



**Local Agency Formation Commission of Napa County**  
Subdivision of the State of California

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*We Manage Local Government Boundaries, Evaluate Municipal Services, and Protect Agriculture*

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**TO:** Local Agency Formation Commission

**PREPARED BY:** Brendon Freeman, Executive Officer

**MEETING DATE:** July 13, 2020

**SUBJECT:** Public Workshop Discussion of Draft Countywide Water and Wastewater Municipal Service Review

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**SUMMARY**

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 directs LAFCOs to prepare municipal service reviews (MSRs) every five years to inform their other planning and regulatory activities. This includes, most notably, preparing and updating all local agencies' spheres of influence as needed. MSRs vary in scope and can focus on a particular agency, service, or geographic region as defined by LAFCOs. MSRs may also lead LAFCOs to take other actions under its authority such as forming, consolidating, merging, or dissolving one or more local agencies. MSRs culminate with LAFCOs making determinations on a number of factors addressing growth and population trends, disadvantaged unincorporated communities, infrastructure needs or deficiencies, financial standing, opportunities for shared facilities, and accountability for community service needs as required by California Government Code Section 56430.

As part of a public workshop, the Commission will receive a presentation on the draft Countywide Water and Wastewater Municipal Service Review ("draft MSR"). The Commission is invited to discuss the draft MSR and receive comments from members of the public. The Commission may provide direction to staff with respect to revisions to the draft MSR to incorporate public comments or other matters discussed during the workshop.

The draft MSR was prepared by a private consultant, Policy Consulting Associates (PCA). Jennifer Stephenson with PCA and Richard Berkson with Berkson Associates will present the draft MSR during the workshop. PCA developed a project-specific website to provide opportunities for ongoing interaction with the subject agencies and members of the general public. The website is available to the public online at <https://sites.google.com/pcateam.com/napamsr/home>.

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Kenneth Leary, Chair  
Councilmember, City of American Canyon

Diane Dillon, Vice Chair  
County of Napa Supervisor, 3rd District

Gregory Rodeno, Commissioner  
Representative of the General Public

Margie Mohler, Commissioner  
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Ryan Gregory, Alternate Commissioner  
County of Napa Supervisor, 2nd District

Brendon Freeman  
Executive Officer

The draft MSR provides a comprehensive review of water, wastewater, and recycled water service in Napa County as provided by 14 local governmental agencies. The 14 subject agencies are listed below:

- City of American Canyon
- City of Calistoga
- City of Napa
- City of St. Helena
- Town of Yountville
- Circle Oaks County Water District
- Congress Valley Water District
- Lake Berryessa Resort Improvement District
- Los Carneros Water District
- Napa Berryessa Resort Improvement District
- Napa County Flood Control and Water Conservation District
- Napa River Reclamation District No. 2109
- Napa Sanitation District
- Spanish Flat Water District

It is important to note the draft MSR includes an overview of potential effects of climatic shifts on utility systems, likely trends that may negatively affect Napa County water supply in the future, and potential implications to water supply and water resources management resulting from these likely trends. Acknowledging the various trends set forth in the numerous hydrological and climatological studies that inform the draft MSR serves to provide the baseline from which to forewarn policy makers, water managers, and resource management practitioners of the potential repercussions of climatic shifts to water resources, including governance issues such as water rights. With this in mind, the draft MSR includes several key recommendations related to the governance structure and shared service opportunities for many of the subject agencies. Toward this end, the draft MSR identifies potential governance structure options for the subject agencies in Figure 3-14, included as Attachment One.

The draft MSR was released to the public on May 18, 2020, and is available online at [https://www.napa.lafco.ca.gov/uploads/documents/CountywideWaterWastewaterMSR\\_PublicReviewDraft\\_5-18-20.pdf](https://www.napa.lafco.ca.gov/uploads/documents/CountywideWaterWastewaterMSR_PublicReviewDraft_5-18-20.pdf). Written comments on the draft MSR are welcome through 1:00 P.M. on July 20, 2020. Verbal comments are encouraged during today's workshop. All written and verbal comments will be incorporated into a final report that will be adopted as part of a future public meeting. As of July 10, 2020, seven written comment letters on the draft MSR have been received from the City of Calistoga, City of Napa, Town of Yountville, Napa River Reclamation District No. 2109, Dan Mufson, Roland Dumas, and Patricia Damery, all of which are included together as Attachment Two.

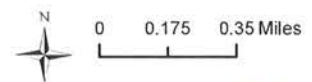
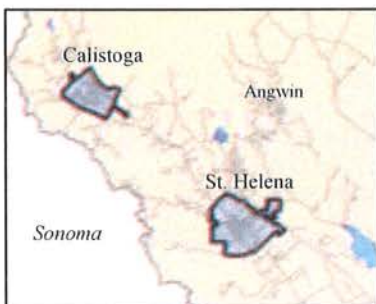
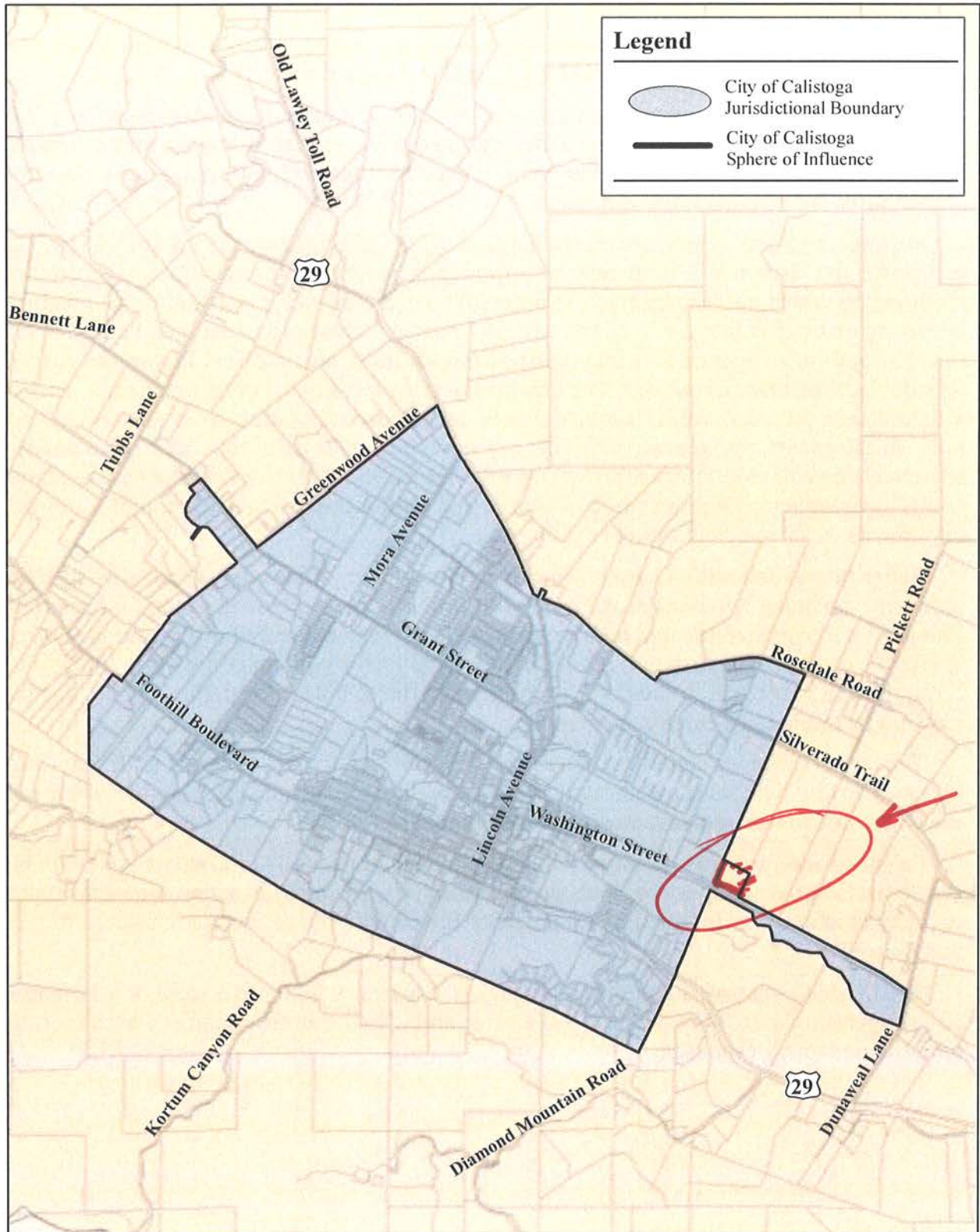
## **ATTACHMENTS**

- 1) MSR Figure 3-14: Governance Structure Options
- 2) Public Comments on Draft MSR

**Figure 3-14: Governance Structure Options**

<b>Napa County Water and Wastewater Agency Governance Structure Options</b>	
<b>Affected Agency</b>	<b>Governance Options</b>
City of American Canyon	<ul style="list-style-type: none"> <li>• Clarification of LAFCO-approved service area</li> <li>• Inclusion of non-contiguous city-owned property in SOI or clarification of LAFCO policy</li> <li>• Participation in a county water agency</li> </ul>
City of Calistoga	<ul style="list-style-type: none"> <li>• Participation in a county water agency</li> </ul>
City of Napa	<ul style="list-style-type: none"> <li>• Reorganization of Congress Valley Water District</li> <li>• Contract service to other agencies</li> <li>• Merger with Napa Sanitation District</li> <li>• Creation of a Water Commission</li> <li>• Inclusion of non-contiguous city-owned property in SOI or clarification of LAFCO policy</li> <li>• Participation in a county water agency</li> </ul>
City of St. Helena	<ul style="list-style-type: none"> <li>• Elimination of Municipal Sewer District No. 1</li> <li>• Inclusion of non-contiguous city-owned property in SOI or clarification of LAFCO policy</li> <li>• Participation in a county water agency</li> </ul>
Town of Yountville	<ul style="list-style-type: none"> <li>• Collaboration with California Department of Veterans Affairs to develop a water management plan</li> <li>• Continued collaboration with County regarding potential annexation of Domaine Chandon property</li> <li>• Participation in a county water agency</li> </ul>
Circle Oaks County Water District	<ul style="list-style-type: none"> <li>• Contracting for services with City of Napa and/or Napa Sanitation District</li> <li>• Reorganization into a county water agency or a countywide county water district</li> </ul>
Congress Valley Water District	<ul style="list-style-type: none"> <li>• Reorganization of Congress Valley Water District <ul style="list-style-type: none"> <li>○ Expansion of City of Napa SOI and annexation of Congress Valley community</li> <li>○ Formation of a subsidiary district of City of Napa</li> <li>○ Formation of a county service area</li> <li>○ Dissolution and continued service by City of Napa</li> </ul> </li> </ul>

Napa County Water and Wastewater Agency Governance Structure Options	
Affected Agency	Governance Options
Lake Berryessa Resort Improvement District	<ul style="list-style-type: none"> <li>• Reorganization as a county service area</li> <li>• Reorganization into a county water agency or countywide county water district</li> </ul>
Los Carneros Water District	<ul style="list-style-type: none"> <li>• Reorganization with Napa Sanitation District</li> </ul>
Napa Berryessa Resort Improvement District	<ul style="list-style-type: none"> <li>• Reorganization as a county service area</li> <li>• Reorganization into a county water agency or countywide county water district</li> </ul>
Napa County Flood Control and Water Conservation District	<ul style="list-style-type: none"> <li>• Establish zones of benefit</li> <li>• Reorganization with Napa River Reclamation District No. 2109</li> <li>• Participation in a county water agency</li> </ul>
Napa River Reclamation District No. 2109	<ul style="list-style-type: none"> <li>• Expansion of services to include levee construction and maintenance</li> <li>• Reorganization into a community services district</li> <li>• Reorganization as zone of Napa County Flood Control and Water Conservation District</li> </ul>
Napa Sanitation District	<ul style="list-style-type: none"> <li>• Merger with City of Napa</li> <li>• Annexation of Los Carneros Water District</li> <li>• Contract service to other agencies</li> <li>• Expansion of services to Monticello Park</li> </ul>
Spanish Flat Water District	<ul style="list-style-type: none"> <li>• Contracting for services with City of Napa and/or Napa Sanitation District</li> <li>• Reorganization into a county water agency or countywide county water district</li> <li>• Transition to a county service area</li> </ul>



December 11, 2019  
Prepared by LAFCO Staff



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for the pending Veranda project listed in Figure 5-3.<sup>191</sup> Water supply availability and wastewater system capacity will be discussed in more detail later in this chapter.

**Figure 5-4: Potential Development through 2034, acre-feet**

Potential Development through 2034	Water Usage	Wastewater Generation
71 SFD	30.39	15.90
118 multi-family dwellings (MFD) (split between 1 and 2 bedroom units)	22.01	12.92
222 guest rooms	37.74	33.30
240,000 square feet of commercial development	26.40	23.76
3,000 restaurant square feet	1.74	1.57
Totals	118.28	87.45
% of available supply/capacity	26.2-53.8%	71%

Source: City Council Staff Report: Growth Management System Report, 2018.

The Association of Bay Area Governments (ABAG) projects that the total growth within the City between 2020 and 2030 will be 3.8 percent or about 0.4 percent a year on average. Based on these projections, the City's population would increase from 5,453 in 2019 to approximately 5,683 in 2030.

Napa LAFCO has developed its own population projections. To project future growth, LAFCO calculated the annual percentage change between 2012 and 2017 based on the DOF population estimates for these years.<sup>192</sup> Population growth was then projected in five-year increments through 2030. According to LAFCO's projections, the population of Calistoga in 2025 is anticipated to be about 5,652 and approximately 5,818 in 2030. LAFCO projects that Calistoga will grow by 0.61 percent a year through 2030.

### DISADVANTAGED UNINCORPORATED COMMUNITIES

LAFCO is required to evaluate disadvantaged unincorporated communities as part of this service review, including the location and characteristics of any such communities.

According to Napa LAFCO's definition of DUCs, there are currently no disadvantaged unincorporated communities in Napa County. Based on the adopted policy, the Commission annually reviews Census Bureau American Community Survey data to determine if local and/or statewide median household income levels have changed.<sup>193</sup>

*we are disadvantaged*

<sup>191</sup> City of Calistoga, Periodic Report on Growth Management System and Water/ Wastewater Availability, 2018.

<sup>192</sup> The change in population, especially unincorporated area, between 2017-2018 was significant due to the wildfires and loss of homes. Therefore, LAFCO used the timeframe from 2012 to 2017.

<sup>193</sup> Napa Local Agency Formation Commission, Policy on Disadvantaged Unincorporated Communities, 2018.



Water Services

Years prior to FY17 indicate capital expenditures averaging an amount similar to budgeted depreciation of \$400,000.<sup>232</sup>

The value of depreciable capital assets increased by about 1.6 percent from FY17 to FY18; capital additions more than offset reduced value due to depreciation.<sup>233</sup>

The City's proposed FY19 budget shows \$3.1 million of capital improvements, and the CIP indicates \$1.8 million and \$1.4 million of expenditures in FY20 and FY21, respectively.<sup>234</sup>

Wastewater Services

Years prior to FY17 indicate capital expenditures averaging an amount nearly equal to budgeted depreciation of \$660,000.<sup>235</sup>

The value of depreciable capital assets increased about 3.8 percent from FY17 to FY18; additions more than offset value reductions due to depreciation.<sup>236</sup>

The City's proposed FY19 budget shows \$2.4 million of capital improvements in FY19, and the CIP indicates \$1.3 million and \$250,000 of expenditures in FY20 and FY21, respectively.<sup>237</sup>

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**Financial Planning and Reporting**

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Achieving transparency and public accountability standards dictates that cities and agencies provide easily accessible and clear documentation of their activities, including financial information.

**Website** – The City's website includes descriptions of and access to current and past water and wastewater financial documents.

**Comprehensive Annual Financial Report (CAFR)** -- The City includes its water and wastewater operations in its CAFR which is published in a timely manner within six months of the end of the fiscal year. The document is a scan of a printed page and not easily searched electronically.

**Capital Improvement Program** – The City creates a ~~5~~<sup>10</sup>-Year CIP and updates the CIP for each budget year as a part of its annual budget process.

Water Services

**Cost of Service/Rate Study** – The City updated its rates based on a Rate Study and created a 5-year schedule of rate increases which took effect beginning FY18.<sup>238</sup>

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<sup>232</sup> City of Calistoga Budget Fiscal Year 2018-19 Operating & Capital, pg. 133 (water system capital improvements); see Water Operations Fund Sources and Uses, pg. 131 for depreciation budget item.

<sup>233</sup> City of Calistoga CAFR FY18, Note D Capital Assets Business-Type Activity, pg. 38. Excludes water rights.

<sup>234</sup> City of Calistoga Budget Fiscal Year 2018-19 Operating & Capital, Major Capital Projects Summary of Proposed Projects FY19-FY23, pg. 200.

<sup>235</sup> City of Calistoga Budget Fiscal Year 2018-19 Operating & Capital, pg. 145 (wastewater system capital improvements). see Wastewater Operations Fund Sources and Uses, pg. 143 for depreciation budget item.

<sup>236</sup> City of Calistoga CAFR FY18, Note D Capital Assets Business-Type Activity, pg. 38.

<sup>237</sup> City of Calistoga Budget Fiscal Year 2018-19 Operating & Capital, Major Capital Projects Summary of Proposed Projects FY19-FY23, pg. 200.

<sup>238</sup> City of Calistoga Water Rate Study Final Report, Bartle Wells Associates, 2/20/2018.

## WATER SERVICES

The City of Calistoga conducts planning for its water services in its General Plan. The Infrastructure Element that provides information and policy guidance related to community infrastructure, including water facilities and services was last updated in 2003. As of the drafting of this report, the City was in the process of updating this element. The 2003 Infrastructure Element lists the following objectives and associated policies for the City's water services:

Objective I-1.1 Plan, manage and develop the public water conveyance and distribution systems in logical, timely and appropriate manner.

- ❖ P1.1-1 The City shall base water capacity and supply plans and projections on the "below normal year" but will also look for ways to decrease the impacts of a "dry year."
- ❖ P1.1-2 The City shall not extend water infrastructure to new areas until existing infrastructure is brought to adequate standards or unless such extensions contribute to infrastructure improvements.
- ❖ P1.1-3 Potable water should generally be available to the City's residents and businesses.
- ❖ P1.1-4 Properties which utilize an on-site well where treated water is generally available may connect to the City's water system provided that there are sufficient resources. Where resources are limited, priority for treated water should be given to vacant parcels and existing developed parcels proposing an expansion of use.

Objective I-1.2 Maintain water storage, conveyance and treatment infrastructure in good condition.

Objective I-1.3 Encourage coordination between land use planning and water facilities and service.

- ❖ P1.3-1 The approval of new development shall be conditional on the availability of sufficient water for the project.
- ❖ P1.3-2 The City shall ensure a fair and equitable distribution of costs for water service expansion.
- ❖ P1.3-3 Structures with plumbing that are located within city limits shall connect to the water system, unless topography, distance from the public water system, or other factors indicate a need for an exemption.
- ❖ P1.3-4 Extension of water service beyond the current service area shall be prohibited.
- ❖ P1.3-5 Needed water supply and pressure for fire suppression shall be maintained.
- ❖ P1.3-6 Users of the cold-water aquifer shall meet all City and governmental requirements.
- ❖ P1.3-7 If and when 95 percent of the capacity of existing water storage, supply and/or distribution systems has been reached, further development in Calistoga will be prohibited until the City has provided sufficient new capacity to accommodate new development.



properties were connected before 2001 and therefore did not require LAFCO prior approval. The City has since adopted code that prohibits new connections to the water system by properties outside of the city limits after 2005. Water customers residing outside of the city boundaries pay a 115 percent surcharge on the volumetric rate which recovers costs associated with operating and maintaining the infrastructure required to serve these customers.<sup>240</sup>

With regard to recycled water services, the City serves ~~17~~<sup>15</sup> customers, ~~one of which (Frediani Ranch) extends outside of the city limits.~~ Recycled water services are exempt from requiring LAFCO approval prior to extension of services beyond an agency's boundaries under Government Code §56133.

Occasionally, residents from outside of the city boundaries acquire recycled water in trucks from a station at the City's Wastewater Treatment Plant (WTP). There is no limit as to the quantity of recycled water that can be ~~purchased~~<sup>its free</sup> and trucked as long as the purchaser obtains a prior permit through the City's WWTP.<sup>241</sup>

Potable and recycle water out-of-area service connections are shown in Figure 5-7.

#### Services to Other Agencies

The City does not provide any water-related services to other agencies.

#### Contracts for Services

Calistoga maintains an agreement with City of Napa, wherein the City of Napa treats the State Water Project (SWP) water at the Jamison Canyon WTP or the Hennessey WTP to drinking water standards and conveys the water up the Napa Valley to the location of Calistoga's wholesale water meter. The SWP water supplied is purchased and treated by the City of Napa prior to delivery to Calistoga at an annual cost to Calistoga of approximately \$1 million. The agreement does not have an expiration date.

Calistoga contracts with the independent Alpha Analytical Laboratory and Caltest Analytical Laboratory for water testing and State Water Resources Control Board (SWRCB) reporting.

#### Overlapping Service Providers

There are no overlapping water service providers within the City of Calistoga.

#### Collaboration

The City participates in the Bay Area Integrated Regional Water Management Plan (IRWMP). The City also has a collaborative relationship with the City of Napa, which transports and treats a portion of Calistoga's water supply.

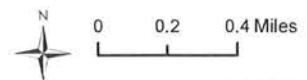
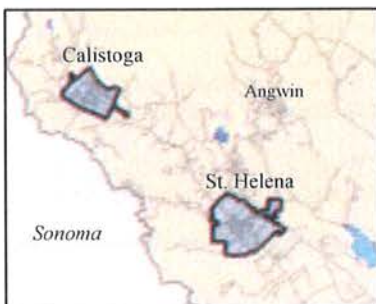
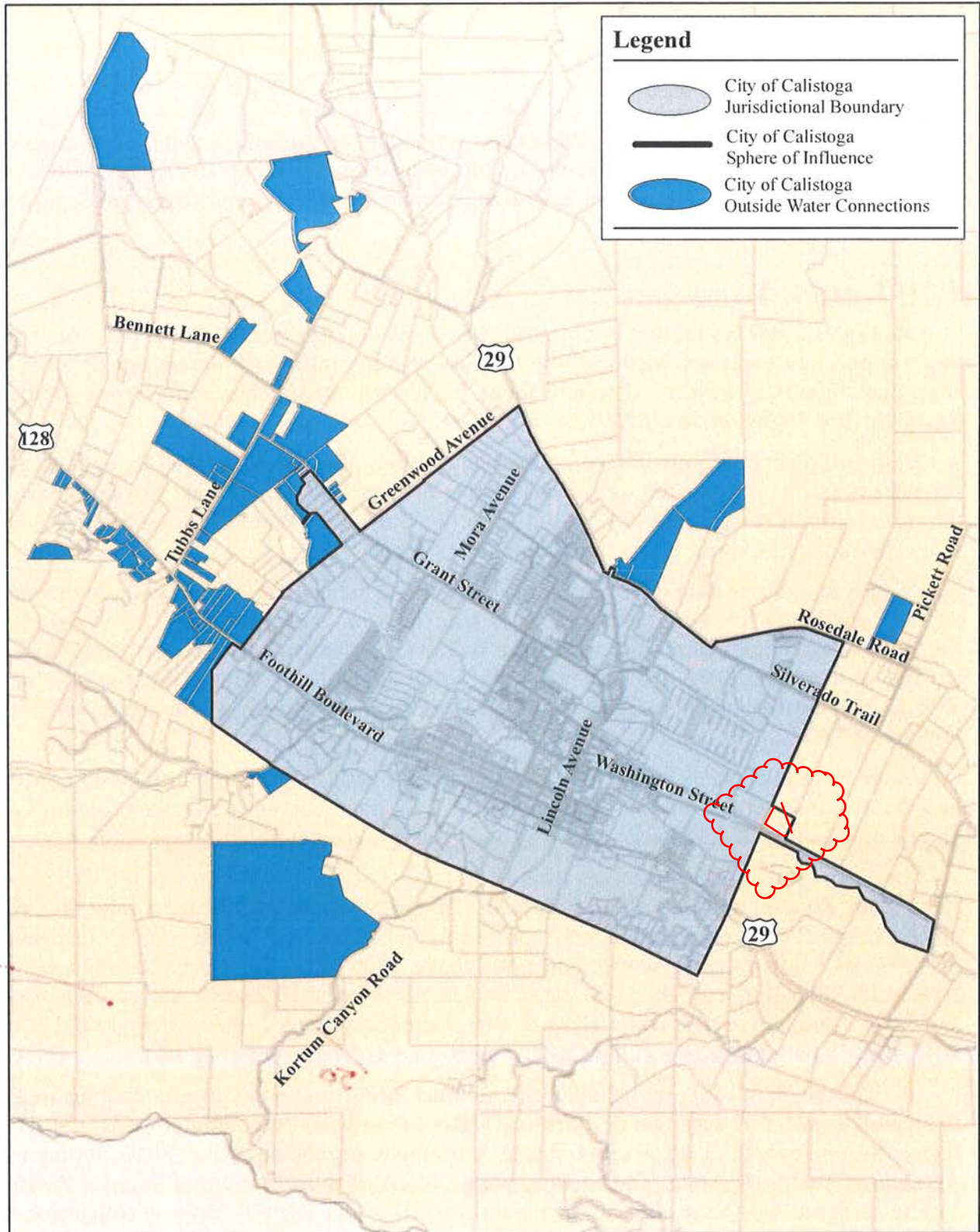
The City additionally is participating in a Memorandum of Understanding (MOU) among Napa County municipal water purveyors to develop a drought contingency plan. As part of this collaboration, participating agencies are evaluating opportunities for supplemental water supply and constraints of their current utility systems.<sup>242</sup>

<sup>240</sup> City of Calistoga, Water Rate Study, 2018, p. 11.

<sup>241</sup> Interview with the City of Calistoga, Michael Kirn and Derek Rayner, 10/7/19.

<sup>242</sup> Interview with the City of Calistoga, Michael Kirn and Derek Rayner, 10/7/19.

Figure 5-7



December 30, 2019  
Prepared by LAFCO Staff



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## Staffing

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The City's Department of Public Works is responsible for operations and maintenance of Calistoga's water treatment and distribution infrastructure. The Water Distribution Division responds to water leaks, after-hours service calls, and reads water meters every other month for billing purposes.

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## Water Supply

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Calistoga's water is supplied by two sources—Kimball Reservoir (about 40 percent of the City's supply) and water transported by the City of Napa (about 60 percent of Calistoga's supply).<sup>243</sup> In 2018, the City supplied about 25 percent of potable water from Kimball Reservoir and 75 percent from SWP.<sup>244</sup>

Water supply from Kimball Reservoir was negatively affected when the City of Calistoga started bypassing more water around the dam to protect fish populations. The supply from the reservoir was reduced by 41 afy from 328 afy to 287 afy.<sup>245</sup> Water lost due to the bypass was replaced by the water delivered by the City of Napa.

Calistoga contracts with the City of Napa to treat and deliver its SWP entitlement through an interconnection between the two agencies' transmission lines. SWP water delivered from the City of Napa comes from the Sacramento Delta via the North Bay Aqueduct (NBA) and is treated and wheeled by the City of Napa from its Jamison Water Treatment Plant; alternatively, water may also be provided by the City of Napa from its Hennessey WTP or Milliken WTP.<sup>246</sup>

Water from the SWP is secured through a contract with the Napa County Flood Control and Water Conservation District (Agreement No. 1926) and currently allocates Calistoga an annual entitlement of 1,925 acre-feet. The agreement was extended through 2085.<sup>247</sup>

The North Bay Aqueduct sources include 500 afy of original SWP entitlement, 925 afy of Kern County water, and 500 afy of American Canyon-purchased water for a total of 1,925 afy. A firm yield of 52 percent delivery reportedly can be expected, which equals a firm yield of 1,001 afy.<sup>248</sup> However, recent year allocations have fallen below the firm yield. The average NBA water allocation from the State Water Project for the past 10 years has been 51 percent (982 afy). The average NBA water allocation from the State Water Project between 2013 and 2017 was 48 percent (924 afy). The 2018 allocation was 40 percent (770 afy).<sup>249</sup>

In 2013 the NCFCWCD, on behalf of the member cities, succeeded in establishing access to an additional 5,659 acre-feet of "back-up" water per year, up to a cumulative 21,900 acre-feet of water, based on an Area of Origin Settlement Agreement (the "2013 Settlement Agreement") with the State. The back-up water, referred to as "Advanced Table A Water," can be accessed only after all other available carryover and Table A water is consumed. In

<sup>243</sup> City of Calistoga, Response to Grand Jury Report on Napa County Water Quality: It's a Matter of Taste, 2019.

<sup>244</sup> City of Calistoga, Large Water System Annual Report to the Drinking Water Program, 2018.

<sup>245</sup> City of Calistoga, Periodic Report on Growth Management System and Water/ Wastewater Availability, 2018.

<sup>246</sup> City of Calistoga, Periodic Report on Growth Management System and Water/ Wastewater Availability, 2018.

<sup>247</sup> City of Calistoga Resolution No. 2014-094.

<sup>248</sup> City of Calistoga, Periodic Report on Growth Management System and Water/ Wastewater Availability, 2018.

<sup>249</sup> City of Calistoga, Periodic Report on Growth Management System and Water/ Wastewater Availability, 2018.

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Recycled water

The City of Calistoga’s Dunaweal Wastewater Treatment Plant (WWTP) produces recycled water. After tertiary treatment, effluent may be discharged to the Napa River from November 1<sup>st</sup> through June 15<sup>th</sup> or during the remainder of the year, distributed for recycled use and spray irrigation, or stored for future use in effluent storage ponds.<sup>255</sup>

The City distributes its recycled water from the WWTP to 17<sup>15</sup> customers through recycled water infrastructure described later in the *Water Infrastructure and Facilities* section. The City’s recycled water is also trucked to customers outside of the City’s boundaries. Individual owners of tanker trucks, as well as truck operators, must have a permit from the City to fill up with recycled water at the WWTP station.

Typically, upwards of 100 million gallons (around 300 acre-feet) of reclaimed water are distributed for irrigation each year, including spray field irrigation.<sup>257</sup> In 2018, the City produced 541.03 af of recycled water.<sup>258</sup>

Emergency Preparedness

During the 2012-2015 California drought years, the City maintained solid supplies including over two years of future storage throughout the period. During 2013-14, when the SWP allocation was at an unprecedented low of five percent, the City had 980 af of SWP supplies (including carryover water) available, along with local supplies of 328 af in the Kimball Reservoir. Total supplies were 1,330 af, and customers consumed 640 af during that same period. In addition, if all SWP supplies were consumed (including carryover water), the City could call on Advanced Table A supplies in accordance with the 2013 Settlement Agreement. The City maintains about two years of water storage between SWP entitlements and local storage; this has been the case throughout the recent four-year drought.<sup>259</sup>

Depending on availability, Calistoga is able to purchase additional water from the City of Napa in emergencies.

During power outages, all systems which move water into Calistoga are shut down, meaning the City must rely on local water storage until power can be restored. The City’s three water storage facilities provide almost 4.5 days of water based on average daily demand, which does not account for conservation efforts.

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Water Demand

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As of 2019, the City had 1,594 water service connections, including 78 out-of-area service connections.<sup>260</sup> There were 1,194 single-family residential, 133 multi-family residential, 237 commercial, five industrial, and 25 landscape irrigation.

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<sup>255</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/dunaweal-wastewater-treatment-plant>

<sup>256</sup> City of Calistoga, Large Water System Annual Report to the Drinking Water Program, 2018.

<sup>257</sup> City of Calistoga, *Budget*, FY 19-20.

<sup>258</sup> City of Calistoga, Large Water System Annual Report to the Drinking Water Program, 2018.

<sup>259</sup> City of Calistoga, 2018 Water and Wastewater Certificates of Participation Statement, 2018, p. 25.

<sup>260</sup> City of Calistoga, *Budget*, FY 2019-2020.

The Town's projected demand for potable and recycled water is depicted in Figure 5-12.

Figure 5-12: Projected Demand for Potable and Recycled Water (acre-feet)

Projected Demand for Potable and Recycled Water					
Use Type	2020	2025	2030	2035	2040
Single-Family Residential	294	303	305	307	311
Multi-Family Residential	181	188	188	190	190
Commercial/Institutional	202	207	209	212	215
Industrial	8	7	8	8	8
Landscape Irrigation	15	15	15	15	16
<b>TOTAL POTABLE</b>	<b>700</b>	<b>720</b>	<b>725</b>	<b>732</b>	<b>740</b>
<b>Recycled Water</b>	<b>243</b>	<b>285</b>	<b>326</b>	<b>326</b>	<b>326</b>

Source: As reported by the City of Calistoga.

As was mentioned before, the City provides recycled water services to ~~17~~ <sup>15</sup> connections, including two single-family residential, two multi-family residential, ~~six~~ <sup>seven</sup> commercial, one industrial, and ~~six~~ <sup>three</sup> landscape irrigation.<sup>264</sup>

The recycled water customers currently include Little League Field, La Pradera Apartments, Stevenson Manor Inn, Calistoga Mineral Water, Calistoga Grove Inn, Community ~~Presbyterian Church~~, Calistoga Elementary School, Logvy Community Park, Napa County Fairgrounds, Indian Springs Resort, Solage, two residences, Boys and Girls Club, and Calistoga High School. Additionally, as mentioned, the City allows permitted haulers to pump and truck recycled water for construction and irrigation. In 2018, the total volume of recycled water pumped and trucked was ~~23.4~~ <sup>7.6</sup> af. During the same year, the total volume of recycled water produced was 315 af.

### Water Infrastructure and Facilities

The City of Calistoga's water system has grown from a small municipal reservoir in Feige Canyon in the first half of the century to include a municipal reservoir in Kimball Canyon, drinking water production from wells in Feige Canyon and the construction of the 12.3-mile North Bay Aqueduct (NBA) connection to the City of Napa's water system. The latter development, completed in 1984, represents the most recent major water facilities upgrade in the City. Since the Feige wells are currently inactive, all public water in Calistoga is currently provided by the Kimball Reservoir and NBA sources.<sup>265</sup>

Key components of the water system include the Kimball Reservoir and Water Treatment Plant, storage tanks with a capacity of 2.5 million gallons, and ~~30~~ <sup>25</sup> miles of distribution and ~~20~~ <sup>25</sup> miles of transmission mains. Twenty percent of the City's water system is over 50 years old and in five years the percentage will increase to almost ~~50~~ <sup>25</sup>.<sup>266</sup>

<sup>264</sup> City of Calistoga, Large Water System Annual Report to the Drinking Water Program, 2018.

<sup>265</sup> City of Calistoga, *General Plan, Infrastructure Element*, 2003, p. I-1.

<sup>266</sup> City of Calistoga, *Water Rate Study*, 2018, p. 6.

Also: New 1.5MG water storage tank @ Mt. Washington 2013





### Water Reservoir

Kimball Reservoir has a surface drainage area of approximately 3.4 square miles. The City owns a portion of the surrounding watershed with the remainder owned by the State Parks Department and a private landowner.<sup>267</sup>

Kimball Canyon Dam was constructed in 1939 by the City and was subsequently raised in 1948 to increase the storage capacity of the reservoir. The dam is an earthfill structure approximately 300 feet long, 200 feet wide at the base, and about 75 feet high. The spillway crest elevation is 575 feet above mean sea level. The original storage capacity of the reservoir measured in a 1954 survey at the spillway crest was approximately 345 af and 409 af at the top of the flashboards (elevation 579 feet). The accumulation of sediment in the reservoir has since reduced the storage capacity to 312 af at the flashboard elevation according to a ~~1991 reservoir sounding study~~. Much of the sediment accumulation has been attributed to wet weather runoff that followed a 1985 fire which burned a large portion of the surrounding watershed.<sup>268</sup>

The dam (National ID No. CA00310) is under the jurisdiction of the State of California. Annual inspections of the reservoir are conducted by the State Division of Dam Safety to ensure the structure is satisfactory for continued use.<sup>269</sup> The dam is certified and considered to be in satisfactory condition by the State. The dam is considered a high-risk dam, as the downstream hazard is categorized as high, and is continuously being watched for leakage.

Between 2017 and 2019, the City made some improvements with Measure A funds to the reservoir to address concerns of aging infrastructure. However, the reservoir still requires the new intake tower and a drain valve. The City is seeking additional grant funds to complete the construction. Calistoga anticipates finishing the work by summer/fall of 2021. After these planned improvements the reservoir will be in good condition, with the exception of sediment buildup and the anticipated water loss of two af annually.

### Water Treatment Plant

Kimball Surface Water Treatment Plant (WTP) features the standard operating design with a maximum capacity of 350,000 gallons per day (gpd). Average water generation at the plant is 269,000 gpd,<sup>270</sup> which indicates sufficient capacity to accommodate current demand.

The treatment processes at the WTP include chemical coagulation, flocculation and sedimentation in a circular clarifier, chlorination, filtration and storage in a 100,000-gallon clearwell.<sup>271</sup> Three finished water pumps supply water from the clearwell to the distribution system. These pumps are responsible for maintaining the level in the Feige one-mg storage tank and the distribution system pressure.<sup>272</sup>

<sup>267</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/kimball-dam-water-reservoir>

<sup>268</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/kimball-dam-water-reservoir>

<sup>269</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/kimball-dam-water-reservoir>

<sup>270</sup> Napa County Grand Jury, Napa County Water Quality: It's a Matter of Taste, June 14, 2019.

<sup>271</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/kimball-surface-water-treatment-plant>

<sup>272</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/kimball-surface-water-treatment-plant>

Measure A funds also funded improvements at the WTP in 2009. Further upgrades totaling \$1 million are planned for FYs 23-24 and possibly another \$6 million through FY 27-28. The plant is generally considered to be in good condition.

Water Distribution

The water distribution system consists of 30 miles of distribution and 20 miles of transmission mains, 404 valves, and 202 fire hydrants. The City owns and maintains 5.5 miles of recycled water distribution pipeline with two booster stations.<sup>273</sup>

flushing

Unaccounted for water loss, specifically the amount of water lost due to system breaks and leaks, as well as illegal connections, is a measure of the water system's integrity. Water losses can include "real losses", which are physical losses from the water distribution system and the supplier's storage facilities as well as "apparent losses", which represent losses due to metering inaccuracies, data handling errors and/or unauthorized consumption. The City-reported total losses in 2018 of 108 af or 15 percent of the water produced in that year.

Breaks and leaks in the mains and service connections account for some of the loss experienced in the system. In 2018, Calistoga distribution system experienced 13 service connection breaks or leaks and six main breaks or leaks. The City averaged about 3.5 water main breaks per year between 2015 and 2018, which averages to about seven breaks per 100 miles of main per year. This is significantly lower than the national average of between 21 and 27 breaks per 100 miles of pipe per year.<sup>274</sup>

The City addresses water loss through metering and monitoring pressures in the system. Any water leaks or breaks are repaired as quickly as possible to reduce these losses. Additionally, included in the losses are hydrant flush water that the City completes annually for about 200 fire hydrants to maintain good drinking water quality in the distribution system.

Storage Facilities

There is a total of three storage tanks with a combined storage capacity of 2.75 million gallons. The storage tanks are described in detail in Figure 5-13.

**Figure 5-13: City of Calistoga Storage Tanks**

Storage	Capacity	Material	Year Installed	Condition
Fiege Tank	1 mg	Glass fused steel	2018	Excellent
High Street Tank	20,000 g	Concrete	1993	Fair
Mt. Washington	1.5 mg	Concrete	2013 2017	Excellent

Source: Annual Reports to the Drinking Water Program for 2014, 2015, 2016, 2017, and 2018.

The new Feige Tank with one-mg capacity has been operational since December 2018. The tank sits on a large concrete base and is weighted with seismic anchors. The anchors keep the tank from overturning during a seismic episode. The tank has sufficient capacity to accommodate current and projected demand.

The new tank's technology includes a computer system that monitors the water level inside the tank, how much water is going in or out, and how much chlorine is in the water. It

<sup>273</sup> City of Calistoga, *Water Rate Study*, 2018, p. 8.

<sup>274</sup> WaterRF, *Knowledge Portals*, 2017.

## WASTEWATER SERVICES

The City of Calistoga conducts planning for its wastewater services in its General Plan. The Infrastructure Element that provides information and policy guidance related to community infrastructure, including wastewater facilities and services was last updated in ~~2003~~. As of the drafting of this report, the City was in the process of updating the Infrastructure Element. The ~~2003~~ Infrastructure Element lists the following objectives and associated policies for the City's wastewater services:

Objective I-2.1 Plan, manage and develop wastewater conveyance, treatment and disposal systems in a logical, timely and appropriate manner.

- ❖ P1.2-1 The City shall not extend wastewater infrastructure to new areas until existing wastewater infrastructure is brought to adequate standards or unless such extensions contribute to city-wide wastewater infrastructure improvements or correct septic problems.
- ❖ P1.2-2 Municipal sewer treatment should generally be available to the City's residents and businesses.

Objective I-2.2 Maintain wastewater infrastructure in good condition.

Objective I-2.3 Promote coordination between land use planning and wastewater treatment and conveyance.

- ❖ P2.3-1 Extension of sewer service beyond the current service area shall be prohibited.
- ❖ P2.3-2 The approval of new development shall be conditioned on the availability of sufficient capacity in the wastewater treatment system to serve the project.
- ❖ P2.3-3 The City shall ensure a fair and equitable distribution of costs for sewer service expansion.
- ❖ P2.3-4 Structures with plumbing that are located within city limits shall connect to the public wastewater collection system, unless topography, distance from the public water system or other factors indicate a need for an exemption.
- ❖ P2.3-5 If and when wastewater flows to the Wastewater Treatment Plant reach 95 percent of the plant's design capacity of 0.84 MGD, development in Calistoga will be halted until the City provides additional treatment capacity sufficient to accommodate new development.

Objective I-2.4 Enforce City wastewater regulations.

- ❖ P2.4-1 Restaurants and others that discharge grease into the wastewater treatment system shall be required to reduce impacts through individual or collective pretreatment facilities that retain wastewater long enough to permit solids to settle and oil and grease to separate.
- ❖ P2.4-2 Regulations related to the discharge of mud and silt into the wastewater treatment system shall be enforced.

Objective I-2.5 Promote innovation in the treatment of wastewater.



Additionally, the City plans for its wastewater services in the Capital Improvement Program contained in annual budgets. Calistoga also adopts a Sewer System Management Plan (SSMP), which was last updated in 2018.

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## Type and Extent of Services

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### Services Provided

The City of Calistoga provides wastewater collection and treatment services within its boundary area. Similar to the water system, most of the wastewater customers are residential.

### Service Area

All sewer connections are located within the city boundaries, with no out-of-agency sewer services provided.

### Services to Other Agencies

The City does not provide wastewater related services to any other agencies.

### Contracts for Services

Calistoga does not receive contract services related to wastewater from other agencies.

### Overlapping Service Providers

No other agencies provide services that overlap with the City of Calistoga. However, approximately ~~half~~ <sup>25%</sup> of the properties within the city limits rely on private septic systems.

Private septic systems have the potential to generate problems due to failure and discharge of contaminants into the environment. The City's Municipal Code requires all structures with plumbing which are on properties within two hundred feet of a wastewater sewer to connect to the public system. ~~This measure has not always been enforced, however.~~ <sup>280</sup> ~~it is now~~

### Collaboration

At present, there is not a collaborative relationship amongst the Napa agencies regarding wastewater services, as the service areas are distant and distinct from one another.

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## Staffing

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Wastewater services in Calistoga are provided by the Public Works Department via the Sewer Collection Division and the Wastewater Treatment Division.<sup>281</sup>

The Public Works Department goals include the proper management, operation, and maintenance of all parts of the wastewater collection system, maintaining adequate capacity to convey peak flows, minimizing the frequency and volume of Sanitary Sewer Overflows (SSOs), and mitigating the impact of SSOs. The Sewer Collection Division maintains four sewer lift stations in the City and all of the City's existing sewer mains and recycled water

<sup>280</sup> City of Calistoga, General Plan Infrastructure Element, 2003, p. 1-9.

<sup>281</sup> City of Calistoga, Sewer System Management Plan, 2018, p. 1-1.



during wet weather flow events.<sup>285</sup> Although the treatment plant is capable of treating a peak wet weather flow of four mgd, the headworks structure is designed for flows up to seven mgd.<sup>286</sup>

Figure 5-15 depicts average dry weather flows at the WWTP over the period of 10 years. It appears that the plant has sufficient capacity to accommodate current demand.

The City estimates that based on the permitted treatment plant capacity of 0.84 mgd and current average dry weather flow of about 0.5 mgd along with other allocations and obligations (including current development agreements and building permits), the excess available treatment capacity available for future development amounts to about 0.1 mgd or 123.2 afy. It is estimated that 71 percent of this available capacity will be allocated by 2034.<sup>287</sup>

**Figure 5-15: Wastewater Flows at the WWTP**

Wastewater Treatment Plant Flows										
User Type	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Average Dry Weather Flow (Gallons)	490,000	490,000	490,000	500,000	500,000	500,000	500,000	396,000	502,000	440,000
Maximum Daily Permit Dry Weather Flow (Gallons)	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000	840,000

Source: City of Calistoga, Comprehensive Annual Financial Report, 2018.

The WWTP was last upgraded in 2002 converting the plant to tertiary treatment capability to provide Title 22 recycled water.<sup>288</sup> The treatment processes consists of primary treatment by coarse bar screening at the headworks structure, secondary treatment by aeration and clarification, tertiary treatment by coagulation, filtration and disinfection. After tertiary treatment, effluent may be discharged to the Napa River from ~~October~~ <sup>June</sup> 1st through ~~May~~ <sup>November</sup> 15th.<sup>289</sup> During the remainder of the year, effluent is distributed for recycled water use or stored for future use in effluent storage ponds.<sup>290</sup>

Collection System

The City's wastewater collection system includes 18 miles of sewer collection piping, 330 manholes, four pump stations, and 50 MG of storage ponds.<sup>321</sup>

The wastewater collection system includes all residential and commercial customers in the City limits. All sewage from the City drains by gravity either to one of the four pump stations or to the WWTP directly. The system also includes recycled water distribution infrastructure described in the *Water Infrastructure and Facilities* section.<sup>291</sup>

To investigate the extent of the infiltration and inflow (I/I) issues in its collection system, the City performed a smoke test, which uncovered a need for repairs to reduce the I/I. The

<sup>285</sup> City of Calistoga, Sewer System Management Plan, 2018, p. i.

<sup>286</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/dunaweal-wastewater-treatment-plant>

<sup>287</sup> City of Calistoga, Periodic Report on Growth Management System and Water/ Wastewater Availability, 2018.

<sup>288</sup> City of Calistoga, Water Rate Study, 2018, p. 8.

<sup>289</sup> NPDES Permit No. CA0037966, Order 00-1312.

<sup>290</sup> <http://www.ci.calistoga.ca.us/city-hall/departments-services/public-works-department/water-wastewater-treatment/dunaweal-wastewater-treatment-plant>

<sup>291</sup> City of Calistoga, Water Rate Study, 2018, p. 8.

## GOVERNANCE STRUCTURE OPTIONS

Over the course of this review, some governance structure options were identified with respect to the City of Calistoga and its water and wastewater services, including possible service structure modifications and reorganizations with other agencies. The feasibility of each of these options is generally assessed in this report; however, more in-depth review would be required to refine specifics of process and structure should the affected agencies or LAFCO choose to move forward.

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### Countywide Water Agency

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There are several challenges to water and wastewater services around the County that could be potentially addressed by alternative governance structures:

- ❖ Some County water resources not being used to the fullest extent possible,
- ❖ A need for greater oversight of all jurisdictions providing water services in the County,
- ❖ A need for support buying on the spot market,
- ❖ Certain redundancies with several smaller systems around the County, which could be eliminated,
- ❖ A need for occasional technical expertise and support, and
- ❖ A lack of economies of scale in the smaller water and wastewater systems.

Given these challenges, there may be a need for a single agency to conduct water supply management on a regional or countywide level, such as a county water agency and/or an agency to provide management and operational support to the smaller utility systems that could benefit from the consolidation of certain services (i.e., lab testing) or from fully transitioning to operations by a regional agency, such as a county water district or a sanitation district. As these options may affect all of the water and wastewater service providers reviewed here, these governance structure options are discussed and assessed in further detail in the *Overview* chapter (Chapter 3) of this report.

While the City of Calistoga has indicated that these options might not be preferred for its municipality, it is interested in continued regional collaboration such as the existing MOU for the Napa Valley Drought Contingency Plan.

## RECOMMENDATIONS

During the process of this review, the following recommendations are made to the City of Calistoga regarding its water and wastewater service delivery.

- 1) The City of Calistoga relies on its General Plan and Capital Improvement Plan as planning documents for its water system, neither of which give a comprehensive assessment of the City's water system and operations. It is recommended that the City develop a water master plan or some other comprehensive water planning document.
- 2) ~~Occasionally, residents from outside of the city boundaries acquire recycled water in trucks from a station at Calistoga's Wastewater Treatment Plant. There is no limit as~~

to the quantity of recycled water that can be ~~purchased and~~ trucked as long as the purchaser obtains a prior permit through the City's WWTP. In order to ensure that trucked water does not promote development and growth in unincorporated areas where water supply is not sustainable and which may adversely affect agricultural uses, it is recommended that approved uses for trucking of water be defined in the City's municipal code.

*→ This statement #2 really isn't true*

*→ 99% for construction/dust control*

*1% or less for irrigation*  
*lots of boron so not very useful for ag use ...*

## CITY OF CALISTOGA DETERMINATIONS

### Growth and Population Projections

- ❖ The City of Calistoga's population, as of 2019, was approximately 5,453.
- ❖ Calistoga's population increased by about six percent in the last 10 years.
- ❖ The City manages its growth to maintain its small-town character through the Resource Management System and the Growth Management System.
- ❖ Napa County LAFCO anticipates that the City will grow by about 0.61 percent a year through 2030 with an anticipated population of 5,818 in 2030.

### The Location and Characteristics of Disadvantaged Unincorporated Communities Within or Contiguous to the Agency's SOI

- ❖ According to Napa LAFCO's definition of disadvantaged unincorporated communities (DUCs), there are currently no DUCs in Napa County.

### Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- ❖ Although water supply from Kimball Reservoir declined, Calistoga was able to replace the lost supply with the water delivered by the City of Napa. Depending on the availability, Calistoga is able to purchase additional water from the City of Napa in emergencies. Water supply is considered to be adequate to meet Calistoga's current needs.
- ❖ Based on the City's existing local reservoir and the State Water project supply, the City does not expect to experience any reductions in water supply during minor drought conditions and expects to experience only minor reductions in water supply during severe droughts.
- ❖ Calistoga currently has excess water supply available for future development. Estimates show that by 2034, the City will be using between 26 and 54 percent of this excess availability. Due to the Growth Management System and the Resource Management System, the City is projected to grow at a fairly predictable pace, and the current available water supply will be able to accommodate future needs, at least through 2034.
- ❖ The City currently reuses about 60<sup>15</sup> percent of its wastewater flows. Recycled water from the WWTP is distributed to 17 customers through recycled water infrastructure, ~~and trucked to customers outside of the City's boundaries.~~
- ❖ The City appropriately plans for its infrastructure needs in the Capital Improvement Plan. The most significant long-term planned infrastructure project is the upgrade of the Kimball Water Treatment Plant. No unplanned for water infrastructure needs were identified.

- ❖ Calistoga has adequate capacity to accommodate existing and projected demand at its wastewater treatment plant. It is estimated that 71 percent of the plant's excess capacity will be allocated by 2034.
- ❖ The level of wastewater services offered by the City were found to be marginally adequate based on the integrity of the wastewater collection system and regulatory compliance.
- ❖ The City's Wastewater Treatment Plant encountered multiple violations and enforcement actions in recent years, most of which were related to dichlorobromomethane limits. The 2016 Cease and Desist order is also related to the dichlorobromomethane levels. *→ which is of 2017 they have fixed & have not kind of violation*
- ❖ The City identifies the current Cease and Desist Order (CDO) and strict Regional Water Quality Control Board (RWQCB) Permit Conditions imposed with the 2016 renewal of the City's permit to operate a WWTP as the basis of its main infrastructure needs and costs related to wastewater services.
- ❖ The City's sanitary sewer overflow rate is lower on average than of other wastewater agencies in California. Although there is still a lot of old infrastructure that causes high infiltration and inflow, Calistoga continues to repair and replace old pipelines and other infrastructure thus further reducing I/I and overflows.

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### Financial Ability of Agencies to Provide Services

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- ❖ The City of Calistoga has the ability to continue providing water and wastewater services. Water and wastewater revenues were insufficient to cover operations and debt service in FY18, however FY19 was anticipated to end with a slight surplus after debt as rates were updated and increased in FY18 to address shortfalls.
- ❖ Utilities met and exceeded their reserve goal of 20 percent reserves. Wastewater operations liquidity exceeded a minimum 1.0 ratio of current assets to current liabilities, and its net position was positive.
- ❖ Current water operations assets, however, were exceeded by current liabilities, reducing water operations liquidity to less than a 1.0 ratio; the water operation's net position was negative at the end of FY18, reflecting liabilities exceeding net capital assets.
- ❖ Combined utility rates approach a maximum of 5 percent of median household incomes and may exceed the measure with future rate increases, depending on growth in household incomes.
- ❖ During FY19 the City's General Fund transferred \$250,000 to assure that debt service coverage requirements were met; a portion of that transfer has since been repaid.
- ❖ Investments in utility capital assets equaled or exceeded annual depreciation, indicating that the City is generally keeping pace with depreciation of facilities.
- ❖ The City reviews and updates its rates regularly based on cost of service studies and CIP forecasts.

0

boundary have been prohibited by the municipal code since 2005, which aligns with State legislation and LAFCO policy.

- ❖ The City provides recycled water services to ~~17~~<sup>15</sup> customers, one of which (Frediani Ranch) ~~extends outside of the city limits~~. Recycled water services are exempt from requiring LAFCO approval prior to extension of services beyond an agency's boundaries under Government Code §56133.
- ❖ The City makes its recycled water available for trucking through a filling station at the City's Wastewater Treatment Plant. There is no limit as to the quantity of recycled water that can ~~be purchased and trucked~~ as long as the purchaser obtains a prior permit through the City's WWTP. In order to ensure that trucked water does not promote development and growth in unincorporated areas where water supply is not sustainable and which may adversely affect agricultural uses, it is recommended that approved uses for trucking of water be defined in the City's municipal code.


*Not applicable  
See pp. 139 (99% is construction  
dust control purpose  
1% or less irrigation  
because so far in it)*



## Utilities Department

**M E M O**

**TO:** Chair Leary and Commissioners of LAFCO of Napa County

**FROM:** Phil Brun, Utilities Director 

**DATE:** June 26, 2020

**SUBJECT:** Comments on Draft Countywide Water/Wastewater Municipal Service Review

City of Napa Water staff have been intimately involved with providing information and participating in multiple stakeholder meetings as the draft report was being prepared. In addition, we provided comments on the administrative draft and our comments are generally reflected in this draft report for public review. I commend the consultant and your Executive Officer in their preparation of a comprehensive report.

The Utilities Department has further reviewed the draft report at the staff level and offers the following comments and questions for Commission consideration:

**1. Congress Valley Water District**

- Page 176 – The second paragraph under the heading “Expansion of the City’s SOI and Annexation of CVWD Territory” makes the case that an amendment to the City’s SOI is an ideal service structure based on LAFCO’s purpose. Despite this, the next paragraph quickly concludes that an SOI amendment is not feasible because there is no potential for a future boundary change due to the City’s RUL. However, there is a potential for future change to the City’s RUL by voter approval, as occurred during the November 2014 election. **Given that an SOI amendment aligns with LAFCO’s purpose to encourage logical boundaries and promote efficient delivery of services, further discussion and analysis of LAFCO policy and options associated with an SOI amendment is warranted in this section rather than concluding that an SOI amendment is not feasible.**
- Page 178 – Under the heading “Dissolution and Continued Services by the City of Napa”, the use of Government Code 56133.5 is suggested. However, this legislation expires on January 1, 2021 and it is my understanding from an email from Executive Officer Freeman in April that Senate Bill 799 to extend the expiration deadline has been taken of the legislative calendar this year. Given



that the current contract for water service to CVWD does not expire until 2022, there is the real possibility that 56133.5 will expire before action is taken. **Therefore, this section should be modified to account for the possibility that Government Code 56133.5 expires on January 1, 2021 and identify options under Government Code 56133.**

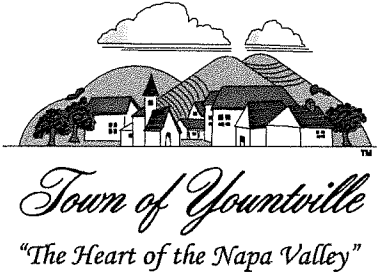
## 2. Trucked Water

- The following comment regarding policy for trucked water in the unincorporated area was provided as part of the review of the administrative draft:

*Given that the concern is “potential to promote development and growth in unincorporated areas where water supply is not sustainable, and which may adversely affect agriculture” it seems that that the County should be setting policy for approved uses and locations rather than the water/recycled water supplier. Trucked water could come from anywhere, not just suppliers in the county. The supplier is not necessarily in a position to control where their product goes and how it is used, nor do they have any land use authority in the unincorporated areas. However, the County can set land use rules and administrative policies to manage the use of trucked water in the unincorporated areas.*

- In response to this comment, a statement that the “County should establish policy for approved uses and locations of transported water to manage the use of trucked water in unincorporated areas” was added to page 44. However, on page 183 the recommendation remains that the City define approved uses and locations for trucking of water to ensure that trucked water does not promote development and growth in unincorporated areas where water supply is not sustainable. The County is the responsible agency to manage growth and development in the unincorporated areas and should be defining approved uses and locations for trucking of water, not the City. **The recommendation should be modified to recommend that the City comply with future County policy for approved uses and locations for trucked water in unincorporated areas.**

Thank you for your consideration of the comments provided herein. City staff look forward to continued collaboration on this study.



July 10, 2020

Napa County Local Agency Formation Commission  
Brendon Freeman, Executive Officer  
1030 Seminary Street, Suite B  
Napa, CA 94599

Via E-mail to [bfreeman@napa.lafco.ca.gov](mailto:bfreeman@napa.lafco.ca.gov)  
[jennifer@pcateam.com](mailto:jennifer@pcateam.com)

RE: Town of Yountville response to LAFCO MSR for Water and Wastewater Services.

Dear Chair Leary, members of the Commission, and Mr. Freeman,

This letter is written in support of the recommendations and analysis included in the Napa Countywide Water and Wastewater Study MSR with focus on those that pertain to the Town of Yountville's Water and Wastewater Services. The Town of Yountville Town Council met on July 7, 2020 and received a presentation on and discussed the findings and recommendations which are outlined in the report. The Yountville Town Council was unanimous in their support of the recommendations as presented in Chapter 8 of the study.

Specifically, the Council is supportive of continuing the work and conversation related to the Annexation of Domaine Chandon parcel in the Town's Sphere of Influence (SOI), and the discussion to encourage, and evaluate the potential creation and implementation of a Countywide Water District or other regional approach.

While the Town Council understands this is the beginning of the conversation, they are keenly interested in continuing the momentum this study (and the previous SOI) have created. In that context they as a group want to make sure this momentum is not curtailed. The Town Council expressed interest in appointing representatives to be part of a regional discussion. The urgency to continue the conversation, and studies and the need to provide the appropriate resources and time given the complexity of the issues.

On behalf of the Town Council, I respectfully submit the Town's response for the July 13, 2020 public virtual workshop.

  
Steven R. Rogers,  
Town Manager

Copies: Town Council  
Joe Tagliaboschi, Public Works Director  
Sandra Smith, Planning & Building Director

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**County Counsel**

Jeffrey M. Brax

**Chief Deputies**

Sherri S. Kaiser  
Thomas C. Zeleny



A Tradition of Stewardship  
A Commitment to Service

**NAPA COUNTY  
OFFICE OF COUNTY COUNSEL**

**Attachment Two**

**Deputies**

Silva Darbinian  
Laura J. Anderson  
Chris R. Y. Apallas  
Susan B. Altman  
Thomas S. Capriola  
Jason M. Dooley  
John L. Myers  
Rachel L. Ross  
Shana A. Bagley  
Corey S. Utsurogi  
Douglas V. Parker

June 24, 2020

LAFCO of Napa County  
c/o Ms. Jennifer Stephenson  
1030 Seminary St Ste B  
Napa, CA 94559  
(Sent via e-mail: [jennifer@pcateam.com](mailto:jennifer@pcateam.com))

RE: NRRD Initial Response to 2020 Napa Countywide Water and Wastewater Municipal Service Review Public Review Draft

Dear LAFCO of Napa County

I have been requested, as legal counsel for the Napa River Reclamation District (District or NRRD), to provide an initial response to the May 2020 Napa Countywide Water and Wastewater Municipal Service Review Public Review Draft (Review). The NRRD's responses and recommended changes to the draft Review are as follows:

**Page 398, Capital Assets: ...**

"The District has no CIP, however, it has recently commissioned technical studies to evaluate capital improvements for its wastewater system and for flood control."

RESPONSE: The following changes as shown in red are recommended: "The District has no CIP, however, it has recently commissioned technical studies to evaluate capital improvements for its wastewater system and for potential flood control **alternatives for its facilities and for the community.**"

**Page 400, Type and Extent of Services**

RESPONSE: The following statements should be added to this section: Water Code section 50652 specifies that reclamation districts have powers over the reclamation works that the districts own. The NRRD did not construct and does not own the

residential levees within the District. It does own one flood control pump station and the levees/berms on NRRD property. Therefore, the District does not have power over the resident owned/non-NRRD levees. Residents are responsible for maintaining their own levees.

### **Page 405, Governance Structure Options**

The Review suggests that the District reorganize into a Community Service District (CSD).

RESPONSE: Several years ago, the District voted against converting to a CSD. The property owners within the District formed the District to have some control over the costs of services. The Review does not discuss the projected costs of reorganization.

The Review suggests that the District “reorganize as a zone of NCFCWCD for the purpose of providing reclamation services –this option would place the area under the jurisdiction of NCFCWCD and enable the creation of assessments, with the approval of residents, to fund increased reclamation and flood control services.”

RESPONSE: The NRRD does not have a formal reclamation plan and primarily provides sewer services. The NCFCWCD does not provide sewer services. The Review does not address what entity would provide sewer services or what reclamation services the NCFCWCD would provide. If an entity (NRRD, NCFCWCD, or otherwise) were to purchase property rights to the private levees and ultimately improve them, it is likely that such an action would result in increased assessments against the parcels. The Review does not address the anticipated amount of the increase in assessments.

### **Page 406: Recommendations**

“NRRD should expand the content available on its website to include financial documents such as past and current budgets and financial reports. Additional content can be added, as resources permit, to improve public access to District information and to comply with Assembly Bill 2257 (Government Code Section 54954.2).”

RESPONSE: The NRRD website is compliant with Government Code section 54954.2. Section 54954.2 does not require the NRRD to post budgets and financial reports on the website. These documents are available at the NRRD Board meetings, at the NRRD office, and upon request.

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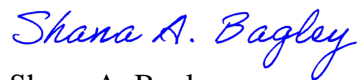
**Page 407, Status of, and Opportunities for, Shared Facilities:**

The Review recommended that “NRRD and its residents should explore opportunities to work with the Napa County Resource Conservation District (NCRCD) to educate constituents with regard to activities to control settlement along their portion of the levee.”

RESPONSE: At this time, the NCRCD does not have expertise regarding levee maintenance. However, this fact should not to discourage the NRRD or residents from utilizing the NCRCD in other capacities.

Please contact the NRRD or me should you have any questions.

Very truly yours,



Shana A. Bagley  
*Deputy County Counsel*  
*NRRD District Counsel*

CC: Penny Wilson, NRRD Assistant Manager



## Water Studies Everywhere - Not A Drop to Drink?

**A comprehensive analysis on Napa County's current situation,  
and a strong recommendation for a better future approach**

by Daniel Mufson, Ph.D.

### Where We Are Now

Suddenly it appears that water is the topic of study by numerous governmental bodies here in Napa. That would seem to imply that people believe that water is important and it needs to be cared for. We certainly agree with that premise. When you look at it, no other factor will have such a profound influence on what our lives look like in the coming years. Yes, climate change is important, and it is especially so on how it will influence our water supplies.

**Let's take a look at the studies underway.** In 2014 the Sustainable Groundwater Management Act became law. The legislative intent is to provide for sustainable management of groundwater basins, enhance local management of groundwater, and establish minimum standards for sustainable groundwater management.

The Department of Water Resources (DWR) has asked Napa County to come up with a plan for water sustainability in what is termed the Napa subbasin which they have determined is a high priority subbasin.

In late December 2019, the Board of Supervisors declared themselves the Napa County Groundwater Sustainability Agency (GWSA) and just this past week selected 25 members of the community to sit on a groundwater advisory committee. **This committee has two years to develop a plan to ensure the sustainability of our groundwater supplies.**

### In Addition, A Task Force Formed

In September 2019 a group of water managers from the county and the municipalities also formed a task force to prepare for and respond to drought. This collaborative planning group will develop the following:

**Drought Contingency Plans:** How will we recognize the next drought in the early stages? How will drought affect us? How can we protect ourselves from the next drought?

**Drought Resiliency Projects:** Drought Resiliency is defined as the capacity of a region to cope with and respond to drought. The US Bureau of Reclamation provides grant assistance for drought resiliency projects identified in a DCP.

The area that they will study is larger than the study area of the GWSA as it will encompass the following critical sources and users:

- The Napa River watershed which drains into the northern edge of San Pablo Bay and includes an area of 430 square miles
- Urban and residential areas, extensive vineyards and agriculture, and diverse environmental habitats
- Water users in the area rely on a mixture of water supplies that include local surface water, imported surface water, groundwater, and recycled water

**Let's focus on that last point that describes from where we get our water.** If you live in the municipalities your water comes from reservoirs (surface water) and from the State/Sierras via the North Bay Aqueduct (imported surface water). In fact, more than half of Napa City's water comes from the state.

If you live in rural Napa County your water likely comes from a well (groundwater). Agriculture uses groundwater and some surface water from the Napa River.

The county has set aside the groundwater for agriculture as stated in the General Plan Goal CON-Reg 11: "Prioritize the use of available groundwater for agricultural and rural residential uses rather than for urbanized areas and ensure that land-use decisions recognize the long-term availability and value of water resources in Napa County."

There are some known water-deficient areas in the county such as the MST (Milliken-Sarco-Tulucay) where the county has placed limits on development and has encouraged the use of recycled water for irrigation.

## **The Problems and The Big Questions**

The big issue is how much water will be available for use by residences, industrial, agricultural, and environmental uses in the coming years? The state has issued numerous reports on water security i.e., "**Safeguarding California Implementation Action Plans 2016**" to ensure that people and communities are able to withstand the impacts of climate disruption:

- Loss of snow-pack storage may reduce the reliability of surface water supplies and result in greater demand on other sources of supply".
- "As climate change reduces water supplies and increases water demands (as a result of higher temperatures), additional stresses are being placed on the Delta and other estuaries along the California coastline."

- “Each local water agency will have to contend with impacts to their local watershed, as well as upstream and downstream watersheds that influence local water supply or water quality constraints.”

With 80% of Napa residents living in the cities, what is the master plan to supply them with water when the state water project is no longer able to deliver and the reservoirs are compromised by drought and/or polluting runoff?

### **The Problem We Collectively Must Solve**

How much water from all sources will be available and who gets to have it? We can study this to death; we can hire consultant engineering firms and pay them to develop numerous scenarios but we think we all truly know that the earth is warming, fire dangers are increasing, the weather is changing dramatically and therefore we ought to focus on planning for the worst-case.

In 2017 Napa Vision 2050 stated in a letter to the DWR that if all users of water in Napa County were to need to rely solely upon the groundwater we would be in an unsustainable situation. We still believe this to be the case.

### **Going Forward: A Clear, Consolidated Approach vs a Fractured System**

Within the past month, **LAFCO** (our Local Agency Formation Commission) issued a most comprehensive draft report, “**Napa Countywide Water and Wastewater Municipal Services Review**” (May 18, 2020). The report thoroughly covers the history and operation of the many water service providers with recommendations regarding their administration and operation.

It is of great significance that this report introduced the concept of a county water agency and/or a countywide county water district. Benefits to forming such a county water district include:

- Efficient use of the County’s water resources
- Enhanced water resource management
- Solidarity amongst Napa water purveyors with greater leveraging power
- Greater scrutiny of all utility providers
- Enhanced technical and operational support for local providers
- Elimination of redundancies and duplication of efforts amongst the smaller systems
- Improved economies of scale.

**Unlike the other two study groups mentioned above that cover a portion of the county’s water supply e.g.** Napa County Groundwater Sustainability Agency-covers the Napa Valley subbasin (and just groundwater); Drought Contingency Plan Task Force-covers the watershed (with multiple sources of water),



**LAFCO suggests an alternative governance structure, an agency that will cover the entire county. We think that LAFCO gets it right and we recommend that the Ground Water Sustainability Agency and the Drought Contingency Task Force come up with a format so that their work product will be a plan for all of Napa's water users to share the diminishing supply that belongs to the commons and will meet the human right to water.**



## Notes on the LAFCO report.

Roland Dumas, Ph.D.<sup>1</sup>

### The nature of the report

These notes are in reference to **The Napa Countywide Water and Wastewater Municipal Service Review, Public Review Draft**, dated May 18, 2020.

This LAFCO report is an audit. As such, it compares practices and performance of the various agencies against standards, regulations, and charters. It does this extremely well, impressively well as far as I can tell.

I was particularly impressed at the discussion of climate variability and change. The authors highlighted areas of uncertainty and the trends toward water availability being 'front loaded' in the season, as well as the correlation between state water supply and local sources. They went beyond the mission of an audit to point at these important factors in projecting water supplies.

### Please add, request, challenge

My strong suggestion is that the document be expanded to address critical scenarios that are increasing in probability. The report is clear that climate change will impact water availability, and that we face increasing demand and less predictable supply, but it needs to go into scenarios in which the water supply is dramatically changed in a short period of time. LAFCO should either explore the scenarios or challenge the county agencies to develop and plan for them. We cannot be secure with agencies that are fulfilling their charters, but collectively unprepared for a future that looks nothing like its history. We cannot be secure if the most challenging recommendation is to consolidate water agencies into a county-wide agency. We need to plan for two classes of inevitable scenarios.

### Uncertainty, improbability, and inevitable surprises

Seismologists like to say the improbable is inevitable. It is improbable that there will be an earthquake on the west coast that registers a 9 and causes historic damage. It's improbable on a year-by-year basis, that is. We also know that it is inevitable over a longer time frame. It could happen tomorrow or 40 years from now, but It's going to happen. We put it out of mind and out of planning, because in short time frames, it's pretty unlikely. We do code and build for earthquakes that register 5 and 6, because they are frequent enough that they are in our awareness. There is a class of events and conditions that we **know** will occur with some certainty, but effectively ignore. We have not planned for the combinations of events that lurk

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in the future, particularly events that have some correlation. That is, they are likely to occur in the same time period because they have common causes.

By way of example, let's start with the current situation, a pandemic. We'll set aside civil unrest for the moment and just consider the pandemic. We have (or had) frameworks and standards for addressing pandemics. We had early warning data gathering and analysis. We had protocols for responding and minimizing the social, health, and economic impact while vaccines are developed. We had communication protocols that were designed to be highly credible and gain high compliance. It was all in place and tested. We had trained people in place all across the country. Those practices, processes, and systems have been effective in recent times, even.

What did we not take into consideration? The breakdown in our own government. The plans didn't take into consideration that our own government would oppose and politicize science and health and fail to execute its own plans – actively fail by interfering with the process. Our planning didn't consider that we would take out scientists closest to the outbreak. We didn't plan on the failure being *us*.

An audit of the pandemic response processes would have come up as A+. In practice, it is a contentious D. We did not have plans for the correlation of pandemic and a failure of major political institutions.

When we look at the water report, there are failure scenarios within the information provided, and others that include factors that come in like asteroids from the outside. The A audit could easily become an F in execution with some improbable – and inevitable – scenarios.

## Failures within the study's information

The report reflects the influences on water input: weather. It notes the La Niña and el Niño influences and global warming. It lists qualitative impacts of climate change (P16-17), but not a projection or estimate of the quantitative impact or the trends. I know it's risky to put numbers to things, particularly when they are not extrapolations from current patterns, but give it a shot. It could say that in the event of a drought, which has probability of  $x$  and going toward  $y$ , the state water will dry up and local supply will decrease by 25% and be front loaded in the season. They could speculate the conditions in which the state will turn off the spigot and show the probability of those conditions over time. They can include scenarios with probability ranges.

**Suggestion: lay out some scenarios.** This document gives the elements of scenarios, but doesn't built them.

For instance, a scenario might be that state water spigot is turned off completely and local supply is off by 50%. What happens in that scenario?

What about a scenario in which the front loading of water is so strong that it breaks parts of the infrastructure, and then severe drought sets in?

Look at some extreme cases with multiple failures and then play out how it impacts each stakeholder, including watersheds and fire responses. Such scenarios will impact each

municipality differently, and cause conflicts between stakeholders. Commons problems will occur. We should look for and plan for them, and consider what principles are at play.

## Failures due to asteroids and other exogenous influences

Ok, asteroids are really extremely improbable, and would represent a game-over scenario, but there are scenarios that are just over the horizon, or perhaps lurking in that dark closet. They are not meteorological, hydrologic, etc. They may be in plain sight, but out of the purview of assessments.

The pandemic is an example, and should be considered a warning shot that a stressed process can become vulnerable to a failure in another system, or even trigger a failure in another system. Influences outside of the traditional modeling domain can exert sudden and dramatic influence on the capability of our systems. Human systems are not easily predicted, because humans are irrational. Political force exerted by economic interests can drive suboptimal decisions.

A prime example is seismic events. Earthquakes can damage infrastructure at moments when integrity of the infrastructure is critical. When I was young, a minor seismic fault with a series of minor quakes caused a municipal dam to fail and wash out a section of a neighborhood. I'm always conscious of what's built on fault lines.

Political events and trends are also a category of exogenous influences that can occur rapidly. Whether it is southern California laying a claim on delta water or a failure of the county's political system<sup>2</sup> to allow discussion of critical analyses, there are failure modes in systems that are not hydrologic that will impact our preparedness for water events.

Failures due to political constraints on knowledge are also a distinct possibility. Before the current pandemic, we couldn't imagine such a scenario, but we are now experiencing that force being a multiplier of the damage.

The county has an analogous political constraint, to wit:

The county has just established a Groundwater Sustainability Agency, after a contentious fight with the state Department of Water Resources. The first move of the county elected officials was to appoint themselves as the GSA, making the Agency a political body in one stroke, beholden to the political and economic interests that the elected officials represent. The elected politicians then were required to appoint an advisory board. They selected representatives from various water interests, but selected by the politicians, so the most aligned with the political interests that the supervisors could do with the applicant pool. The county supervisors, operating as the GSA, passed an "anti-lobbying" rule that prohibits advisors from communicating freely, thereby constraining knowledge.

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<sup>2</sup> Of course, the GSA is not capable of discussing failures of elected political systems because the GSA is inhabited by the county board of supervisors, and therefore less interested in discussing their own blind spots, political dependencies, or objectivity.

The county officials had previously suppressed inquiry and discussion of modeling methods; the inquiry that was suppressed was how the modeling addressed the compound effect of multiple influences that had not been experienced before. That is, inquiry was suppressed into improbable and inevitable scenarios.

The LAFCo report needs to surface forces and issues like these that can have a material impact on planning for inevitable surprises<sup>3</sup>.

### The request: offer or request

LAFCO should challenge the county to discover and address classes of events that represent interactions of forces within the agency responsibility and those from outside those responsibilities.

LAFCO should lay out the need for scenario planning using the “edge cases” for various contributors to water availability. LAFCO might list some ‘starter’ scenarios that should be considered and anticipated. A strong recommendation should be made to use the services of a qualified scenario planning consultant along with the traditional water-focused resources. The Global Business Network was the spin-off of SRI that was the home of scenario planning expertise. It has been acquired by a large consulting firm and many of the primary consultants spun off; they are easily found. ([https://en.wikipedia.org/wiki/Global\\_Business\\_Network](https://en.wikipedia.org/wiki/Global_Business_Network))

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<sup>3</sup> Schwartz, Peter. *Inevitable Surprises*. 2003, Gotham. New York.

**From:** [Jennifer Stephenson](#)  
**To:** [Freeman, Brendon](#)  
**Cc:** [Richard Berkson](#); [Oxana Kolomitsyna](#); [Jill Hetland](#)  
**Subject:** Fwd: LAFCO Public Workshop, Public comment  
**Date:** Monday, June 29, 2020 8:55:34 AM

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[External Email - Use Caution]

And some more comments...

Begin forwarded message:

**From:** Patricia Damery <[damery17@icloud.com](mailto:damery17@icloud.com)>  
**Subject:** LAFCO Public Workshop, Public comment  
**Date:** June 28, 2020 at 3:14:49 PM PDT  
**To:** [jennifer@pcateam.com](mailto:jennifer@pcateam.com)

Dear LAFCO,

First, your suggestion of the formation of a county agency coordinating water security in Napa County is a critically important move as we face climate disruption and the real possibility of losing the water of the North Bay Aqueduct. I am in full support of coordinating the efforts of the forming Groundwater Sustainability Agency with the Drought Contingency Task Force, and troubleshooting in advance various emergency scenarios.

I want to address the issue of trucked-in water. Around our ranch, we've observed that water is being trucked regularly to many customers on Redwood and Dry Creek Roads.

In recent years, as more wells have been drilled, our well, once performing at about 40 gallons per minute, is, at best, 1.5 gallons per minute. On Redwood Road, after a neighbor drilled eight wells to supply a winery, several residents' wells have gone dry and they are now forced to truck water because they cannot afford to drill another well.

Still, vineyards and wineries are being permitted by the Napa Board of Supervisors and Planning Commission. These are properties with multiple, low-performing wells, approved, despite the fact that hydrologists have warned that additional newly drilled wells are almost certainly affecting other established Redwood Road wells and Redwood Creek flow.

When trucked water is not taken into consideration, a skewed perspective on

water availability is perpetrated. Trucked water from Napa City is a source of revenue for the City, but in the event of severe drought and the possibility that the North Bay aqueduct does not deliver the water the municipalities in Napa County depend upon, the trucked water to these rural residences will also dry up.

Napa County does not require vineyards, wineries, or any businesses it permits, to live within the resources (water, sewage, etc) of the parcel share it is located. It does not require transparency of water usage via internet postings. Most importantly, transparency of trucked water usage is an essential piece of any resource evaluation of the property and parcel: Trucked water is an Indicator and an enabler of water overuse and the depletion of an area's resources.

Consider the following points:

- • 1. Groundwater is a public resource, and is not under the ownership of the parcel owner. It is a finite resource that must be shared, maintaining the viability of all parcels and permits using the same public resource. The county and the GSA must prioritize care of the water tables in the upstream of the water basin. The state of the hillside aquifers is a leading indicator of the health of the basin. If water sources upstream are sucked dry, that water basin is in trouble.
- 
- Assessing and documenting the quantity of trucked water is critical knowledge. Trucking of water creates a false sense of abundance and adequacy. Water trucking is covering up the emergency that is already at hand. To the county, it looks like all is well because the city is supplying the water that is trucked. When the city has an emergency, the greater problem will be exposed.
  -
- This is a social justice issue. Many of the residents whose wells run dry and are forced into hauling water are often long time, older residents. They have been impacted by the excessive drilling of new wells near them and they cannot afford to another deeper well. Continued development in the hillsides means more wells drilled and more water extracted leading to two things: The neighbors adjacent to the developments are left high and dry, and the flow to the basin, where all those corporate straws are stuck, will also get depleted. We're already experiencing loss of water and hardship in the hillsides, as the county allows more and more vineyard, winery and large home developments.
- 
- A county agency or department (such as what LAFCO has suggested) could and should monitor trucking of water. We also need our Board of Supervisors (who have appointed themselves as the members of the GSA)

to direct the Planning Commission to consider the overall cumulative impacts of more drilling and water usage on the larger area in permitting and intensifying use of water before we end up in a position in which rural and municipal faucets are fighting with agricultural driplines. We are approaching that point now.

<!--[if !supportLists]-->

A quote from L.A. Times Journalist Mark Arax says it all. “All that pumping requires deep pocket. The small farmer who can’t afford to keep chasing groundwater falls by the wayside. ....Water isn’t the equalizer that the state and federal projects promised. Water is the means by which the valley has become one of the most unequal places on earth.” He was speaking of the Central Valley, but this applies increasingly to Napa County as well.

Patricia Damery