions of the landowners seeking exit clauses, NSD suspended implementing the contract and applied the money earmarked for the Carneros Recycled Water Service Project to finance other reclamation projects.

In 2014, the NSD and LCWD entered into an agreement[2] regarding construction, operation and maintenance of a recycled water pipeline to provide service to LCWD. Los Carneros Water District has been responsible for financing the design, planning, and construction of the project. To date, LCWD has obtained a number of grants to fund approximately 45 percent of the project. Los Carneros Water District also obtained a low-interest loan through the State's Revolving Loan program to fund the remainder of the $16 million project. Construction of the pipeline project commenced in 2015 with a scheduled completion date of spring 2016. Upon completion, NSD will assume ownership of the pipeline infrastructure along with operation and maintenance responsibilities.

With the long-planned construction of the recycled water pipeline, LCWD fulfills its purpose. The boundaries of the District remain unchanged since its establishment.

Sphere of Influence

Los Carneros Water District's sphere was first adopted by LAFCO in 1984 and reaffirmed with no changes in 2007. LAFCO designated the sphere to reflect what the Commission determined

[2] Agreement between NSD and LCWD Regarding the Construction, Operation, and Maintenance of a Recycled Water Pipeline In the LCWD Area. December 13, 2014.

was the natural service area of LCWD. This includes lands generally bounded on the east by the Stanly Ranch and the Napa River, on the north primarily by Highway 12, on the west by the Napa / Sonoma County line, and on the south by the Southern Pacific and Northwestern Pacific Railroad lines. Excluded from the sphere but within the District's boundaries are ten parcels located north of State Highway 12, one of which is only partially within the sphere, totaling approximately 300 acres (see Figure 2-1).

Extra-territorial Services

No specific areas outside the District boundaries have been identified that require services from the District.

Areas of Interest

Four Study Areas were identified during preparing of this MSR and SOI Update.

Study Areas A-1 and A-2
There are two parcels within the District SOI that are not included in the boundaries (Study Areas A-1 and A-2, Figure 2.2). One parcel consists of 160.5 acres and is located in the very southwest corner of the District. The second parcel is 6.7 acres in size and is adjacent to State Highway 12 along the northern border of the District's SOI.

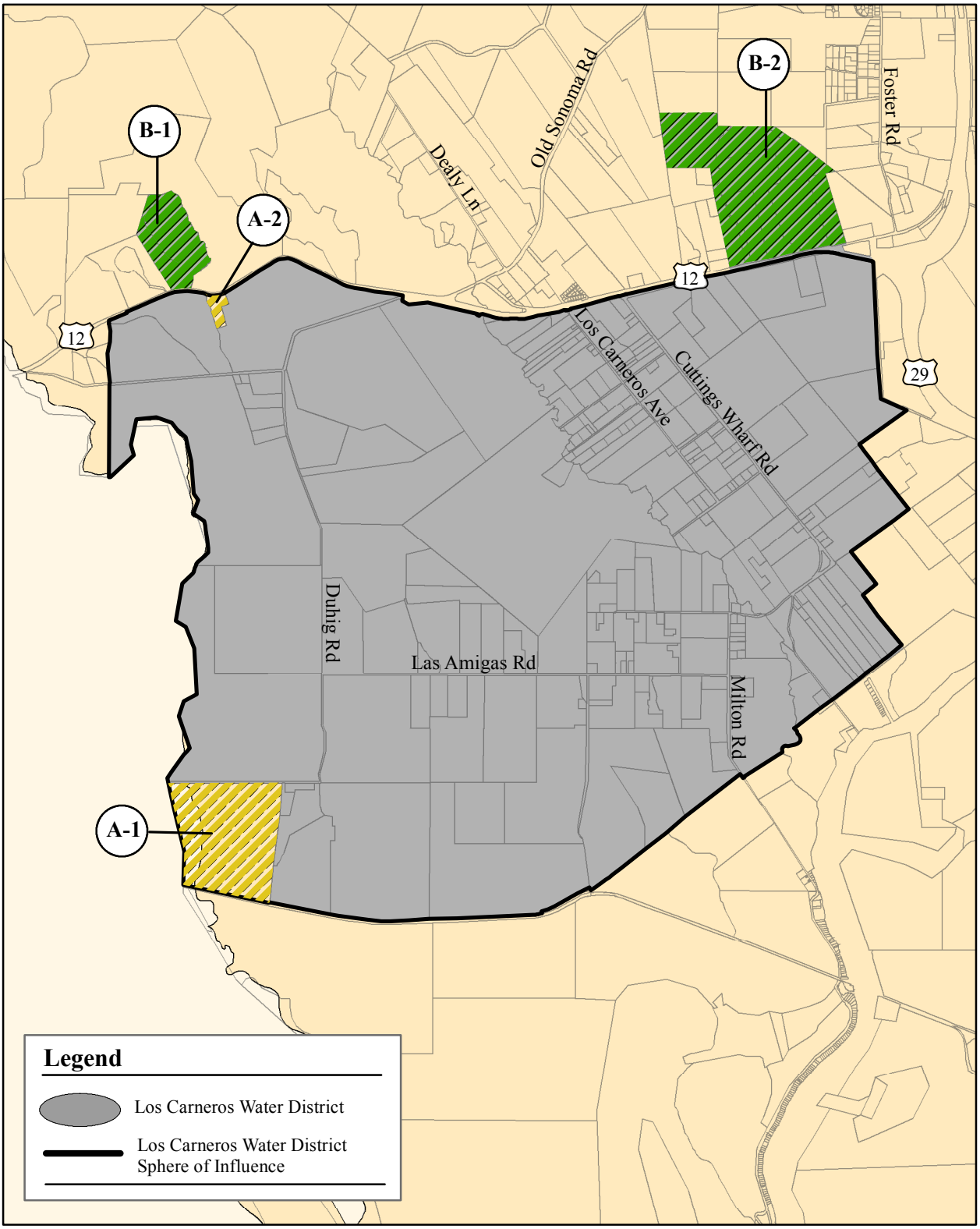
The two parcels are not included in the assessed area to receive services. However, consistent with General Policy II.A.1 and III.A.2 of Napa LAFCO's Policies, their inclusion promotes logical boundaries for the District.

Study Areas B-1 and B-2
Ten parcels, one of which is partially included, are located within the District's boundaries but outside the adopted SOI. Nine of the ten parcels are zoned *Agricultural Watershed*. The remaining parcel is zoned *Agricultural Watershed: Produce Stand*.

None of the 10 parcels identified in Study Areas B-1 and B-2 (Figure 2.2) are included in the Carneros Recycled Water Pipeline Assessment or are receiving recycled water at this time. However, they are located adjacent to other parcels receiving recycled water and logistically could be connected upon application to LCWD and NSD. The District has noted that some of the parcels referenced are a substantial distance from the newly installed recycled water infrastructure. It would take the installation of a large amount of pipeline to afford a connection.[3] Those parcels adjacent to State Highway 12 would be more likely to have access to the infrastructure than those behind them to the north.

[3] John Stewart, 2016. Personal communication. May 17.

Los Carneros Water District



Study Areas

Category A: Areas that may merit removal from LCWD's sphere given they are located within the District's existing sphere and outside the District's jurisdictional boundary

A-1: 1 lot / 160.5 acres A-2: 1 lot / 6.7 acres

Category B: Areas that may merit addition to LCWD's sphere given they are located outside the District's existing sphere and within the District's jurisdictional boundary

B-1: 2 lots / 60.6 acres B-2: 7.5 lots / 233.7 acres

2.4 GOVERNMENT STRUCTURE AND ACCOUNTABILITY

The District is governed by a seven-member Board of Directors elected to staggered four-year terms by landowners within the District boundaries. Elections, if held, are land-owner based by assessed value of property. 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, all seven Board Members have been appointed by the Board of Supervisors, four in 2013 and three in 2015. The current Board members and their terms are identified in Section 2.1 Agency Profile, above.

Regularly scheduled meetings are held on the second Tuesday of the month at 6:00 p.m. Meetings are located in the Staff Development Room, Stone Bridge Elementary School, at 1680 Los Carneros Avenue, Napa. All meetings are publicly posted at least three days prior to Board meetings. Postings are located on public information boards at the Napa County Clerk's office and the Library at the Secretary's home, and electronically on the District's website (http://carneroswater.org/SitePages/Home.aspx). All meetings are open to the public and held in accordance with the Brown Act (Government Code §§ 54950-54926).

The agenda for each District Board meeting includes two public comment periods. Agendas are distributed via the District's website, email, and postal mail. Los Carneros Water District's website (carneroswater.org) is a communication vehicle for District meeting agendas, meeting minutes, and information on the District's services and programs. The LCWD maintains compliance with the requirements of the Brown Act, the Political Reform Act, and similar laws.

2.5 MANAGEMENT EFFICIENCIES AND STAFFING

The Los Carneros Water District operates under the direction of the elected Board of Directors and is managed by volunteers. The District President reports to the Directors and is responsible for managing day-to-day administrative functions. The District President takes the lead in planning, organizing, and review of the overall activities of the District; represents the District locally, regionally, and at the state and federal levels; and works to ensure the best interests of the District are met.

Additionally, in accordance with its agreement with NSD, the District is in the process of establishing a position for a Water Scheduling and Delivery Master or Manager. Because the LCWD pipeline is not designed to convey the peak flow necessary to serve all LCWD users concurrently, the Manager will be responsible for the orderly provision of service, including irrigation quantities, times, and days for users. Additionally, the Manager will be responsible for enforcement of the schedule and actions. The Ordinance establishing the

CONTACT INFORMATION:

John Stewart, President
2111 Las Amigas Road
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Manager position provides for the NSD General Manager filling the role, which is the current plan, or of entering into a Professional Services Contract for the position. Under the agreement, NSD will be responsible for overseeing the day-to-day administration of recycled water use by LCWD users and will monitor recycled water use to ensure compliance with LCWD use policies. The District is currently all volunteer; it has no employees.

Chapter 3: Socio-Economics

3.1 PRESENT AND PLANNED LAND USES

Existing land use

The majority of land within LCWD is under agricultural use, primarily vineyards, along with rural single-family residences and small wineries.

General Plan, Zoning, and Policies

The Los Carneros Water District is located entirely within the unincorporated area of the County and is therefore under the land use authority of the County of Napa. The County's General Plan designates land located within LCWD as *Agriculture, Watershed and Open Space* or *Agricultural Resource*. The General Plan specifies the intent and anticipated uses of these designations as:

> *Agricultural, Watershed and Open Space (AW)*
> "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. General uses include agriculture, processing of agricultural products, and single-family dwelling."
>
> *Agricultural Resource (AR)*
> "To identify areas in the fertile valley and foothill areas of the county in which agriculture is and should continue to be the predominant land use, where uses incompatible with agriculture should be precluded and where the development of urban type of uses would be detrimental to the continuance of agriculture and the maintenance of open space which are economic and aesthetic attributes and assets of Napa County. General uses include agriculture, processing of agricultural products, and single-family dwelling."

Napa County's Zoning Ordinance implements the General Plan and is codified as part of the Napa County Code. The Zoning Ordinance is designed to promote the public health, peace, safety, and welfare of the citizens of Napa County and to control and regulate the future growth and development of land in the entire unincorporated area. Land within the District is generally zoned agriculture and is primarily comprised of two standards: "Agricultural Watershed" and

"Agricultural Watershed: Airport Compatibility." Both zoning standards require minimum parcel sizes of 160 acres. A single exception is a 1.19-acre portion of an 11.83-acre parcel (APN: 047-022-005) located within LCWD's jurisdictional boundary and sphere of influence that is zoned *Commercial Limited*. In the past, this split-zone parcel, which is located at the corner of State Highway 12 and Cuttings Wharf Road, has accommodated a restaurant; however, it is currently vacant. The *Commercial Limited* zoning standard requires minimum parcels sizes of one acre[4].

Approximately 40 percent of the District (consisting of 28 parcels) is under "Williamson Act" contracts with the County of Napa, which helps ensure the preservation of agriculture and open space as predominant land uses within the District. Parcels under Williamson Act contracts are required to maintain their agricultural and open space land uses over the course of renewable 10-year periods in exchange for reduced property tax assessments.[5]

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 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 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[6].

Senate Bill 215 (Wiggins) was approved by CA 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. LCWD was established to provide recycled water for irrigation purposes, and was approved by the Napa County Board of Supervisors in 1978. Future growth within the District is currently limited due the agricultural zoning of the lands within and adjacent to the District, which stipulates 160-acre minimum parcel sizes. The LCWD does not have the legal authority to make land use policy decisions that

[4] According to Napa County Zoning Code, if both public water and sewer facilities are available, the minimum parcel size is reduced to one-half acre.

[5] Napa LAFCO. 2004. *Comprehensive Water Service Study Municipal Service Review.* October.

[6] Plan Bay Area website: http://www.planbayarea.org/the-plan/adopted-plan-bay-area-2013.html

would impact growth in Napa County. Therefore, the activities of the District are not connected with regional growth beyond the existing zoning allowances.

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 LCWD service area or service functions would need to be approved by Napa LAFCO and would include consideration of Plan Bay Area pursuant to SB 215.

Future Development Potential

Development densities for the County are identified under its zoning standards. Nearly all land located within and adjacent to LCWD is zoned *Agricultural Watershed* with a minimum parcel size of 160 acres, which significantly limits additional subdivision and related growth from occurring in or adjacent to the LCWD. It is estimated that 52 of the 263 assessor parcels are not developed with residences. However, the District reported that only three new residences and two small wineries have been constructed within the District since the 2004 MSR[7], indicating a very slow rate of growth within the District. Given the amount of viniculture and Williamson Act contracts within the District, very little development within the District is anticipated.

3.2 POPULATION AND GROWTH

Population

This section describes the existing population and future growth projections for the LCWD, 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).

The Los Carneros Water District consists of agricultural and rural residential lands in the unincorporated area of Napa County. The LCWD is located within Census Tract 201102; however it is not a census-designated place, so actual population statistics for the District are not available. Therefore, the current population in the District was estimated based on available data. The population estimates made by LAFCO for the 2007 SOI Review were based on the parcels with situs addresses (208) multiplied by a 2000 estimated 2.57 persons per household, which resulted in an estimated population for the District of 535[8] (Table 3-1).

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

[8] Napa LAFCO. 2007. *Los Carneros Water District Sphere of Influence Review;* page 4. June. Available at: http://www.napa.lafco.ca.gov/uploads/documents/SOI_LCWD_2007.pdf.

The District has indicated the addition of three residences since the 2004 MSR[9]. Furthermore, the estimated persons per household has been revised downward by ABAG to 2.48 (Appendix A). Thus, using the same methodology as in the 2004 MSR, the current estimated population of LCWD is estimated to be 523 residents (Table 3.1). This lower estimate is due to a calculated change in the estimated persons per household, rather than people physically leaving the District.

Table 3.1: Historic and Existing Population

	Total population	Land area (sq. miles)	Population per sq. mile
2010	535	9.02	59.31
2015	523	9.02	58.01

Projected Growth and Development

To some extent, population growth in the District is dependent upon land use, general plan designations, and zoning on properties. As described in Section 3.1, above, the Napa County General Plan, which guides development within the unincorporated regions of Napa County, was adopted in 2008. A new Housing Element was adopted December 2014. No changes to land use designations have occurred within the District since adoption of the 2004 MSR.

The Association of Bay Area Governments (ABAG) makes population projections for the counties within its planning area, which includes Napa County. However, projecting future population growth at the small district level is problematic due to a variety of unknown factors including those associated with the annexation rates. The ABAG projects an annual population growth rate for unincorporated areas of Napa County of 0.6 percent over the next 10 years.[10]

Based on this slow growth rate as shown in Table 3.2 below, the population within the District will have minimal growth over the next 15 years. Therefore, it is unlikely that the District will have a significant increase in demand for recycled water services during that time. Additionally, the demand for recycled water attributable to residential growth will be minimal. The recycled water project is primarily aimed at agricultural use rather than residential use. While there are a few purely residential parcels included in the service area, they elected to be included due to a hardship in locating groundwater on their parcel.[11]

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

[10] 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.

[11] John Stewart, 2016. Personal communication. May 17.

Table 3.2: Projected Population Growth (2014–2030)				
	2015	2020	2025	2030
Unincorporated Napa County	26,900	27,600	28,400	29,400
LCWD	523	538	555	572
Projections calculated using an annual growth rate of 0.6 percent within the District.				

3.3 DISADVANTAGED UNINCORPORATED COMMUNITIES

Pursuant to the Cortese-Knox-Hertzberg Act, 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 by the State 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 LCWD, 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). Drinking water is provided to parcels within the District through private wells. Wastewater service is provided via individual septic systems. Fire protection service is provided by Carneros Volunteer Fire Department. Additionally, no public health and safety issues have been identified.

Chapter 4: District Services and Infrastructure

4.1 DISTRICT SERVICES

Service Overview

The District was formed to provide recycled water for agricultural irrigation purposes. After more than 38 years, the infrastructure to provide that service is under construction and scheduled for completion in spring 2016.

Water Service

Upon completion of necessary infrastructure, LCWD, through an agreement with Napa Sanitation District (NSD) will provide recycled irrigation water to its customers within its boundaries. The NSD is collaborating with LCWD to construct a recycled water pipeline to provide tertiary treated reclaimed water from its Soscol Wastewater Treatment Plant to the LCWD. Pursuant to the agreement between the two entities, NSD will provide approximately 1,300 acre-feet of reclaimed water annually to 107 parcels within the District.

Distribution and Transmission of Water

Upon completion of the recycled water transmission and distribution system, it will be owned and operated by NSD. Tertiary treated water will be delivered from NSD's Soscol Wastewater Treatment Plant via newly constructed pipelines that runs under the Napa River to LCWD customers. The water will be used solely for irrigation of agricultural and residential landscapes. The 9.12-mile pipeline will include pipe size diameters ranging from 6- to 20- inches. From the main pipeline, recycled water users will be responsible for connecting their own pipeline/irrigation systems at pre-approved locations along the pipeline.

Supply/Demand

LCWD does not own or maintain rights to water supplies. The Carneros Recycled Water Pipeline will provide reclaimed water for irrigation purposes to 107 parcels (approximately 4,127 acres) within the District. The agreement between NSD and LCWD will provide approximately 1,300 acre-feet annually of reclaimed water from NSD's wastewater treatment plant to LCWD customers.

Those residents within the District that do not receive reclaimed water rely primarily on creek diversions and groundwater withdrawals. Many of the aquifers in Napa Valley have been found to be adequately recharged by annual precipitation and stream flow.[12] However, the area within LCWD is served by aquifers that apparently don't produce abundantly.[13] Local landowners have irrigated primarily with surface water stored in private reservoirs. Surface water is now fully appropriated and it is difficult to receive approvals for additional water from the State Water Resources Control Board. Therefore, the ability to use recycled water is critical for the future of agriculture in the Carneros area.[14]

Creek diversions are drawn from two tributaries of the Napa River: Carneros Creek and Huichica Creek, while groundwater is pumped from the Carneros Valley Basin, a sub-basin of the Napa-Sonoma Lowlands.[15] The Napa-Sonoma Lowlands is a sub-basin of the Napa-Sonoma Valley Groundwater Basin and is located between the Sonoma Valley and Napa Valley sub-basins, both of which are designated low to medium priority basins according to the California Statewide Groundwater Elevation Monitoring[16] (CASGEM) Basin Prioritization methodology. The District is located in a sub-basin with a CASGEM ranking of very low priority.[17]

4.2 INFRASTRUCTURE AND PUBLIC FACILITIES

The LCWD does not own or operate any infrastructure or facilities. In 2015, construction of a recycled water pipeline was initiated, which will serve 107 of the 263 parcels[18] (approximately 4,127 acres[19]) within the District. The Carneros Recycled Water Pipeline transmission and distribution system will be owned and operated by the Napa Sanitation District (NSD) upon completion. The recycled water produced at NSD's Soscol Wastewater Treatment Plant meets the requirements for disinfected tertiary recycled water "unrestricted use" as defined by the California Code of Regulations (CCR), Title 22, Sections 60301 through 60355. The pipeline network with pipe sizes ranging from 6- to 20- inches, is located within existing roadways (Las Amigas Road, Duhig Road, South Avenue, Los Carneros Avenue, Withers Road and Cuttings Wharf Road) and NSD access easements. The system will not require additional pump stations or storage facilities, as these are provided within NSD's existing facilities or on the end user's

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[12] Napa LAFCO. 2004. *Comprehensive Water Service Study Municipal Service Review.* October.

[13] Napa LAFCO. 2004. *Comprehensive Water Service Study Municipal Service Review.* October.

[14] Bureau of Reclamation. 2014. *Press Release: Los Carneros Recycled Water Pipeline Installation Project Gets $1 million*. June.

[15] Napa LAFCO. 2004. *Comprehensive Water Service Study Municipal Service Review.* October.

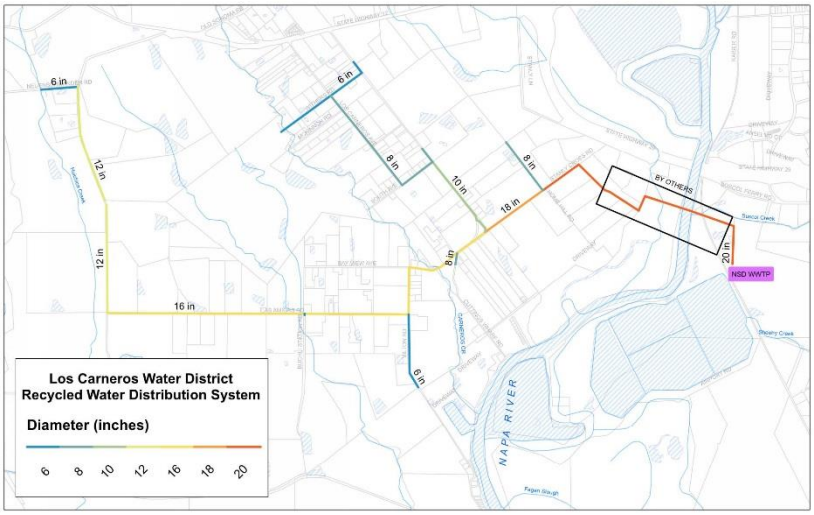
[16] The California Department of Water Resources (DWR) implemented the CASGEM Program in response to legislation enacted in California's 2009 Comprehensive Water package. As part of the CASGEM Program and pursuant to the California Water Code (CWC §10933), DWR is required to prioritize California groundwater basins, so as to help identify, evaluate, and determine the need for additional groundwater level monitoring.

[17] Department of Water Resources (DWR). 2014. *CASGEM Basin Summary: Napa-Sonoma Lowlands*. Available at: http://www.water.ca.gov/groundwater/casgem/pdfs/basin_prioritization/NCRO%2035.pdf.

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

[19] Bureau of Reclamation. 2015. *Los Carneros Water District Recycled Water Pipeline Project: Final Environmental Assessment; page 1.* July.

private property. Metered connections will be located in the public rights of way and NSD easements. "Land-locked" parcels will provide private laterals from the metered connection to individual irrigation systems or reservoirs.[20]



In order for NSD to deliver recycled water to LCWD parcels, a pipeline crossing beneath the Napa River was necessary. The District worked cooperatively with the St. Regis/Stanly Ranch Partners ("Stanly Ranch"), who were also required to construct a pipeline crossing the Napa River as a condition of approval for annexation to NSD. The District agreed to compensate Stanly Ranch by way of purchasing capacity in the construction of a pipeline sized large enough to meet the recycled water needs of both parties. The construction of the pipeline crossing the Napa River was completed in late 2013.[21]

The NSD is responsible for all aspects of treatment, distribution, and delivery of the reclaimed water to LCWD.

Adequacy and Challenges in Provision of Service and Infrastructure

The biggest challenge for LCWD that was identified in the 2004 MSR in regards to the provision of recycled water was developing the infrastructure from NSD. Upon completion of construction of the reclaimed water infrastructure, which is scheduled for spring 2016, no other infrastructure or service challenges have been identified.

Opportunities for Shared Facilities

Having no infrastructure or facilities of its own, LCWD relies upon shared facilities from NSD to provide reclaimed water to its customers.

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[20] NBS. 2014. *Second Amended Engineer's Report: 2014 Assessment District (Recycled Water Project):* page 4-1. August.

[21] Bureau of Reclamation. 2015. *Los Carneros Water District Recycled Water Pipeline Project: Final Environmental Assessment; page 1.* July.

The District is also considering participating in the North Bay Water Reuse Program, which is a regional water recycling management initiative covering portions of Napa, Marin, and Sonoma Counties that surround the northern rim of the San Francisco Bay. The North Bay Water Reuse Program (NBWRP) is a coordinated effort of 10 municipal water and sanitation agencies working together to address water supply shortages from a watershed perspective by investing in diverse projects that offset potable demand throughout the region. The Napa Sanitation District is a member of NBWRP (www.nbwrp.org).

Chapter 5: Financing

5.1 FINANCIAL OVERVIEW

Los Carneros Water District develops and adopts annual budgets and has a two-year audit performed biennially. Both budgets and audits are available to the public via the District's website. The most recent independent financial report was for the two years including Fiscal Years (FY) 2012/2013 and FY 2013/2014 and dated October 9, 2014.[22]

Revenues and Expenses

This section describes sources of revenues and expenses associated with LCWD's provision of recycled water for irrigation purposes. The District receives revenue from a single source: a benefit assessment, which is assessed to those parcels within the District that receive recycled water services (107 parcels). The assessed funds are collected on the County Tax Statements, and applied to the construction costs associated with the Los Carneros Recycled Water Pipeline project; payments are made on behalf of the District by the Napa County Auditor-Controller. The Napa Sanitation District will operate and maintain the infrastructure and serve as the water manager. The charge for water made by NSD covers both the cost of the commodity plus operation and maintenance costs. This ensures that the assessment revenue will be used to pay for the actual costs of providing recycled water services. The District reserves approximately $20,000 in the General Fund for administrative expenses.[23] Following is a summary of the last three fiscal years' financial statements (Table 5.1).

[22] Charles W. Pillon, CPA. 2014. *LCWD Basic Financial Statements for Fiscal Years Ended June 30, 2014 and 2013*. October.

[23] LCWD. 2016. Personal interview by Kateri Harrison and Brendon Freeman.

Table 5.1 Summary of Fiscal Year Statements						
Fiscal Year	***FY 11-12***		***FY 12-13***		***FY 13-14***	
Revenues						
OPERATING REVENUES						
Water Sales, Residential	$0	0%	$0	0%	$0	0%
Other Sales	$0	0%	$0	0%	$0	0%
NON-OPERATING REVENUES						
Property Taxes	$0	0%	$0	0%	$0	0%
Property Assessment	$121,318	99%	$119,757	99%	$380,814	100%
Interest Income	$1,274	1%	$1,138	1%	$1,327	0%
Intergovernmental	$0	0%	$0	0%	$0	0%
Total Revenues	***$122,592***	*100%*	***$120,895***	*100%*	***$382,141***	*100%*
Expenses						
OPERATING EXPENSES						
Administration & General	$47,147	100%	$59,584	100%	$486,810	100%
Pumping	$0	0%	$0	0%	$0	0%
Water Treatment	$0	0%	$0	0%	$0	0%
Transmission & Distribution	$0	0%	$0	0%	$0	0%
Other Operating Expenses	$0	0%	$0	0%	$0	0%
			$0	0%		
NON-OPERATING EXPENSES						
Interest Expense	$0	0%	$0	0%	$0	0%
Total Expenses	***$47,147***	*100%*	***$59,584***	*100%*	***$486,810***	*100%*
Income (or Loss) Before Transfers	***$75,445***		***$61,311***		***($104,669)***	
Transfers from Reserves	***0***		***0***		***$104,669***	
Net Income (or Loss)	***$75,445***		***$61,311***		***0***	

Comparing revenues to expenses provides an analysis of the overall fiscal health of the assessment and serves to assess the financial ability of the Agency to provide reclaimed water services. In FY 2013/2014 expenses exceeded revenue by $104,669; however in previous years the District operated with a surplus, which are utilized as 'reserve funds' to make-up for any revenue shortfalls.

In 2014, LCWD conducted a Proposition 218 protest hearing, which granted the District permission to assess for 30 years, on a not to exceed basis. The District's assessment rates are based on an annual assessment engineer's report, which outlines what the rate will be for the following fiscal year. The regular review of this assessment occurs during the budget process at a public meeting which allows public input.

Asset Maintenance and Replacement

The LCWD does not own or maintain any infrastructure or facilities, so no depreciation of capital assets applies. All infrastructure for the recycled water pipeline is owned and operated by NSD.

Capital Improvements

Because LCWD does not own or operate any infrastructure or facilities, there is no need for capital improvement planning.

Long-term Liabilities and Debts

Construction of the $16 million recycled water pipeline is funded approximately 45 percent by grants and the rest through a State loan. To fund the pipeline project, LCWD received a low-interest 30-year loan through the State Water Board's State Revolving Fund Program for $14 million. The loan was amended for approximately $4 million in federal and state grants. The first payment on the loan is required 365 days after the Notice of Completion is filed. The District has no history of loan defaults.

Cost Avoidance

The Los Carneros Water District's agreement with NSD all but eliminates costs for the District with respect to the delivery of reclaimed water service to its constituents. Notable cost-savings associated with this agreement includes providing the District unconfined access to a wide range of administrative and operational support, including engineering and maintenance personnel.[24]

Rate Restructuring

The District's assessment rates are based on an annual assessment engineer's report, which were approved under a Proposition 18 protest hearing for a duration of 30 years on a not to exceed basis. The annual assessment is developed based on an annual Assessment Engineer Report and are applied only to those parcels within the District receiving recycled water services. Fiscal Year 2012-2013 was the fifth year of a voter approved assessment, which was levied at $25 per acre. Fiscal Year 2013-2014 was the first of a three-year voter approved assessment, which was levied at $100.16 per acre.[25] The assessments are collected by the County and disbursed to the District annually. The assessment was last updated in 2014.[26] Water rates for recycled water are set by NSD.

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[24] Napa LAFCO. 2004. *Comprehensive Water Service Study Municipal Service Review;* page 54. October.

[25] Charles W. Pillon, CPA. 2014. *LCWD Basic Financial Statements for Fiscal Years Ended June 30, 2014 and 2013;* page 4. October.

[26] NBS. 2014. *LCWD Second Amended Engineer's Report: 2014 Assessment District (Recycled Water Project).* August. Available: http://carneroswater.org/Shared%20Documents/2014/081814/Engineer's%20Report_v6%20signed%20Second%20Amended%20Report%20081314.pdf.

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. 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 hearing.

Growth and Population Projections

1. The 2015 population of the Los Carneros Water District is estimated to be 523 permanent residents, which represents a decline of 12 persons (-2.2 percent) from the previous year. However, this reduction is a result of ABAG's calculated reduction to the estimate of persons per household within unincorporated Napa County.

2. Private parcels located within the Los Carneros Water District are subject to the land-use authority of the County of Napa. Over 99 percent of land located within the District is zoned by Napa County as "Agricultural Watershed," "Agricultural Watershed: Airport Compatibility," or "Agricultural Watershed: Produce Stand". These zoning standards require minimum parcels sizes of at least 160 acres, which substantially restrict future development within the District.

3. Less than one percent of land located within Los Carneros Water District's jurisdictional boundary is zoned for non-agricultural use by the County of Napa. This area is limited to a single split zone parcel zoned "Commercial Limited," which upon grant of a use permit, could accommodate a variety of commercial uses within the District. Based on Measure J, which requires a vote of the citizens to change the zoning standard of any unincorporated agricultural property in Napa County through 2020, it is unlikely that the development of this parcel would induce the conversion of any adjacent agricultural land for commercial use or alter the service needs of the community other than reclaimed water service.

4. There are 28 parcels located within Los Carneros Water District's jurisdictional boundary under "Williamson Act" contracts with the County of Napa. These parcels represent approximately 40 percent of the entire jurisdictional boundary and help to ensure the preservation of agriculture and open space as predominant land uses within the District.

   Parcels under Williamson Act contracts are required to maintain their agricultural and open space land uses over the course of renewable 10-year periods in exchange for reduced property tax assessments.

5. The development of reclaimed water service within Los Carneros Water District's jurisdictional boundary will not induce growth beyond what is already contemplated by the land use plans adopted by the County of Napa.

Disadvantaged Unincorporated Communities

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

7. No disadvantaged unincorporated communities have been identified within Los Carneros Water District's boundaries, its SOI, or adjacent areas.

Present and Planned Capacity of Public Facilities

8. The Los Carneros Water District was formed in 1978 for the purpose of facilitating an agreement with the Napa Sanitation District for the delivery of reclaimed water for agricultural use. In 2015, under a joint agreement the Los Carneros Water District and the Napa Sanitation District began construction of the recycled water pipeline to serve the District. Under the terms of the agreement, upon completion of the pipeline all infrastructure and facilities will be owned and operated by the NSD. Therefore, the District itself has no infrastructure or facilities.

9. The recycled water pipeline will serve 107 parcels consisting of 4,127 acres within the District. The parcels make up approximately 70 percent of the District.

10. Approximately 1,300 acre-feet annually of reclaimed water from the Napa Sanitation District's Soscol Wastewater Treatment Plant is used to provide recycled water to 70 percent of lands within Los Carneros Water District's jurisdictional boundary. Other water users within the District obtain water through creek diversions from Carneros and Huichica Creeks and groundwater withdraws from the Carneros Valley Basin.

11. The development of reclaimed water service within Los Carneros Water District's jurisdictional boundary lessens the demand for creek diversions and groundwater withdraws, and promotes the beneficial use of recycled water for agricultural use.

Financial Ability of Agency to Provide Services

12. The Los Carneros Water District develops and adopts a comprehensive budget and receives an audited financial statement biennially.

13. The LCWD conducted a Proposition 218 protest hearing in 2014, which granted the District permission to assess for 30 years on a not to exceed basis. The District's assessment rates are based on an annual assessment engineer's report, which outlines what the rate will be for the following fiscal year. This assessment is reviewed on a regular basis during the budget process.

14. Water rates are set by the Napa Sanitation District.

Opportunities for Shared Facilities

15. Future projects with the North Bay Watershed Association may provide opportunities for the Napa Sanitation District to share costs with other agencies towards the construction of additional facilities for the delivery of reclaimed water to the Los Carneros Water District.

Accountability for Community Service Needs

16. The Los Carneros Water District is empowered under the California Water District Act to provide three municipal services: water, sewer, and hydroelectric power. Due to its predominant agricultural land use designation under the County of Napa's General Plan, parcels within the District do not require a full range of municipal services. Only water for irrigation of agriculture is an appropriate and currently needed service within the District.

17. The Los Carneros Water District has been successful in meeting its original objective to facilitate an agreement with the Napa Sanitation District for the delivery of reclaimed water on behalf of landowners within its jurisdictional boundary. The project is scheduled for completion in 2016 and will supply the District's needs for reclaimed water service on behalf of local landowners.

18. It is recommended that in the future the Los Carneros Water District, the Napa Sanitation District, and Napa LAFCO collaborate to produce a new, but brief (3-page), study of the advantages and disadvantages to pursuing a change in reorganization for the Los Carneros Water District. This study should consider alternative government structures and any cost/benefits with respect to meeting the service needs of the affected area. This additional information would assist the Los Carneros Water District in determining whether an alternative government structure would better serve the needs of the District's constituents as it relates to improving delivery service, public participation, and local accountability. This study is recommended to be submitted to LAFCO by the year 2023.

19. The Napa County Flood Control and Water Conservation District and Napa County Resource Conservation District are both empowered to provide water service for agricultural use and their jurisdictions overlap that of the Los Carneros Water District. Both of these agencies have elected not to offer water service, and have expressed no intentions of doing so in the foreseeable future. The future reorganization study recommended in Determination #18, above could consider the relationship among these two districts and the LCWD.

20. The Los Carneros Water District has a seven-member Board of Directors elected or appointed in staggered, four-year terms. The Los Carneros Water District Board meets in the Stonebridge Elementary School on the second Tuesday of the month. Los Carneros

Water District meetings are noticed and conducted in compliance with the Brown Act and the meetings provide ample opportunities for public comment.

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

21. There are no other aspects of recycled water 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 Los Carneros Water District (LCWD). The most recent comprehensive review of LCWD'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 which 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. 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.[27]

The following SOI options have been identified for LCWD and are based on a five-year planning period.

Option No. 1: Retain the Existing SOI

The LCWD's sphere was first adopted by LAFCO in 1984 and reaffirmed with no changes in 2007. LAFCO designated the sphere to reflect what the Commission determined was the natural service area of LCWD. This includes lands generally bounded on the east by the Stanly Ranch and the Napa River, on the north primarily by Highway 12, on the west by the Napa / Sonoma County line, and on the south by the Southern Pacific and Northwestern Pacific Railroad lines. Excluded from the sphere but within the District's boundaries are ten parcels located north of State Highway 12, one of which is only partially within the sphere, totaling approximately 300 acres (see Figure 2.1).

Option No. 2: Removal of two parcels from the Existing SOI

Areas that may merit removal from LCWD's SOI given they are located within the District's existing SOI and outside the District's jurisdictional boundary (Study Areas A-1 and A-2 on Figure 2.2). Table 7.1 portrays a parcel summary of the two lots.

[27] Napa LAFCO. *General Policy Determinations*: page 9. Amended October 11.

Table 7.1 Parcel Summary for Study Areas B-1 and B-2				
Study Area	APN	Acreage	Zoning	Land Use
A-1	047-320-001	160.5	Agriculture Watershed	Vineyard
A-2	047-380-008	6.7	Agriculture Watershed	Vineyard/Residence

Option No. 3: Inclusion of 10 parcels within the SOI

Areas that may merit addition to LCWD's SOI given they are located outside the District's existing SOI and within the District's jurisdictional boundary (Study Areas B-1 and B-2 on Figure 2.2). Table 7.2 provides a parcel summary of the 10 lots, one of which is partially included in the District's boundary:

Table 7.2 Parcel Summary for Study Areas B-1 and B-2				
Study Area	APN	Acreage	Zoning	Land Use
B-1	047-070-021 (31.5 acres)	60.6	AW	Vineyard
	047-070-020 (29.1 acres)		AW	Not developed
B-2	047-100-054 (partially within boundary) (71.8 acres)	233.7	AW	Vineyard
	047-100-018 (4.7 acres)		AW	Vineyard
	047-100-019 (19.6 acres)		AW	Vineyard/Residence
	047-100-048 (49.2 acres)		AW	Vineyard
	047-100-045 (40.0 acres)		AW	Vineyard/Residence
	047-100-046 (16.8 acres)		AW	Vineyard/Residence
	047-100-061 (22.8 acres)		AW	Vineyard/Winery
	047-100-059 (17.8 acres)		AW	Vineyard/Agriculture

Analysis and Discussion of Options

Option No. 1: Retain the Existing SOI

If Napa LAFCO determines that the existing government structure is appropriate to coordinate with Napa Sanitation District to provide recycled water services, then the existing SOI should be retained. This option would enable the District to continue to include all current areas within its SOI.

Option No. 2: Removal of two parcels from the Existing SOI

There are two parcels within the District SOI that are not included in the boundaries (Study Areas A-1 and A-2). One parcel consists of 160.5 acres and is located in the very southwest corner of the District. The second parcel is 6.7 acres in size and is adjacent to State Highway 12 along the northern border of the District's SOI.

Neither of the two parcels are included in the Carneros Recycled Water Pipeline Assessment or are receiving recycled water at this time.

Their removal will not impact regional transportation plans or sustainable community strategies contained in ABAG's *Plan Bay Area*.

Option No. 3: Inclusion of 10 parcels within the SOI

Ten parcels, one of which is partially included, are located within the District's boundaries but outside the adopted SOI. Nine of the ten parcels are zoned *Agricultural Watershed*. The remaining parcel is zoned *Agricultural Watershed: Produce Stand*.

None of the 10 parcels identified in Study Areas B-1 and B-2 are included in the Carneros Recycled Water Pipeline Assessment or are receiving recycled water at this time. However, they are located adjacent to other parcels receiving recycled water and logistically could be connected upon application to LCWD and NSD. One of the 10 parcels (APN 047-100-054) is partially within the boundaries of the District. As noted above, no portion of the parcel is included in the assessment or receiving recycled water at this time.

The District has noted that some of the parcels referenced are a substantial distance from the newly installed recycled water infrastructure. It would take the installation of a large amount of pipeline to afford a connection.[28] Those parcels adjacent to State Highway 12 would be more likely to have access to the infrastructure than those behind them to the north.

Their addition will not impact regional transportation plans or sustainable community strategies contained in ABAG's *Plan Bay Area*.

[28] John Stewart, 2016. Personal communication. May 17,

SOI Issues

Table 7.3 Los Carneros Water District Sphere Issues	
Issue	Comments
SOI Update Recommendation	The Consultants recommend that LAFCO consider each of the three options outlined above. In particular, it is recommended that option No. 3 receive careful attention from the Commission. Prior to any modification of LCWD's SOI, the Commission should consult with the LCWD Directors regarding the potential for future study of reorganization options as described in MSR Determinations No. 18 and 19.
Services Provided	The LCWD facilitates the delivery of recycled water for irrigation from the NSD to residents and customers within its boundaries.
Urbanizing effect of services	The District provides recycled water for irrigation purposes. There will be no urbanizing effect as a result of its services.
Present and planned land uses in the area	The District consists of rural agricultural lands, primarily associated with viniculture, single-family residences, and small wineries. Existing development is consistent with land use designations contained within the County's General Plan and Zoning regulations, which are primarily 160-acre minimum densities. No substantial development within the District is anticipated.
Potential effects on agricultural and open-space lands	With the exception of a 1.19-acre portion of a parcel (split-zoned), all lands within the District and its SOI are zoned for agricultural and rural residential uses. The District's services are currently limited to the provision of reclaimed water from the NSD Wastewater Treatment Plant for irrigation purposes.
Projected growth in the District	The growth rate within the District is estimated to be 0.6 percent by the Association of Bay Area Governments (ABAG). Further, since the 2004 MSR, the District noted only three new residences had been constructed within the District.
Present and probable need for public facilities and services in the area related to recycled water services	The District does not own, maintain, or operate any facilities. All facilities are owned and operated by the Napa Sanitation District.
Present capacity of public facilities and adequacy of public services related to recycled water services	The agreement between LCWD and NSD is for 1,300 acre-feet annually of tertiary reclaimed water from NSD's Soscol Wastewater Treatment Plant. The water service will be provided on a schedule so as to ensure that all parcels within the assessment area receive the agreed upon allotment of water.

The existence of any social or economic communities of interest in the area	The District is located in a rural, agricultural area of southwest Napa County and does not contain any social or economic communities of interest. The nearest community is the City of Napa located northeast of the District.
The present and probable need for water of any Disadvantaged Unincorporated Community within the existing SOI	No DUCs have been identified within LCWD, 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. However, Napa Sanitation District is a partner of LCWD and should be kept informed of any changes to the LCWD SOI.
Potential for consolidations or other reorganizations when boundaries divide communities	The District's boundaries do not divide communities. One possible exception involves Study Area A-1 (APN 047-320-001) that appears to be partially within Sonoma County based on Napa County's GIS data. The wastewater treatment facility and recycled water distribution infrastructure is owned and operated by the Napa Sanitation District. No other districts in the area have expressed interest in providing recycled water services for the area.
Location of facilities, infrastructure and natural features	The location of the Carneros Recycled Water Pipeline and meters are entirely within existing road right-of-ways. Laterals to land-locked parcels are the responsibility of individual land owners.
Willingness to serve	The District wishes to continue to facilitate recycled water services within its boundary and to determine the most efficient way to provide services within its SOI.
Potential environmental Impacts	The use of recycled water will reduce the impacts of current water diversions on both surface and groundwater sources in the region. Irrigating agricultural crops with recycled water may offer both benefits[29] and impacts[30] to public health.

[29] Sharona Sokolow, Hilary Godwin, Brian L. Cole. Impacts of Urban Water Conservation Strategies on Energy, Greenhouse Gas Emissions, and Health: Southern California as a Case Study. *American Journal of Public Health*, 2016; e1 DOI: 10.2105/AJPH.2016.303053. As cited in Science Daily, 18 March 2016. <*www.sciencedaily.com/releases/2016/03/160318091012.htm*>.

[30] Ora Paltiel, Ganna Fedorova, Galit Tadmor, Geffen Kleinstern, Yehoshua Maor, Benny Chefetz. Human Exposure to Wastewater-Derived Pharmaceuticals in Fresh Produce: A Randomized Controlled Trial Focusing on Carbamazepine. *Environmental Science & Technology*, 2016; DOI: 10.1021/acs.est.5b06256 as cited in Science Daily. 18 April 2016. <*www.sciencedaily.com/releases/2016/04/160418120339.htm*>.

7.2 DRAFT SOI DETERMINATIONS

Present and planned land uses in the area

1. The majority of land within the LCWD is under agricultural use, primarily vineyards, along with rural single-family residences and small wineries.
2. The County's General Plan designates land located within LCWD as *Agriculture, Watershed and Open Space* or *Agricultural Resource*.

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

3. The Los Carneros Water District has an agreement with the Napa Sanitation District to provide recycled water services to the District. Construction on the Carneros Recycled Pipeline Project started in 2015 and is expected to be complete in spring 2016. When complete, the pipeline will provide irrigation water to approximately 70 percent of the District's lands. The development of reclaimed water services within the area will lessen the demand for creek diversions and groundwater withdrawals, and promotes the beneficial use of recycled water to support agriculture.

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

4. The Los Carneros Water District does not own, lease, or operate any public facilities relating to the collection and conveyance of reclaimed water to the area. The ability of the District to provide reclaimed water service is dependent upon importing supplies from an outside provider. All infrastructure and facilities are owned and operated by the Napa Sanitation District. Additionally, under the mutual agreement, the water services will be managed by the NSD General Manager.

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

5. There has been a significant transition over the last 40 years in the area as viniculture has become the predominant land use. This transition has fostered strong social and economic interdependencies and has been formally recognized as part of a federal vinicultural designation that includes the entire area as well as neighboring lands in Congress Valley and Sonoma County.

6. The District is located in a rural, agricultural area of southwest Napa County and does not contain any social or economic communities of interest. The nearest community is the City of Napa located northeast of the District.

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

7. No DUCs have been identified within LCWD, 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
Los Carneros Water District	John Stewart, President Bob Mueller, Director/Secretary

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.

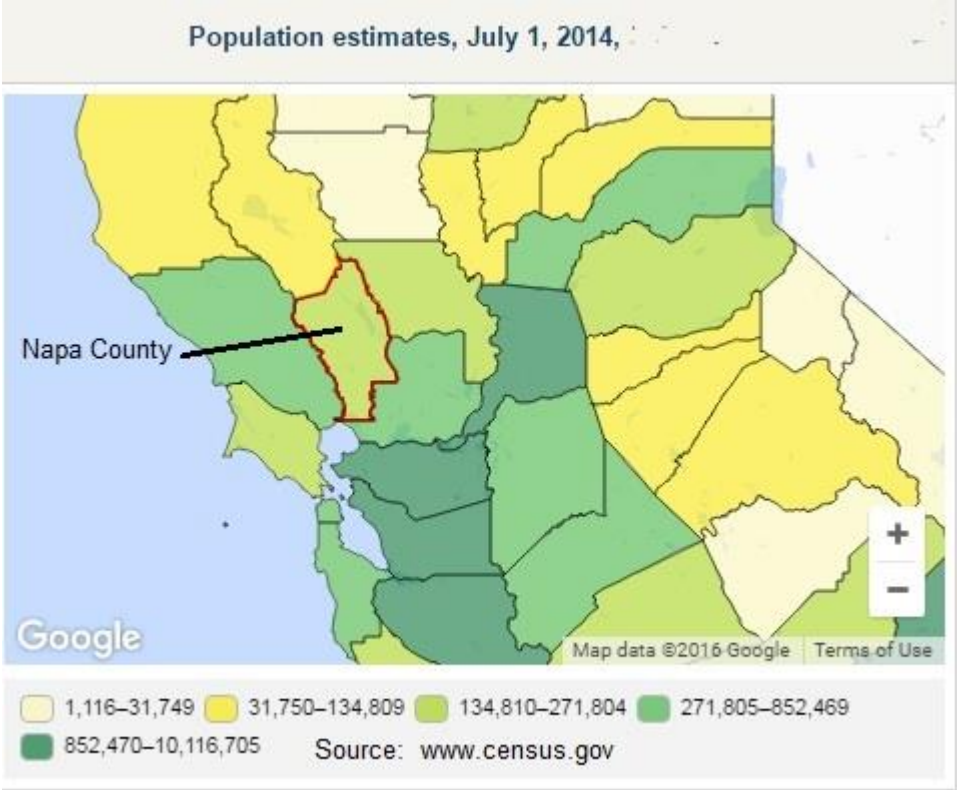
SWALE Inc.	Kateri Harrison, Project Manager
Uma Hinman Consulting	Uma Hinman, Author, Planner
Baracco & Associates	Bruce Baracco, Project Advisor

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.

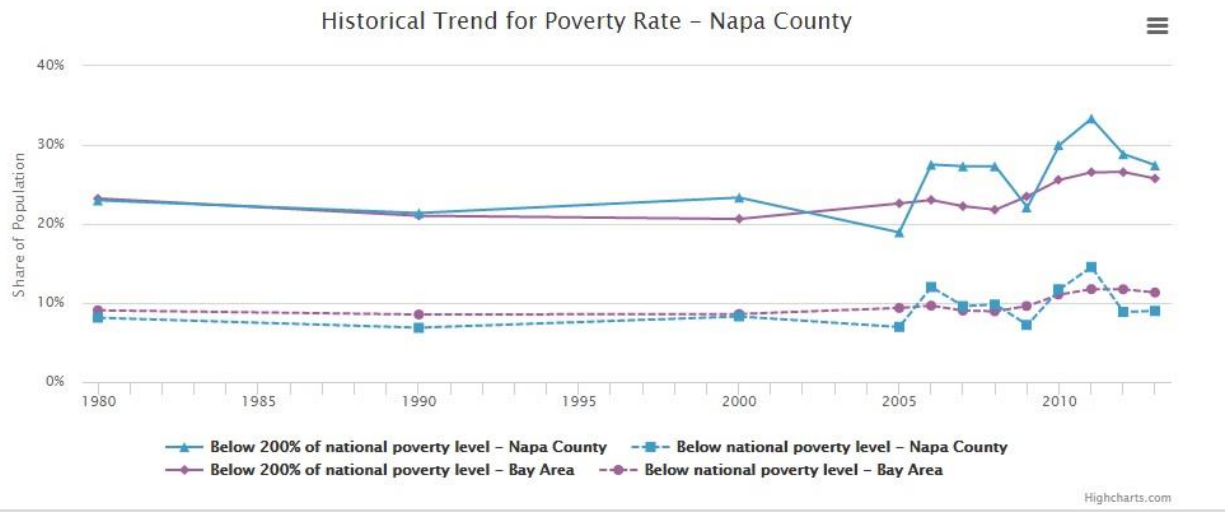
Table A.1: Projected Total Population Napa County						
	2015	**2020**	**2025**	**2030**	**2035**	**2040**
AMERICAN CANYON	20,500	21,500	22,600	23,700	25,000	26,200
CALISTOGA	5,200	5,300	5,400	5,500	5,500	5,600
NAPA	78,800	80,700	82,800	85,100	87,700	90,300
ST. HELENA	5,900	6,000	6,100	6,100	6,200	6,300
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						

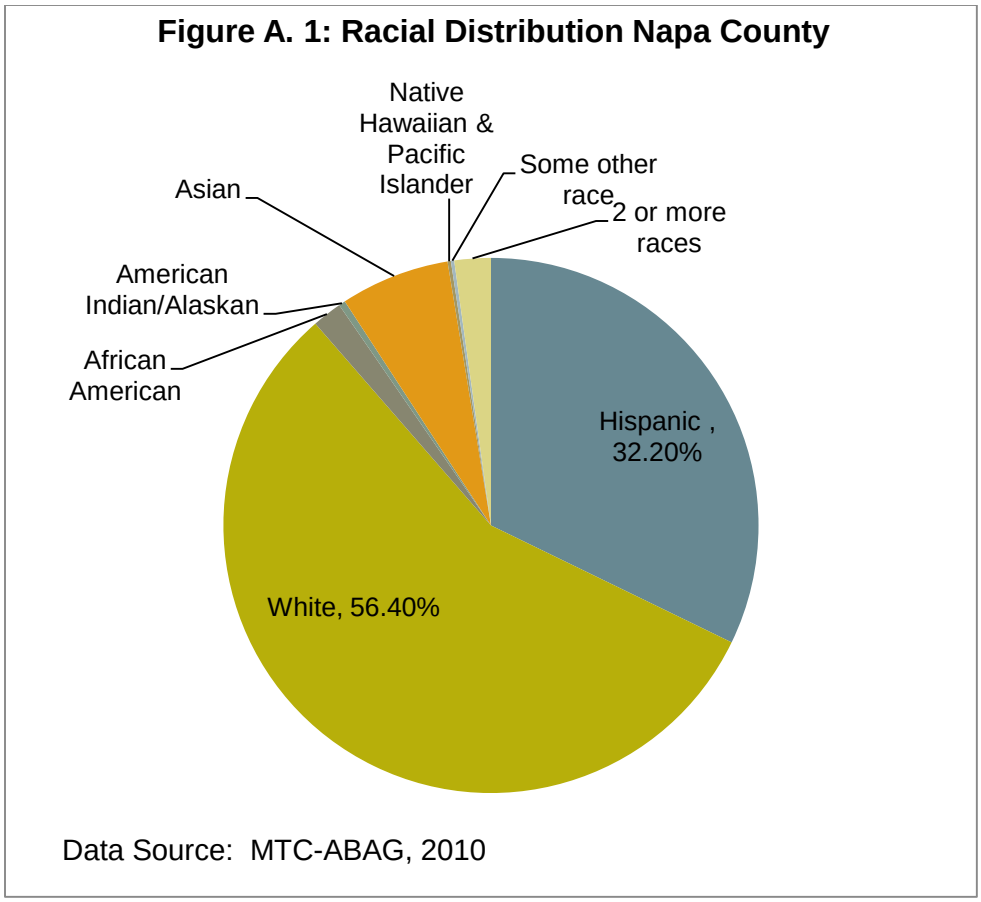
The Metropolitan Transportation Commission analyzes and publishes various statistics about local counties as part of their transportation planning process. The historical trend of poverty rates is shown in Figure below. Napa County is shown as a blue line and it indicates that poverty in Napa County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

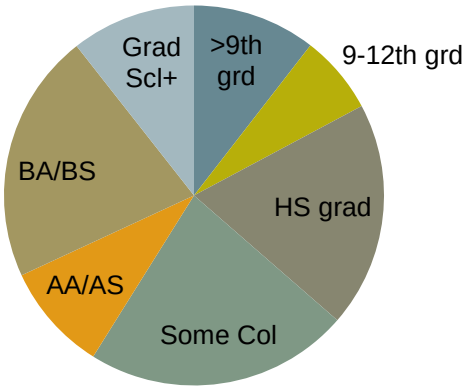
Table A.3: Age Distribution in Napa County	
Age Category	**# of residents**
Under 5 years	8,131
5 to 17 years	23,355
18 to 64 years	84,404
65 years and over	20,594
Data Source: http://www.bayareacensus.ca.gov/counties/NapaCounty.htm	

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).

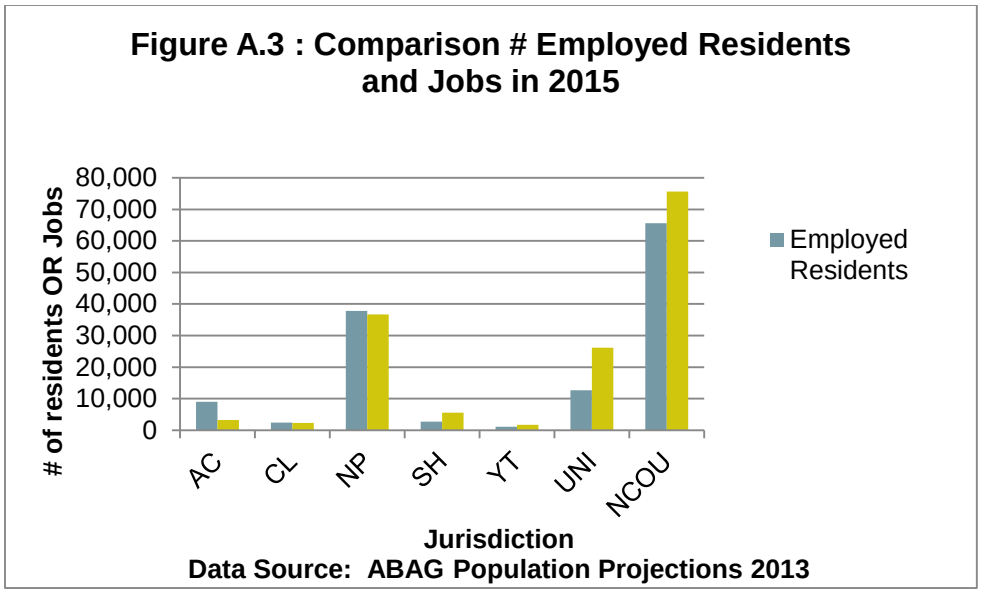
The Educational Attainment In the population aged 25 years and over is that 82.80% of the county's population is a high school graduate or higher. Almost 32% of the county's population has attained a bachelor's degree or higher, as shown in Figure A.2, below (US Census, 2014).

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

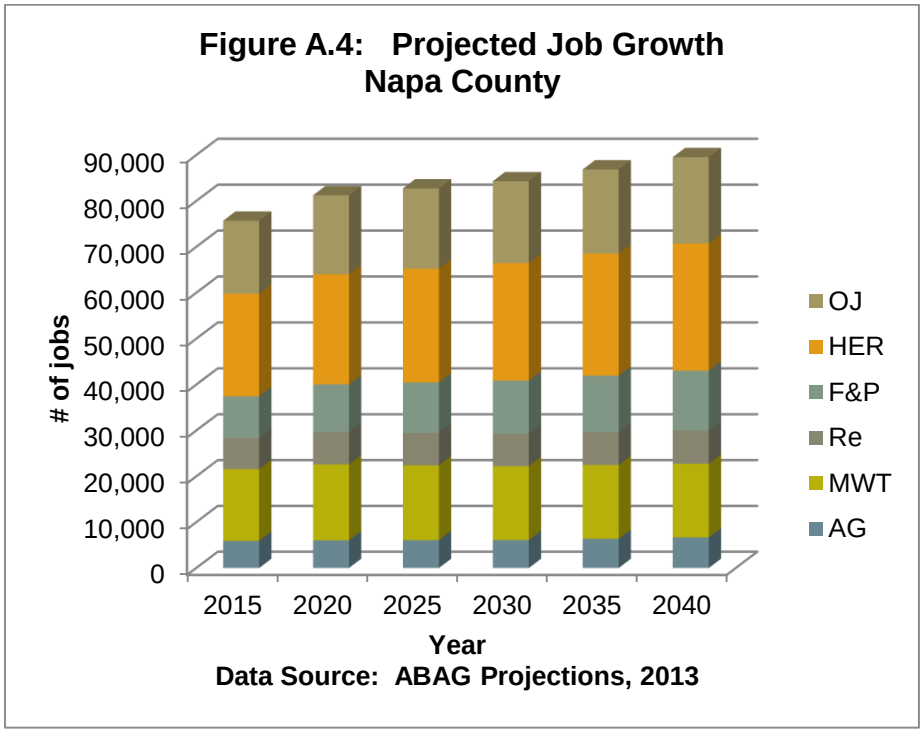


US Census, 2014

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.

References

Association of Bay Area Governments (ABAG). Bay Area Plan Projections 2013. Oakland, California. Available on-line at: <*http://abag.ca.gov/planning/housing/projections13.html*>. Accessed March 23, 2016.

CA Department of Finance (DOF), Demographic Research Unit. Table E-1, Cities, Counties, and the State Population Estimates with Annual Percent change – January 1, 2014 and 2015. May 2015. Sacramento, California. Available on-line at: <*http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/view.php*>. Accessed March 23, 2016.

MTC-ABAG Library. Bay Area Census website. 2010 Census data for Bay Area. Oakland, California. Available on-line at: <*http://www.bayareacensus.ca.gov/index.html*>. Accessed March 23, 2016.

U.S. Census Bureau; 2014. American Community Survey 5-Year Estimates Educational Attainment. Generated by Kateri Harrison; using American FactFinder; <*http://factfinder2.census.gov*>. Accessed March 23, 2016.

Appendix B

Napa County Economic Forecast

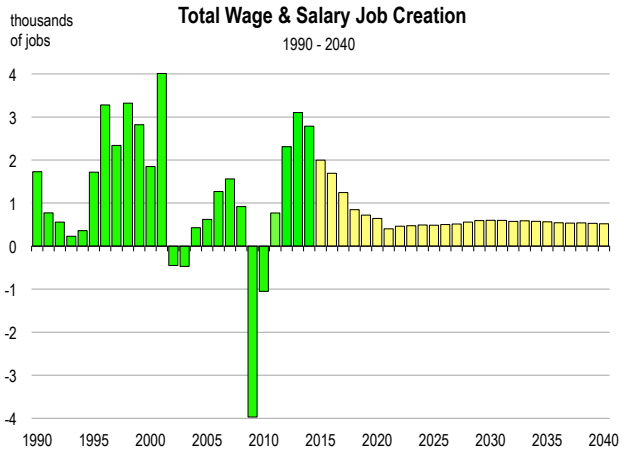
Napa County is home to the Napa Valley, a popular tourist destination known for wine grapes and premium wine production. Napa County has a population of 140,300 people and a total of 74,200 wage and salary jobs. The per capita income in Napa County is $60,576, and the average salary per worker is $58,557.

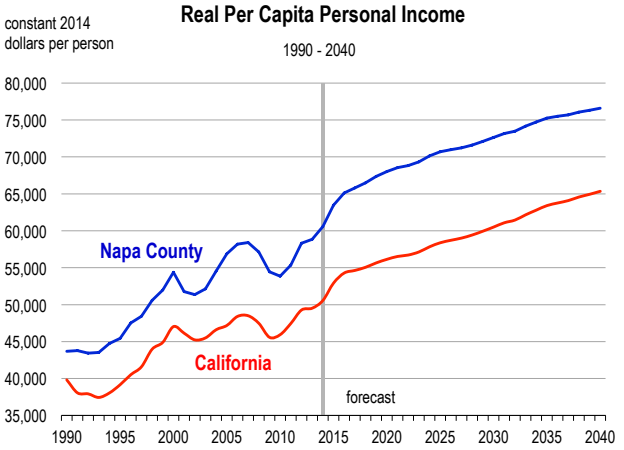
Wine grapes account for 99 percent of all agricultural output in Napa County. Red grapes are dominant in the region, with a total value that is almost 5 times than that of white grapes. The viticulture industry also attracts a large number of tourists to the county each year, generating a substantial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

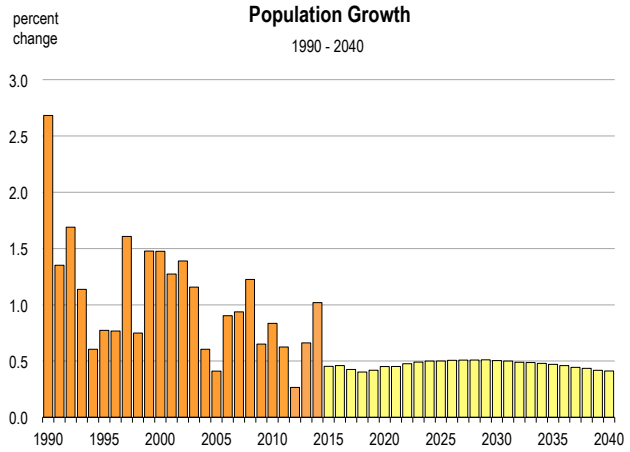
- Job growth of 2.7 percent is forecasted for 2015. Between 2015 and 2020, the annual growth rate for total wage and salary jobs will average 1.3 percent.
- Average salaries are below the California average, and will remain so over the foreseeable future. In Napa County, inflation-adjusted salaries are 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.

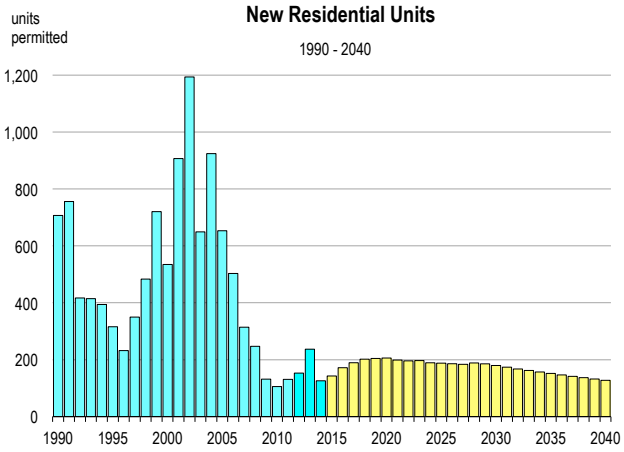
This Forecast was prepared by Caltrans, Economic Analysis Branch. On-line at: http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic_files/2015/Final%20Forecasts/Napa.pdf

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

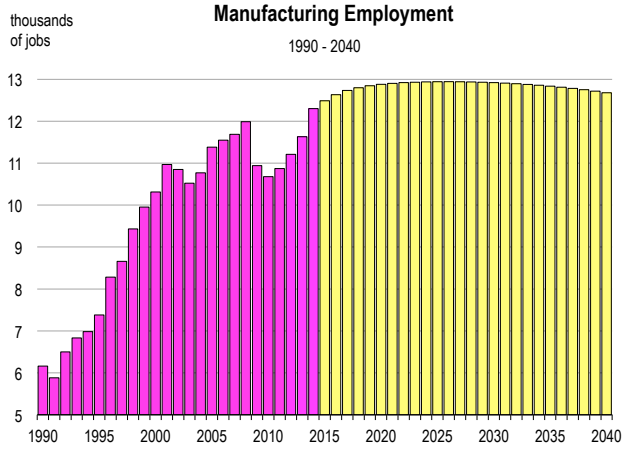


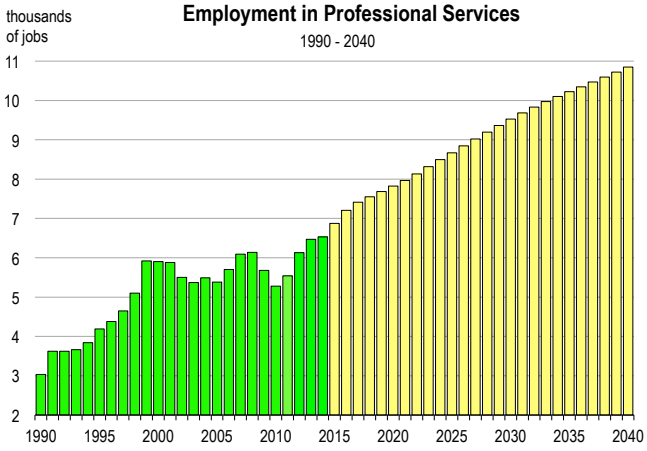


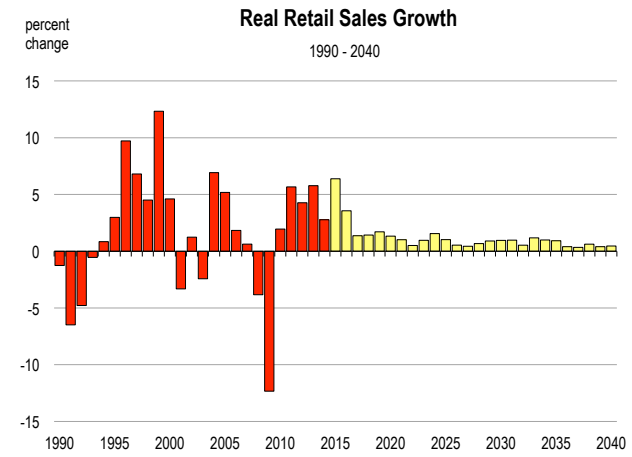
Napa County Employment Forecast

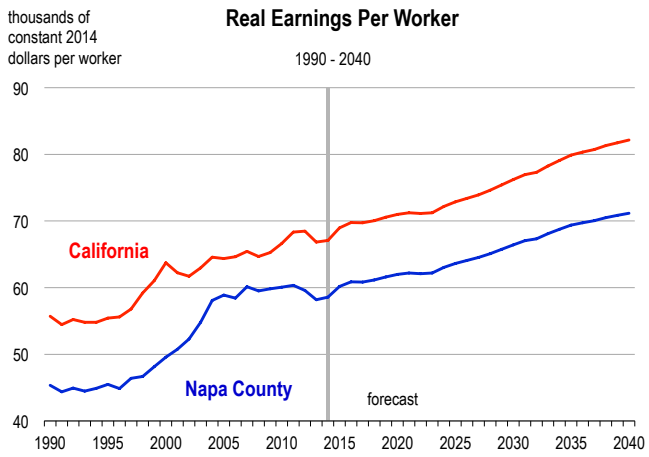
2006-2014 History, 2015-2040 Forecast

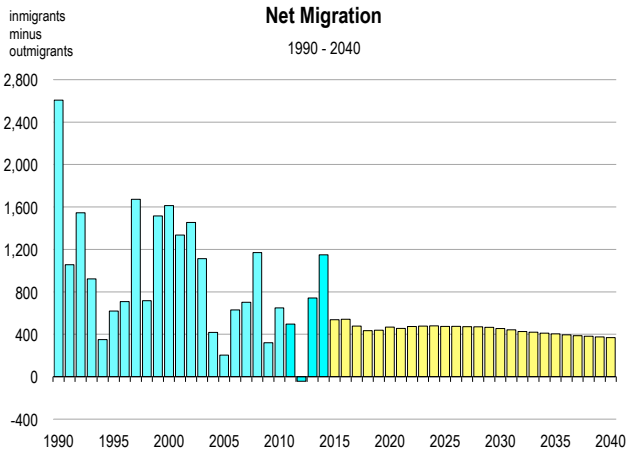
	Total Wage & Salary	Farm	Construction	Manufac-turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Information	Health & Education	Leisure	Government
	employment (thousands of jobs)											
2006	67.8	4.74	5.1	11.6	1.4	7.6	2.8	5.7	0.7	8.0	8.5	10.0
2007	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

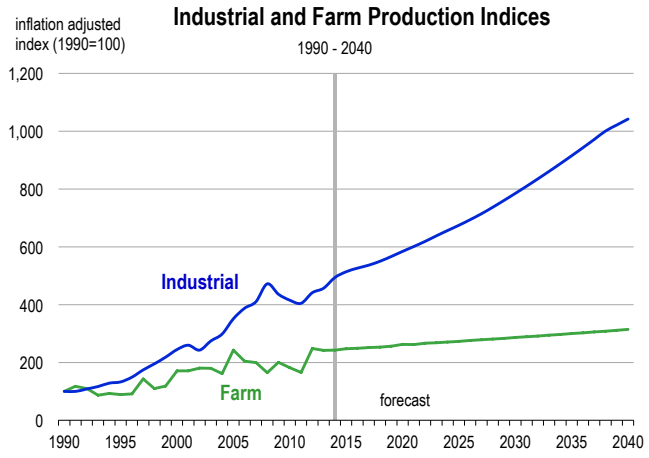












County Economic and Demographic Indicators

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