



CENTRAL MARIN WASTEWATER SERVICES STUDY

Municipal Service Review | Government Code Section 56430

Affected Agencies

- Central Marin Sanitation Agency
- County Sanitary District No. 1
- County Sanitary District No. 2
- Las Gallinas Valley Sanitary District
- Murray Park Sewer Maintenance District
- San Rafael Sanitation District
- San Quentin Village Sewer Maintenance District

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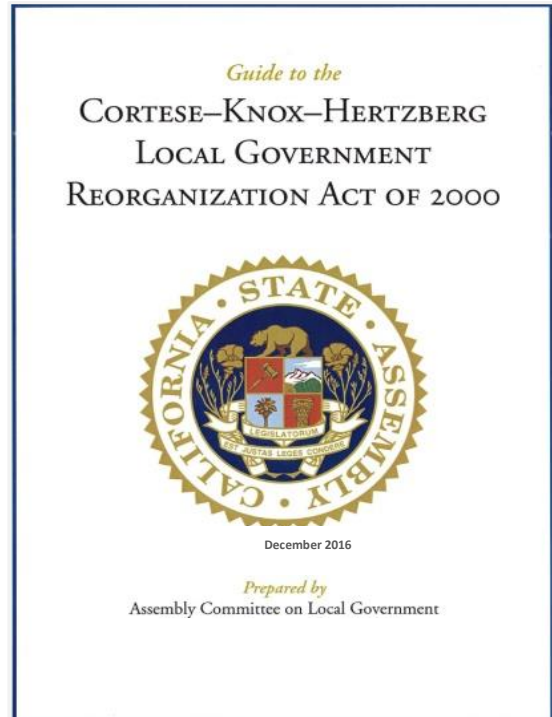
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CHAPTER ONE INTRODUCTION

1.0 LOCAL AGENCY FORMATION COMMISSIONS

1.1 Authority and Objectives

Local Agency Formation Commissions (LAFCOs) were established in 1963 and are political subdivisions of the State of California responsible for providing regional growth management services in all 58 counties. LAFCOs' authority is currently codified under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 ("CKH") with principal oversight provided by the Assembly Committee on Local Government.¹ LAFCOs are comprised of locally elected and appointed officials with regulatory and planning powers delegated by the Legislature to coordinate and oversee the establishment, expansion, and organization of cities, towns, and special



districts as well as their municipal service areas. LAFCOs' creation were engendered by Governor Edmund "Pat" Brown Sr. (1959-1967) to more effectively address the needs of California's growing and diversifying population with an emphasis on promoting governmental efficiencies. Towards this end, LAFCOs are commonly referred to as the Legislature's "watchdog" for local governance issues.²

Guiding LAFCOs' regulatory and planning powers is to fulfill specific purposes and objectives that collectively construct the Legislature's regional growth management priorities outlined under Government Code (G.C.) Section 56301. This statute reads:

¹ Reference California Government Code Section 56000 et seq.

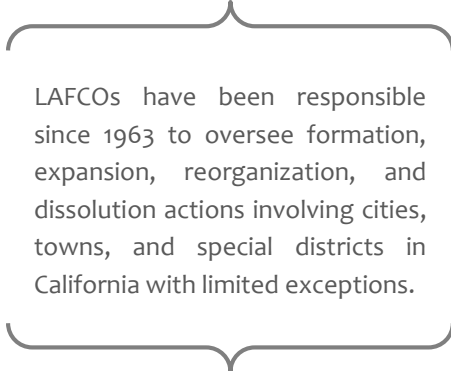
² In its ruling on *City of Ceres v. City of Modesto* the 5th District Court of Appeal referred to LAFCOs as the "watchdog" of the Legislature to "guard against the wasteful duplication of services." (July 1969)

“Among the purposes of the commission are discouraging urban sprawl, preserving open space and prime agricultural lands, efficiently providing governmental services, and encouraging the orderly formation and development of local agencies based upon local conditions and circumstances. One of the objects of the commission is to make studies and to obtain and furnish information which will contribute to the logical and reasonable development of local agencies in each county and to shape the development of local agencies so as to advantageously provide for the present and future needs of each county and its communities.”

LAFCO decisions are legislative in nature and therefore are not subject to an outside appeal process. LAFCOs also have broad powers with respect to conditioning regulatory and planning approvals so long as not establishing any terms that directly control land uses, densities, or subdivision requirements.

1.2 Regulatory Responsibilities

LAFCOs’ principal regulatory responsibility involves approving or disapproving all jurisdictional changes involving the establishment, expansion, and reorganization of cities, towns, and most special districts in California.³ More recently, LAFCOs have been tasked with also overseeing the approval process for cities, towns, and districts to provide new or extended services beyond their jurisdictional



LAFCOs have been responsible since 1963 to oversee formation, expansion, reorganization, and dissolution actions involving cities, towns, and special districts in California with limited exceptions.

boundaries by contract or agreement as well as district actions to either activate a new service or divest an existing service. LAFCOs generally exercise their regulatory authority in response to applications submitted by the affected agencies, landowners, or registered voters. Recent amendments to CKH, however, now authorize and encourage LAFCOs to initiate on their own jurisdictional changes to form, consolidate, and dissolve special districts consistent with current and future community needs.

³ CKH defines “special district” to mean any agency of the State formed pursuant to general law or special act for the local performance of governmental or proprietary functions within limited boundaries. All special districts in California are subject to LAFCO with the following exceptions: school districts; community college districts; assessment districts; improvement districts; community facilities districts; and air pollution control districts.

1.3 Planning Responsibilities

LAFCOs inform their regulatory actions through two central planning responsibilities: (a) making sphere of influence (“sphere”) determinations and (b) preparing municipal service reviews. Sphere determinations have been a core planning function of LAFCOs since 1971 and effectively serves as the Legislature’s version of “urban growth boundaries” with regard to

LAFCOs are tasked with planning the location of future urban development and services through two interrelated activities: (a) establish and update spheres of influence and (b) prepare municipal service reviews to independently evaluate the availability and performance of governmental services relative to need.

cumulatively delineating the appropriate interface between urban and non-urban uses within each county. Municipal service reviews, in contrast, are a relatively new planning responsibility enacted as part of CKH and are intended to inform – among other activities – sphere determinations. The Legislature mandates, notably, all sphere changes as of 2001 be accompanied by preceding municipal service reviews to help ensure LAFCOs are effectively aligning governmental services with current and anticipated community needs. An expanded summary of the function and role of these two planning responsibilities follows.

Sphere of Influence Determinations

LAFCOs establish, amend, and update spheres for all cities, towns, and most special districts in California to designate the territory it independently believes represents the appropriate and probable future service area and jurisdictional boundary of the affected agency. Importantly, all jurisdictional changes, such as annexations and detachments, must be consistent with the spheres of the affected local agencies with limited exceptions.⁴ Further, an increasingly important role involving sphere determinations relate to their use by regional councils of governments as planning areas in allocating housing need assignments for counties, cities, and towns.

⁴ Exceptions in which jurisdictional boundary changes do not require consistency with the affected agencies’ spheres include annexations of State correctional facilities or annexations to cities/towns involving city/town owned lands used for municipal purposes with the latter requiring automatic detachment if sold to a private interest.

As of January 1, 2008, LAFCOs must review and update all local agencies' sphere every five years. In making sphere determinations, LAFCOs are required to prepare written statements addressing five specific planning factors listed under G.C. Section 56425. These mandatory factors range from evaluating current and future land uses to the existence of pertinent communities of interest. The intent in preparing the written statements is to orient LAFCOs in

Spheres serve as the Legislature's version of urban growth boundaries and – among other items – delineates where cities, towns, or districts may seek future annexations or outside service approvals with LAFCOs. All jurisdictional changes must be consistent with the affected agencies' spheres with limited exceptions.

addressing the core principles underlying the sensible development of local agencies consistent with the anticipated needs of the affected communities. The five mandated planning factors are summarized in the following table.

Mandatory Determinations | Spheres of Influence

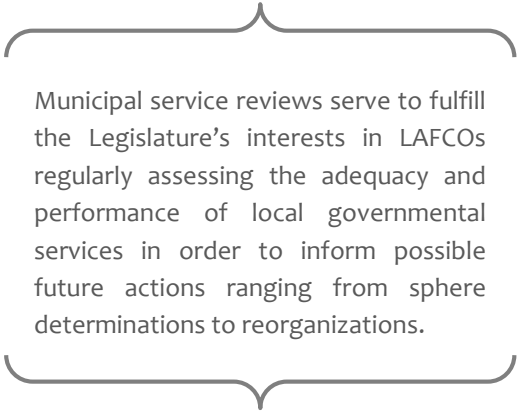
Table 1-1

1. Present and planned land uses in the area, including agricultural and open space.
2. Present and probable need for public facilities and services in the area.
3. Present capacity of public facilities and adequacy of public services the agency provides or is authorized to provide.
4. Existence of any social or economic communities of interest in the area if the commission determines they are relevant to the agency.
5. If the city or district provides water, sewer, or fire, the present and probable need for those services of any disadvantaged unincorporated communities within the existing sphere.

Municipal Service Reviews

Municipal service reviews serve as a centerpiece to CKH’s enactment in 2001 and represent comprehensive studies of the availability, range, and performance of governmental services provided within defined geographic areas. LAFCOs generally prepare municipal service reviews to explicitly inform subsequent sphere determinations. LAFCOs also prepare municipal service reviews irrespective of making any specific sphere determinations in order to obtain and furnish information to contribute to the overall orderly development of local communities. Municipal service reviews vary in scope and can focus on a particular agency or governmental service. LAFCOs may use the information generated from municipal service reviews to initiate other actions under their authority, such as forming, consolidating, or dissolving one or more local agencies. Advisory guidelines on the preparation of municipal service reviews were published by the Governor’s Office of Planning and Research in 2003 and remain the lone statewide document advising LAFCOs in fulfilling this mandate.

All municipal service reviews – regardless of their intended purpose – culminate with LAFCOs preparing written statements addressing seven specific service factors listed under G.C. Section 56430. This includes, most notably, infrastructure needs or deficiencies, growth and population trends, and financial standing. The seven mandated service factors are summarized in the following table.



Municipal service reviews serve to fulfill the Legislature’s interests in LAFCOs regularly assessing the adequacy and performance of local governmental services in order to inform possible future actions ranging from sphere determinations to reorganizations.

Mandatory Determinations | Municipal Service Reviews

Table 1-2

1. Growth and population projections for the affected area.
2. Location and characteristics of any disadvantaged unincorporated communities within or contiguous to affected spheres of influence.⁵
3. Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies.
4. Financial ability of agencies to provide services.
5. Status and opportunities for shared facilities.
6. Accountability for community service needs, including structure and operational efficiencies.
7. Matters relating to effective or efficient service delivery as required by LAFCO policy.

1.4 LAFCO Composition & Decision-Making

LAFCOs are generally governed by 11-member board comprising three county supervisors, three city councilmembers, three independent special district members, and two representatives of the general public.⁶ Members are divided between “regulars” and “alternates” and must exercise their independent judgment on behalf of the interests of residents, landowners, and the public

State law directs all LAFCO members to independently discharge their responsibilities for the good of the region and irrespective of the interests of their local appointing authorities.

as a whole. LAFCO members are subject to standard disclosure requirements and must file annual statements of economic interests. LAFCOs have sole authority in administering its legislative responsibilities and decisions therein are not subject to an outside appeal process. All LAFCOs are independent of local government with the majority employing their own staff; an increasingly smaller portion of LAFCOs, however, choose to contract with their local county government for staff support services. All LAFCOs, nevertheless, must appoint their own Executive Officers to manage agency

⁵ This determination was added to the municipal service review process by Senate Bill 244 effective January 1, 2012. The definition of “disadvantaged unincorporated community” is defined under G.C. Section 56330.5 to mean inhabited territory that constitutes all or a portion of an area with an annual median household income that is less than 80 percent of the statewide annual median household income; the latter amount currently totaling \$60,190.

⁶ Approximately two-fifths of LAFCOs in California currently operate without special district representation based on local conditions. A limited number of LAFCOs also have additional seats through special legislation.

activities and provide written recommendations on all regulatory and planning actions before the membership. All LAFCOs must also appoint their own legal counsel.

1.5 Prescriptive Funding

CKH prescribes local agencies fully fund LAFCOs' annual operating costs. Counties are generally responsible for funding one-third of LAFCO's annual operating costs with the remainder one-third portions allocated to the cities/towns and independent special districts. The allocations to cities/towns and special districts are calculated based on standard formula using general tax revenues unless an alternative formula has been approved by a majority of the local agencies. LAFCOs are also authorized to collect applicant fees to offset local agency contributions.

2.0 MARIN LAFCO

2.1 Adopted Policies and Procedures

The majority of Marin LAFCO's ("Commission") existing policies and procedures were updated and or established in 2001 in step with the enactment of CKH. These policies and procedures collectively guide the Commission in implementing LAFCO law in Marin County in a manner consistent with regional growth management priorities as determined by the membership. This includes overarching policies and procedures to direct existing and new urban uses towards city-centers along the State Highway 101 corridor and maintaining restrictive allowances for the potential development and use therein of agricultural and open-space lands. The Commission has also established pertinent policies and procedures specific to preparing sphere updates and municipal service reviews. These latter policies are anchored on directing staff to present annual recommendations on new sphere updates and their associated municipal service reviews every year with proposed scopes of work for Commission approval.

2.2 Commission Roster

The Commission’s current membership is provided below.

Current Members

Name	Position	Agency Affiliation
Jeffry Blanchfield, Chair	Public	Commission
Carla Condon, Vice Chair	City	Town of Corte Madera
Jack Baker	Special District	North Marin Water
Damon Connolly	County	County of Marin
Sashi McEntee	City	City of Mill Valley
Craig K. Murray	Special District	Las Gallinas Valley Sanitary
Dennis J. Rodoni	County	County of Marin
Judy Arnold, Alternate	County	County of Marin
Matthew Brown, Alternate	City	City of San Anselmo
Chris Skelton, Alternate	Public	Commission
Lew Kious, Alternate	Special District	Almonte Sanitary

Figure 1.1

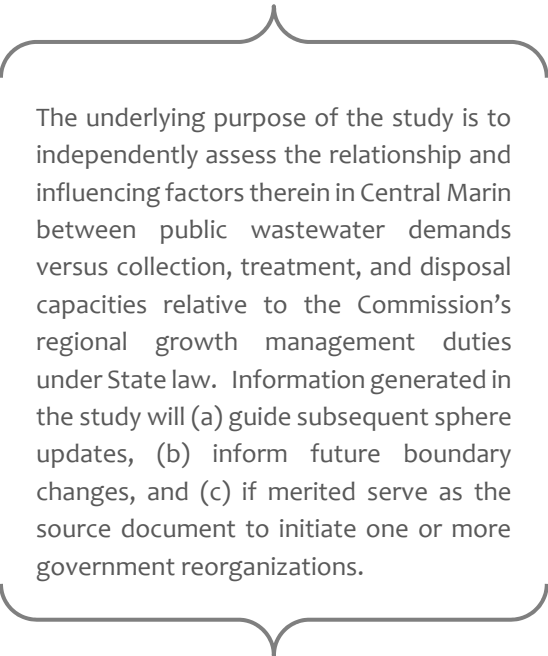
2.3 Contact Information

Marin LAFCO’s administrative office is located at 1401 Los Gamos Drive in San Rafael (Terra Linda). Visitor parking is available. LAFCO is a small governmental agency and as a result the office is sometimes closed during normal business hours when staff is in the field. Accordingly, appointments to discuss proposals or other matters are strongly encouraged and can be scheduled by calling 415-448-5877. Communication by e-mail is also welcome and general questions or comments should be directed to staff@marinlafco.org. Additional information regarding Marin LAFCO’s functions and activities is also available anytime by visiting www.marinlafco.org.

CHAPTER TWO EXECUTIVE SUMMARY

1.0 OVERVIEW

This study represents Marin LAFCO’s scheduled municipal service review on public wastewater services within an approximate 60-square mile area of central Marin County. The study has been prepared by staff and consistent with the scope of work approved by the Commission at a noticed public hearing. The underlying aim of the study is to produce an independent assessment of public wastewater services in the region over the next five to ten years relative to the Commission’s regional growth management duties and responsibilities as established by the Legislature. This includes evaluating the current and future relationship between public wastewater demands versus collection, treatment, and disposal capacities region-wide and within the service areas of the seven affected agencies, directly or indirectly subject to the Commission’s oversight. Information generated as part of the study will be used by the Commission in (a) guiding subsequent sphere of influence updates, (b) informing future boundary changes, and – if merited – (c) initiating government reorganizations, such as special district formations, consolidations, and or dissolutions.



The underlying purpose of the study is to independently assess the relationship and influencing factors therein in Central Marin between public wastewater demands versus collection, treatment, and disposal capacities relative to the Commission’s regional growth management duties under State law. Information generated in the study will (a) guide subsequent sphere updates, (b) inform future boundary changes, and (c) if merited serve as the source document to initiate one or more government reorganizations.

1.1 Key Assumptions and Benchmarks

The study has been oriented in scope and content to serve as an ongoing monitoring program on public wastewater services in Central Marin. It is expected the Commission will revisit the study and key assumptions and benchmarks therein approximately every five years consistent with the timetable set by the Legislature. This will also allow the Commission – among other tasks – to assess the accuracy of earlier projections and

make appropriate changes in approach as needed as part of future studies. Key assumptions and benchmarks affecting scope and content in this study follow.

1.2 Setting the Study's Timeframe

The timeframe for the study has been oriented to cover the next five to ten year period with the former (five years) serving as the analysis anchor as contemplated under State law. Markedly, this timeframe is consistent with the five-year cycle legislatively prescribed for municipal service reviews under G.C. Section 56430. Expanding the timeframe to also contemplate an additional five-year period provides the Commission flexibility in scheduling its next review on public wastewater services within Central Marin in alignment with resources and priorities.⁷

1.3 Determining the Data Collection Range or Study Period

The period for collecting data to inform the Commission's analysis and related projections on population growth, service demands, and finances has been set to cover the five-year fiscal period from 2010 to 2014. This data collection period – which covers the 60 months immediately preceding the start of work on the study – purposefully aligns with the five-year timeline for the study with the resulting data trends appearing most relevant to the Commission in making near-term projections (i.e., data from the last five years is most pertinent in projecting trends over the next five to ten years).

1.4 Calculating Population Estimates

Residential population calculations in the study have been independently made by Commission for both recent and near-term estimates within all seven affected service areas. Recent population estimates for the service areas are premised on occupied housing driving resident projections based on data collected within all applicable census tracts. Four distinct calculations are made in producing population estimates for each agency and specific to each year that take into account (a) total housing units, (b) local occupancy rates, (c) occupied housing units, and (d) household sizes. Near-term

⁷ Incorporating projections 10 years out also allows the Commission to proceed with an applicant request for a sphere of influence amendment involving one of the affected agencies within the time period without the concurrent need for a new stand-alone municipal service review.

estimates have been similarly calculated for the next five to ten year period based on applying the estimated growth trend in each service area over last 60 months with limited exceptions (i.e., population growth over the last five years is expected to hold through the next five to ten years).

1.5 Making Growth Projections at Planned Buildout

The study includes a cursory review of population and housing totals at planned buildout for purposes of telegraphing potential long-term growth within each affected agency's service area. Housing unit projections at planned buildout are based on a review of all subject land use authorities' existing housing elements and specific to zoning within existing jurisdictional boundaries.⁸ Population projection totals at buildout are similarly based on applying an agency specific person-per-house amount for every projected housing unit as separately calculated by the Commission. Importantly, and as used in this study, planned buildout is a dynamic term with current projections based on housing elements that will need to be updated by 2023 and presumably reflect new and expanded development expectations.

The term "buildout" as calculated and used in the report is dynamic and changes in step with changes in the land use authorities' housing elements. Accordingly, and as detailed, it is equally reasonable for the report to conclude the region is approaching its currently planned buildout while anticipating growth will ultimately exceed this threshold as land use policies are updated.

1.6 Calculating Future Wastewater Demands

Future near-term wastewater demands in the study have been independently calculated by the Commission through 2024 within each affected agency's service area based on overall production trends generated in the preceding five-year period between 2010 and 2014. These projections have been made using linear regression to help *control* for large variances in the recent five-year totals (emphasis). Importantly, these projections have been made by the Commission in the absence of the affected agencies' own projections and are intended only as reasonable estimates of likely and near-term demand-to-capacity relationships going forward.

⁸ Buildout estimates do not take into consideration future changes in boundaries as well as outside service commitments.

1.7 Benchmarking Infrastructure Needs and Deficiencies | Emphasis on Five-Year Averages

The study and its analysis focuses on average wastewater demands within specific categories (i.e., dry, wet, and peak periods) generated in each affected agency's service area during the 60-month study period in benchmarking infrastructure needs or deficiencies. This broader focus on averages provides a more reasonable account of system demands generated during the study period and helps to mitigate against one-year outliers in step with analyzing overall relationships with collection, treatment, and disposal capacities.

1.8 Benchmarking Financial Solvency

Several diagnostic tools are used in the study to assess and make related determinations on each affected agency's financial solvency based on a five-year review of audited statements from 2010-2014. This includes, most notably, calculating and analyzing current ratio, debt-to-net assets, and operating margin. These tools provide the Commission with reasonable benchmarks to evaluate liquidity, capital, and margin and calculated to track both overall trends as well as final-year standing.

1.9 Benchmarking Pension Obligations

Three specific diagnostic tools are used in the study to assess and make related determinations on the strength of the pension obligations for the five affected agencies that provide employees with defined retirement benefits; all of whom have contracts with the California Public Employees Retirement System (CalPERS) or – and to a more limited extent – the Marin County Employee Retirement Association (MCERA). These diagnostic tools – (a) funded ratio, (b) unfunded liability, and (c) active-to-retiree ratio – have been calculated by the Commission based on the three most recent pension statements issued by CalPERS or MCERA covering 2011 to 2014. (Earlier data is not readily accessible at this time.) Further key benchmarks herein include identifying 80% as the minimum threshold for an adequate funded ratio.

2.0 STUDY ORGANIZATION

This chapter serves as the Executive Summary and outlines the key conclusions, recommendations, and determinations generated within the study.⁹ This includes addressing the mandatory service and governance factors required by the Legislature anytime the Commission performs a municipal service review. The Executive Summary is preceded by a review of key regional service characteristics (Chapter Three) underlying public wastewater services in Central Marin. Examples include providing regional and agency comparisons with respect to demographics, demands, capacities, costs, and financial resources now and going forward. The third and final section involves individual agency profiles (Chapter Four) of all seven affected agencies responsible for providing public wastewater services directly or indirectly under the Commission’s jurisdiction in Marin County. These profiles transition between narrative descriptions of the background and development of these agencies’ service areas to quantifying specific data-driven categories, such as population and growth trends, wastewater service capacities, and financial standing.

3.0 AFFECTED PUBLIC AGENCIES | GEOGRAPHIC AREA

The geographic area designated for this study is approximately 60 square miles in size within Central Marin and incorporates therein seven public agencies that provide one or more of the following public wastewater services: collection; treatment; and disposal. These seven affected agencies and their service areas are shown below.

⁹ It is important to note the Executive Summary purposely distinguishes between “conclusions” (general policy takeaways), “determinations” (address specific legislative factors), and “recommendations” (specific actions drawn from the determinations).

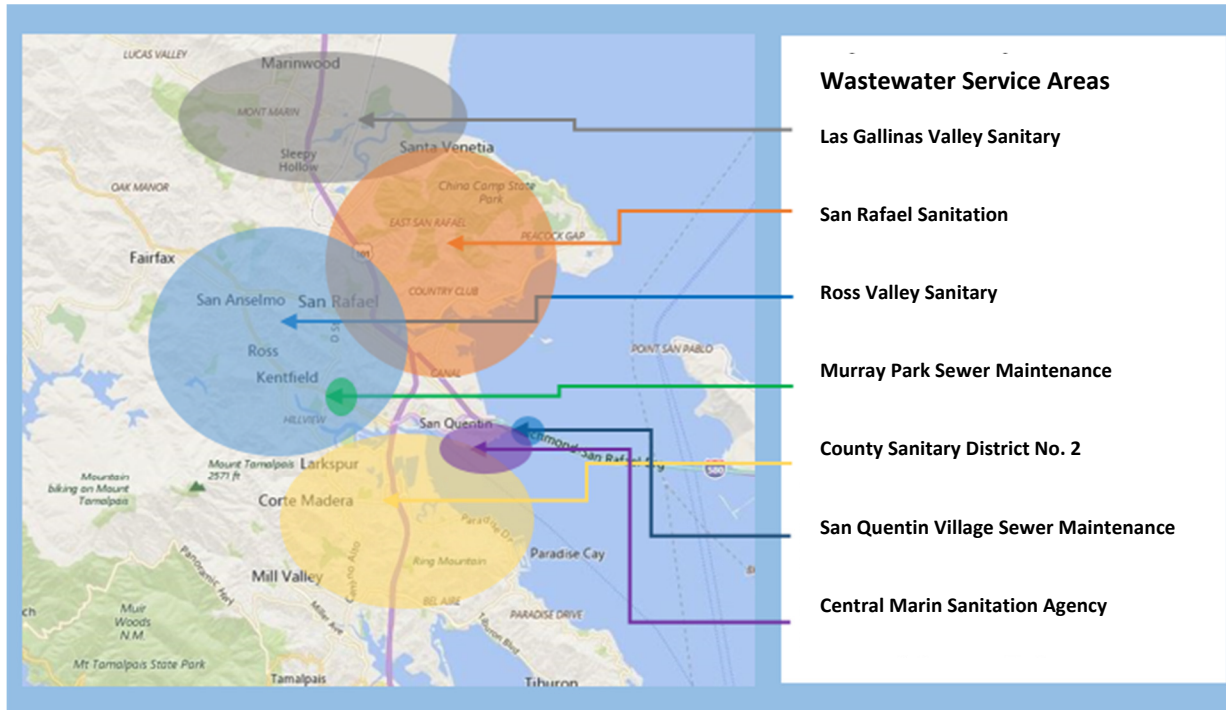


Figure 2.1

4.0 STUDY SUMMARY

4.1 General Conclusions

This study identifies 12 central policy conclusions underlying the Commission’s review of the availability, capacity, and performance of public wastewater services in Central Marin now and going forward. These conclusions range in substance from recent usage trends to financial standing and are entirely generated from information detailed in the succeeding sections. Additionally, and as previously

The study’s general conclusions are based on data collected and analyzed by the Commission between 2010 and 2014 and specific to Marin LAFCO’s prescribed growth management interests under State law.

detailed, these conclusions are premised on the Commission’s own independent assessment relative to Marin LAFCO’s growth management interests and drawn from the information collected and analyzed between a five-year period of 2010 to 2014.

- **No. 1 | Agencies' Substantive Role on Growth in Marin County**

The seven affected agencies organized to provide public wastewater services in Central Marin directly affect nearly one-half of all county residents as estimated by the Commission, and as such have a significant role in accommodating growth and development in Marin County. This relationship is marked by the seven agencies' service areas collectively accounting for an estimated 124,182 total residents and equals 48% of the entire countywide population as of the study period term.

- **No. 2 | Service Areas are Nearing Current Residential Buildout; Growth Exceeding Earlier Estimates**

The Commission projects the seven affected agencies are collectively at 89% of their current planned residential buildout as of the term of the study period with the expectation this ratio will increase to 94% over the succeeding 10-year period. This includes the Commission estimating the affected agencies will collectively add close to 6,530 new residents over the succeeding 10-year period and result in a joint annual growth rate of 0.53% through 2024. Markedly, this Commission projection – which draws on actual trends during the study period – suggests the region's population is exceeding by more than one-fourth estimates previously made by the Association of Bay Area Governments or ABAG.¹⁰

- **No. 3 | Increasing Diseconomies of Scale**

It is reasonable to assume the underlying constraints towards new growth in Central Marin will persist given restrictive planning policies and community preferences, and as such limit opportunities for the affected agencies to spread out costs among a greater pool of ratepayers. The net effect is an increasing diseconomies of scale where the affected agencies' costs to maintain wastewater infrastructure continues to exceed associated revenues as evident during the study period; the latter highlighted by the combined increase in operating expenses outpacing the combined increase in operating revenues by three-fold.

¹⁰ Drawing from a publication issued in 2013 ABAG projects the Central Marin region will experience an overall increase in population over succeeding 10-year period of 5,208 and result in an annual population change of 0.42%.

- **No. 4 | Variation in Civic Engagement; Board Type Matters**

All seven affected agencies appear generally accountable to their constituents in the ongoing provision of public wastewater services within their respective service areas. The level and effectiveness of engagement between agency and customer in Central Marin, nonetheless, appears expressively highest among LGVSD and RVSD. This observation suggests a direct correlation between board type and responsiveness with favor assigned to independent public agencies with directly elected members.

- **No. 5 | Immediate Merit to Reorganize MPSMD and SQVSMD**

It appears two separate governance alternatives are readily merited to improve local accountability and service efficiencies and irrespective of other potential changes under consideration in Central Marin. This involves proceeding with reorganizations to dissolve MPSMD and SQVSMD and concurrently place their respective service areas in RVSD either by consolidation or annexation. These reorganizations would eliminate two dependent special districts governed by the County of Marin and operating under antiquated statutes in favor of recognizing RVSD as the preferred and more capable service provider going forward.

- **No. 6 | Additional Merit to Explore Regional Consolidation**

Information collected and analyzed in this study provides sufficient merit for the Commission to further evaluate options and merits to reorganize and consolidate public wastewater services in Central Marin and most pertinently among agencies in the Ross Valley (RVSD, CSD No. 2, MPSMD) and San Rafael Creek (SRSD, CMSA, SQVSMD) Watersheds. This topic – which has been previously reviewed by some of the agencies specific to assessing cost-savings – responds to Marin LAFCO’s directive to independently assess the notional sense affirmed in this study that consolidation would appear primed to produce greater accountability and efficiency within the combined watershed. The topic should be explored in addendum form and calendared as part of a future work plan. It should be premised on identifying merits/demerits of regionalization in improving costs, accountability, and efficiency while being sufficiently fair to all agencies and their ratepayers in terms of shared control.

- **No. 7 | Wastewater Demands De-Intensifying During Normal Conditions**

Overall relative demand – i.e., annual wastewater flow measured by residents – in Central Marin during the study’s five-year term has decreased within all seven affected agencies’ service areas with daily per capita demands declining from 133 to 111 gallons; a reduction of 20%. Similar reductions are also reflected in dry-weather and wet-weather periods with the former measurement – dry-weather – highlighting that wastewater demands are de-intensifying during normal conditions. This reduction appears most attributed to ratepayer diligence in water conservation in step with the drought; whether conservation practices hold going forward remains uncertain. Advancements in uniform plumbing standards as well as the developing practice of gray-water systems are also noted.

- **No. 8 | Wastewater Demands Intensifying During Peak-Day Conditions; Increasing Impacts from Inflow and Infiltration**

Overall – and contrast to other flow measurements – relative peak-day demands (highest 24 hour totals) in Central Marin have increased within all seven affected agencies’ service areas with the daily per capita use increasing from 852 to 901 gallons during the study period; a rise of 5.8% and a corresponding peaking factor of nearly 11-fold. This dynamic appears most attributed to changes in weather patterns and a rise in brief storm events yielding higher levels of intensity, leading to more susceptibility of inflow and infiltration within the wastewater systems. Projected peak-day conditions show some improvement in lessening peak-day demand impacts on the wastewater systems going forward with the affected agencies’ combined peaking factor falling under 10-fold by 2024.

- **No. 9 | Collection System Capacities are Sufficient to Accommodate Demands Now and Projected Over the Next 10 Years Without Stress**

The seven affected agencies’ collection systems within Central Marin have sufficient capacities to meet current demands within their respective service areas under normal and peak conditions. This sufficiency is demonstrated by observing the highest agency demand-to-capacity ratio specific to collection systems during peak-day periods was 72% within RVSD. No substantive changes in these ratios are projected by the Commission over the next 10 years.

- **No. 10 | Treatment System Capacities are Sufficient to Accommodate Demands Now and Projected Over the Next 10 Years With Some Stresses**

The two entities responsible for providing wastewater treatment services within Central Marin – LGVSD and CMSA – have sufficient capacities based on demand averages over the study period as well as projected flows over the succeeding 10-year period, albeit to different allowances and stress levels. LGVSD is best positioned now and going forward in meeting wastewater demands with no single measurement (i.e., dry, wet, peak) ratio exceeding 70% of capacity. CMSA’s treatment capacities are comparatively closer to approaching design and or permit limits and highlighted by current peak and dry weather flows within the contracted service area equaling 79% and 85% of capacity, respectively.

- **No. 11 | Near-Term Finances in Generally Good Shape and Highlighted by Liquidity and Capital; Margin Levels Mixed**

A review of the audited financial statements covering five of the seven affected agencies – LGVSD, SRSD, RVSD, CSD No. 2, and CMSA – show these entities finished the study period in generally good financial standing as measured by liquidity, capital, and – albeit at more mixed results – margin levels. This includes noting all five of these affected agencies maintained moderate to high liquidity averages and marked by having no less than 315 days’ cash on hand as well as no less than a 2 to 1 current ratio; meaning the agencies at a minimum ended with \$2 in current assets for every \$1 in short-term liabilities/obligations. All five of the agencies also finished the study period with available capital with no more than 51% in debt relative to net assets. Year-end profit levels as measured by total margin – the net difference between all revenues less all expenses including depreciation – largely stayed positive with a combined study period average of 14% with the notable exception of CSD No. 2 and CMSA both finishing the study period with slight losses.¹¹ Audited statements specific to the other two affected agencies – MPSMD and SQVSMD – were not available in preparing this report.

¹¹ Total margin includes expensing depreciation.

- **No. 12 | Climate Change Requires Resiliency in Wastewater Planning**

With increasingly serious climate impacts due to higher temperatures, such as more frequent droughts, storm surges and rising sea levels throughout Marin County, all seven affected agencies' demands, infrastructure and capacities are likely to be disturbed and deviate from historical norms. The affected agencies, accordingly, should explore and implement strategies to help reduce climate impacts and allow for greater flexibility in preparing for external shocks and stresses. Future municipal service reviews should focus on activities and progress made by the affected agencies in this respect.

4.2 Recommendations

The following recommendations call for specific action either from the Commission and or by the affected agencies based on information generated as part of this study and outlined below in order of their placement in Section 6.0 (Written Determinations). Recommendations for Commission action are dependent on a subsequent directive from the membership and through the adopted work plan.

1. The Commission should proactively work with local agencies – and in particular water, wastewater, and fire providers – to develop a definition of “disadvantaged unincorporated community” consistent with SB 244 to ensure an appropriate and equitable level of municipal services is available for qualifying areas in context to local conditions.
2. CMSA should develop a plan to allocate treatment capacity among its member agencies to enhance regional growth management. This plan would appropriately inform each member agency as well as local land use authorities with more certainty with respect to their ability to forecast and accommodate new development within their jurisdictional boundaries going forward.
3. CSD No. 2 should make additional efforts to distinguish itself as a stand-alone governmental entity separate from the Town of Corte Madera. An example herein would include developing stand-alone contracting arrangements with Corte

Madera outlining specific services and costs therein with respect to the existing use of Town staff, supplies, and resources in carrying out District duties.

4. CMSA should reorganize its governing board structure to limit and or remove the City of Larkspur's presence within the joint powers authority to better align and weight governance with vested participation among member agencies.
5. SRSD should designate the lone board seat statutorily dedicated to a member of the County of Marin to the incumbent holding Supervisor District 1 given it covers nearly all of the jurisdictional boundary and approximately 70% of the District's *unincorporated* ratepayers (emphasis). This designation would provide a more logical and direct match between SRSD voters and their appointed representative.
6. Corrective action is needed to appropriately amend jurisdictional boundaries to better align service areas with existing property lines within the Ross Valley and San Rafael Creek Watersheds. Similarly, boundary clean-ups are needed to correct instances where actual service provision in this sub-region does not match up with assigned jurisdictional boundaries.
7. The Commission should consider proceeding with reorganizations to dissolve MPSMD and SQVSMD and concurrently place their respective service areas in RVSD. These reorganizations would eliminate two dependent special districts governed by the County of Marin in favor of recognizing RVSD as the preferred and more able service provider going forward.
8. The Commission should consider authorizing a future addendum to fully evaluate options to reorganize and consolidate public wastewater services in Central Marin and most pertinently among agencies in the Ross Valley and San Rafael Creek Watersheds. This topic – which has been previously reviewed by some of the agencies specific to assessing cost-savings but not the Commission – responds to Marin LAFCO's directive to independently assess the notional sense affirmed in this study that a consolidation would appear primed to produce greater accountability and efficiency within the combined watershed.

9. Septic systems are increasingly problematic in urban and or developing areas in Central Marin and pose a public safety threat to the health and environment of the agencies' service areas. The affected agencies should work to identify all septic systems within their respective areas in step with resiliency planning and determining future system risks.
10. Land use authorities in Central Marin should match the affected wastewater service provider with potential development opportunities in their housing elements as a means to better sync land use and service planning in the region.
11. The affected agencies in Central Marin should coordinate efforts to establish policies and protocols in addressing the increasing effects of climate change relative to wastewater services. This includes resiliency planning with respect to droughts, storm events, and raising water tables.

5.0 WRITTEN DETERMINATIONS

The Commission is directed to prepare written determinations to address the multiple governance factors enumerated under G.C. Section 56430 anytime it prepares a municipal service review. These determinations serve as independent statements based on information collected, analyzed, and presented in this study's subsequent sections. The underlying intent of the determinations is to provide a succinct

These determinations detail the pertinent issues relating to the planning, delivery, and funding of public wastewater services relative to the Commission's interests. Determinations based on data collected and analyzed between 2010 to 2014.

detailing of all pertinent issues relating to the planning, delivery, and funding of public wastewater services in Central Marin specific to the Commission's growth management role and responsibilities. An abridged version of these determinations will be separately prepared for Commission consideration and adoption with the final report.

5.1 Growth and Population Projections

- 1) The Commission estimates there are 124,182 total residents served by the seven affected agencies responsible for providing public wastewater services in Central Marin as of the end of the study period. It is also estimated the combined resident population has increased by 3,037 or 2.5% over the 60-month study period; the net effect resulting in a combined annual growth rate of 0.6%.
 - a) Recent residential growth as estimated by the Commission during the study period has exceeded by more than one-fourth earlier projections made for the Central Marin region by ABAG.
- 2) The Commission estimates resident growth in Central Marin during the study period has been disproportionately concentrated within SRSD and RVSD. These two agencies collectively account for nearly nine-tenths of all new estimated growth in the region over the preceding 60-month period.
- 3) The Commission assumes calculated growth rates in Central Marin over the five-year study period will generally hold in the near-term. To this end, it is estimated the region will experience an overall net increase in population of 6,530 over the succeeding 10-year period and total 130,712 by 2014.
- 4) The Commission estimates the housing market has produced 1,199 new occupied units in Central Marin over the course of the five-year study period. This results in a corresponding ratio of 2.56 new residents for every new occupied housing unit added in the region.
- 5) RVSD accounts for 37% of all occupied housing units within the region as of the study period term; the most of any of the affected agencies. RVSD also experienced the largest increase in new occupied housing units during the study period tallying 694 or 3.9% overall.

- 6) Should residential buildout plans proceed as currently contemplated by the County of Marin and other overlapping land use authorities the housing unit stock in Central Marin will increase by 3,352 and result in the estimated addition of 8,268 residents; a net increase of 6.7% through the end of 2024.
- 7) Current demographic information shows marked differences between SRSD and the other six affected agencies providing public wastewater services in Central Marin in both economic and social measurements. These differences include SRSD finishing the study period with significantly lower household incomes along with high poverty and unemployment rates. Distinctions among and within the other six affected agencies are less evident.
- 8) The Commission estimates there are 28,475 total residents within LGVSD that are explicitly served by the District's wastewater collection and treatment system as of the term of the study. It is further estimated LGVSD has experienced an overall population increase of 261 over the preceding five-year period, resulting in an annual growth rate of 0.2%.
 - a) New and occupied housing units within LGVSD over the study period is estimated by the Commission at 263 coupled with a net change in persons per household – i.e., an intensity measurement – of (1.2%).
 - b) The Commission estimates LGVSD is at 88% of the service area's current residential buildout projection relative to applicable land use policies.
- 9) The Commission estimates there are 40,744 total residents within SRSD that are explicitly served by the District's wastewater collection system as of the term of the study. It is further estimated SRSD has experienced an overall population increase of 1,363 over the preceding five-year period, resulting in an annual growth rate of 0.7%.
 - a) New and occupied housing units within SRSD over the study period is estimated by the Commission at 153 coupled with a net change in persons per household – i.e., an intensity measurement – of 2.7%.

- b) The Commission estimates SRSD is at 87% of the service area's current residential buildout projection relative to applicable land use policies.
- 10) The Commission estimates there are 40,809 total residents within RVSD that are explicitly served by the District's wastewater collection system as of the term of the study. It is further estimated RVSD has experienced an overall population increase of 1,356 over the preceding five-year period, resulting an in annual growth rate of 0.7%.
- a) New and occupied housing units during the study period within RVSD are estimated by the Commission at 694 coupled with a net change in persons per household – i.e., an intensity measurement – of (4.5%).
 - b) The Commission estimates RVSD is at 90% of the service area's current residential buildout projection relative to applicable land use policies.
- 11) The Commission estimates there are 9,874 total residents within CSD No. 2 that are explicitly served by the District's wastewater collection system as of the study term. It is further estimated CSD No. 2 has experienced an overall population increase of 86 over the preceding five-year period, resulting an in annual growth rate of 0.2%.
- a) New and occupied housing units over the study period within CSD No. 2 is estimated by the Commission at 87 coupled with a net change in persons per household – i.e., an intensity measurement – of (11.1%).
 - b) The Commission estimates CSD No. 2 is at 97% of the service area's current residential buildout projection relative to applicable land use policies.
- 12) The Commission estimates there are 191 total residents within MPSMD that are explicitly served by the District's wastewater collection system as of the term of the study. It is further estimated MPSMD has experienced an overall population increase of 16 over the preceding five-year period, resulting an in annual growth rate of 1.8%.

- a) New and occupied housing units over the study period within MPSMD is estimated by the Commission at one coupled with a net change in persons per household – i.e., and intensity measurement – of 7.1%.
- 13) The Commission estimates there are 89 total residents within SQVSMD that are explicitly served by the District’s wastewater collection system as of the term of the study. It is further estimated SQVSMD has experienced an overall population decrease of six persons over the preceding five-year period, resulting an in annual growth rate of (1.8%).
- a) New and occupied housing units over the study period within SQVSMD is estimated by the Commission at zero coupled with a net change in persons per household – i.e., and intensity measurement – of (8.8%).
- 14) The Commission estimates there are 95,428 total residents within CMSA that are explicitly served by the District’s treatment system as of the term of the study; an amount that includes inmates at San Quentin State Prison. It is also estimated CMSA has experienced an overall population increase of 1,356 over the preceding five-year period, resulting in an annual growth rate of 0.7%.
- a) New and occupied housing units during the study period within CMSA are estimated by the Commission at 934 coupled with a net change in persons per household – i.e., an intensity measurement – of 0.9%

5.2 Location and Characteristics of Any Disadvantaged Unincorporated Communities in the Area

- 1) There are no unincorporated areas within Central Marin or immediately adjacent therein that presently qualify as disadvantaged under the statewide definition based on recent census information.

- 2) The unincorporated community of Nicasio previously qualified as disadvantaged under the statewide definition before slightly exceeding the median household income threshold in the latest census. This community and its estimated population of 130 is in relative proximity to LGVSD – though outside the District’s present sphere of influence – and currently dependent on private septic systems.
- 3) It is possible other unincorporated communities in or adjacent to Central Marin would qualify as “disadvantaged” upon completion of the Commission’s scheduled policy review to establish its own definition in implementing Senate Bill 244 (Wolk). The Commission should proactively work with other local agencies – and in particular water, wastewater, and fire providers – in developing a definition to meet the legislation’s intent to ensure an appropriate and equitable level of municipal services is available to all qualifying areas.

5.3 Capacity of Public Facilities and Infrastructure Needs and Deficiencies

- 1) The Commission estimates the average total daily flow of wastewater collected by the seven affected agencies in Central Marin during the study period tallies 14.6 million gallons, or 120 gallons for every person. Additional wastewater flow tallies collectively generated over the 60-month period follow.
 - a) Average dry-day wastewater flows during the study period tallies 11.1 million gallons, or 91 gallons for every person.
 - b) Average wet-day wastewater flows during the study period tallies 18.1 million gallons, or 148 gallons for every person.
 - c) Average peak-day wastewater flows generated over 24 hours during the study period tallies 102 million gallons, or 855 gallons for every person.
- 2) The Commission estimates total annual wastewater flows generated among the seven affected public agencies’ services areas in Central Marin have decreased overall by (17%) and results in a net daily demand savings of 2.7 million gallons.

- 3) All of the affected agencies experienced decreases in annual wastewater flows in their respective collection systems serving Central Marin during the study period ranging from a high of (23%) in RVSD to a low of (1%) in CSD No. 2.
- 4) Changes in the affected agencies' combined annual wastewater flow totals during the study period closely matches year-end rainfall counts for Central Marin and highlighted in 2013 – the apex of the parallel drought – when collected flows fell to a period low average of 12.8 million per day. This correlation indicates, albeit differently among the collection systems, the existence of excessive infiltration and inflow throughout the region.
- 5) The combined average peaking-factor among the seven affected agencies' service areas in Central Marin generated during the study period tallies 9.2. This amount further quantifies excessive amounts of runoff and or groundwater are entering the collection systems and – among other adverse impacts – contributing to the 317 reported sanitary overflows in the region during the 60-month period.
- 6) It appears the primary sources of excessive infiltration and inflow within Central Marin is occurring within RVSD and SRSD given these agencies' collection systems account for over 90% of all reported overflows during the study period.
- 7) All of the affected agencies with collection systems and or treatment facilities in Central Marin are accounting and funding therein replacement of their capital infrastructure, albeit to different degrees and accordingly producing a sizable range in equipment age among the agencies. The average age of capital equipment among the affected agencies as of the study period term is 21 years and bookmarked by a low – or youngest – of 12 years within CSD No. 2 and a high – or oldest – of 30 years within RVSD.
- 8) All of the wastewater collection systems within Central Marin appear adequately sized in accommodating current and projected flow demands. This comment is substantiated given none of the affected agencies' collection systems' peak-day demands generated during the study period exceed 72% of estimated capacity.

- 9) LGVSD is the entity responsible for treating and disposing all wastewater generated within the Las Gallinas Watershed portion of Central Marin and has adequate capacity to accommodate current and projected flows through the 10-year timeframe of this study. This includes the Commission projection that no demand measurement will exceed 70% of capacity now and through 2024.
- 10) CMSA is the entity responsible for treating and disposing all wastewater generated within the Ross Valley and San Rafael Creek Watersheds portion of Central Marin and has adequate – albeit more narrowly – capacity to accommodate current and projected flows through the 10-year timeframe of this study. The most pressing demand measurement within CMSA involves dry weather flows and highlighted by averages during the study period reaching 85% of the treatment facility’s permitted capacity.

5.4 Agencies’ Financial Ability to Provide Services

- 1) Approximately three-fourths of operational costs underlying public wastewater services in Central Marin are generated from direct revenues based on a combined earned income ratio generated during the study period of 76%.
 - a) Earned income ratios during the study period ranged from 91% in SRSD to 55% in CSD No. 2; a difference of nearly two-thirds.
- 2) Resident accounts make up no less than 89% of any one affected agency’s total wastewater service connections in Central Marin as of the study period term with the average annual residential charge – the principal source of direct revenue – tallying \$710 as of the study period term.
 - a) The annual residential charge for wastewater services in Central Marin as of the study term varies significantly and bookended between \$1,067 in RVSD (Larkspur) and \$472 in MPSMD.

- 3) Opportunities to increase direct revenues among all seven affected agencies in Central Marin in support of their respective public wastewater systems is substantively constrained given two external factors. First, opportunities to spread-out costs among additional customers is limited given community preferences – which are reflected in local land use policies – to limit new growth. Second, opportunities to raise rates and or establish assessments are constrained under State law to require majority landowner approval.
- 4) Indirect revenues support the remaining and approximate one-fourth of operational costs underlying public wastewater services in Central Marin and largely derived from the distribution of property taxes. The average property tax distribution rate among the affected agencies - less CMSA as a joint-powers - is 1.9% of the 1.0% in total ad-valorem.
- 5) Large variances exist with respect to individual agency shares of the 1.0% of property tax collected within Central Marin. RVSD receives the highest property tax distribution rate at 7.8% and is more than four times greater than the next highest of 1.5% by SRSD. The lowest distribution rate is SQVSMD at 0.03%.
- 6) The affected agencies in Central Marin finished the study period with a combined net asset total of \$245.2 million as of the study period term. This amount has collectively increased during the study period by 13% and more than one-half greater than the corresponding inflation rate for the greater Bay Area region.
- 7) Overall unrestricted fund balances for the affected agencies in Central Marin collectively tally \$66.0 million at the end of the study period. This amount has jointly increased during the study period by 65% and more than five times greater than the corresponding inflation rate for the greater Bay Area region.
 - a) LGVSD has experienced the largest percentage increase in unrestricted fund balances during the study period at 132% followed by RVSD at 94%, SRSD at 78%, CMSA at 23%, and CSD No. 2 at (16%).
 - b) Information for SQVSMD and MPSMD is not available as of date of this report.

- 8) Five of the seven affected agencies – LGVSD, SRSD, RVSD, CSD No. 2, and CMSA – have pension obligations. These agencies collectively experienced an approximate 29% rise in annual contributions during the study period.
 - a) Increases in annual pension contributions among the five agencies range from 78% in RVSD to 1% in CSD No. 2 (Corte Madera).
- 9) All five affected agencies with pension obligations – directly or indirectly through their parent agency – have improved their funded status over the course of the study period by no less than 7%.
 - a) Improvements in funded status among the five agencies range from 16% in LGVSD to 7% in CSD No. 2 (Corte Madera).
- 10) Four of the five affected agencies – LGVSD, RVSD, CSD No. 2, and CMSA - with pension obligations finished the study period with funded status ratios near or above 80%; the standard threshold used in governmental accounting to identify relatively stable pension plans. The remaining agency – SRSD – ended the study period with a funded status of 72%.
- 11) Four of the five affected agencies – LGVSD, SRSD, CSD No. 2, and CMSA – experienced decreases in their active-to-retiree ratio during the study period. RVSD experienced no change.
 - a) RVSD finished the study period with the highest ratio at 1.81 active employees to every 1.00 retiree, while CSD No. 2 had the lowest ratio with 0.36 active employees to every 1.00 retiree.

5.5 Status and Opportunities for Shared Facilities and Resources

- 1) Ratepayers within the Ross Valley and San Rafael Creek Watershed portion of Central Marin have benefited from the ongoing costs savings associated with the creation of CMSA and construction and operation therein of a single and jointly-owned wastewater treatment facility serving multiple jurisdictions.

- 2) CMSA should develop a formal plan to dedicate remaining treatment capacity among its member agencies based on assigning an ultimate equivalent dwelling unit allocation. This plan would significantly enhance regional growth management by providing each member agency and all associated land use authorities more certainty in their ability to appropriately match wastewater provision with future development projects within their respective jurisdictions.
- 3) There appears to be relatively limited engagement between LGVSD and the remaining affected agencies within Central Marin despite comparatively close service areas. Opportunities should be explored for the benefit of region ratepayers to establish more connectivity among all agencies in sharing costs and expertise commonly underlying the management and operation of public wastewater systems.
- 4) LGVSD has taken a leadership role in investing resources to repurpose wastewater into recycled water supplies for beneficial use within its jurisdictional boundary and through an ongoing partnership with Marin Municipal Water District. LGVSD has more recently partnered with North Marin Water District to provide recycled water for irrigation and landscape purposes to the Hamilton area. Additional partnerships should be explored to expand the potential reach of repurposed wastewater throughout the rest of Central Marin.
- 5) Affected agencies should continue to participate in programs that focus on sustainability opportunities, such as the North Bay Watershed Association where member agencies (LGVSD, RVSD, CMSA) foster partnerships to promote, protect, and reuse regional resources for the collective benefit of their constituents.

5.6 Local Accountability and Government Restructure Options

- 1) Residents throughout Central Marin similarly benefit from the aptitude and responsiveness of board and senior management within all seven affected agencies. These attributes create trust with ratepayers and help ensure their

ongoing financial investment in the agencies' wastewater systems are appropriately safeguarded.

- 2) There has been noticeable improvement in membership relations within CMSA during the course of the study period that ultimately benefits ratepayers. This improvement appears aided in large part to board and management change within RVSD and, among other benefits, contributed to the recent settlement of litigation within CMSA.
- 3) Additional efforts should be taken by CSD No. 2 to distinguish its role as a stand-alone governmental entity separate from the Town of Corte Madera. This includes developing stand-alone contracting arrangements with Corte Madera outlining specific services and costs therein with respect to the existing use of Corte Madera staff, supplies, and resources in carrying out District duties.
- 4) CMSA's governing structure appears outdated given the dedication of one of its six-member regular board seats to the City of Larkspur; an entity that ceased wastewater services in 1993 in step with the annexation of its service area to RVSD, and as such is no longer a funding contributor. Reorganization of the board, accordingly, appears appropriate to limit and or remove Larkspur's presence on CMSA to better align and weight governance with vested participation among member agencies.
- 5) SRSD's dependent governance structure would be enhanced by formally designating the lone board seat dedicated to a member of the County of Marin to the incumbent holding Supervisor District 1 given it covers nearly all of the jurisdictional boundary and approximately 70% of all unincorporated ratepayers. This designation would provide a more logical and direct match between SRSD voters and their appointed representative.

- 6) Two separate governance alternatives appear readily merited to improve local accountability and service efficiencies in Central Marin. This involves immediately proceeding with reorganizations to dissolve MPSMD and SQVSMD and concurrently place their respective service areas in RVSD by annexation or consolidation. These reorganizations would eliminate two dependent special districts governed by the County of Marin subject and inhibited therein to antiquated statutes in favor of recognizing RVSD as the preferred and more capable service provider going forward.
- 7) Irrespective of other determinations it appears appropriate for the Commission to evaluate options to potentially reorganize and consolidate public wastewater services in Central Marin and most pertinently among agencies in the Ross Valley and San Rafael Creek Watersheds. This topic – which has been previously reviewed by the agencies specific to assessing cost-savings but not the Commission – responds to Marin LAFCO’s directive to independently assess the notional sense affirmed in this study that a consolidation would appear primed to produce greater accountability and efficiency within the combined watershed.
- 8) Corrective action is needed to appropriately amend jurisdictional boundaries to better align service areas with existing property lines within the Ross Valley and San Rafael Creek Watersheds. Similarly, boundary clean-ups are needed to correct instances where actual service provision in this sub-region does not match up with assigned jurisdictional boundaries.

5.7 Matters of Local Interests as Required by Policy | Relationship Between Services and Land Use Policies

- 1) There is merit for more connectivity between planning wastewater services with land use policies of the local cities, towns, and County of Marin to manage future growth within Central Marin. A coordinated effort among municipalities could also promote better use of federal funds.

- 2) Land use authorities in Central Marin should match the affected wastewater service provider in step with identifying potential development opportunities in preparing housing element updates as a means to connect growth with service.

5.8 Matters of Local Interests as Required by Policy | Planning for Climate Change

- 1) The affected agencies in Central Marin should coordinate efforts to establish policies and protocols in addressing the increasing effects of climate change relative to wastewater services. This includes resiliency planning with respect to droughts, storm events, raising water tables as well as future demands.
- 2) The Commission, affected agencies and the County of Marin's Environmental Health Services Department should work to identify all remaining septic systems – active and inactive – within Central Marin and proactively partner in connecting these properties with the appropriate public wastewater system.

CHAPTER THREE REGIONAL CHARACTERISTICS & COMPARISONS

1.0 SERVICE AREAS

1.1 Population Trends

The resident population collectively served by the seven affected public agencies responsible for providing wastewater services in the region is estimated by the Commission at 124,182 as of the term of this study period (2014).²⁰ This estimate is specific to residents directly tied to the agencies' collection systems. It is also estimated the affected agencies are collectively at 89.3% of their projected and combined near-term planned buildout of 132,450. The planned near-term buildout is based on the potential for up to 3,352 new units that *may* be built subject to market demand and project approvals and as detailed in the accompanying footnote.²¹

LAFCO estimates there are 124,182 total residents served by the seven public agencies responsible for providing public wastewater services in the region as of the end of this study period. It is also estimated the combined service population has increased by 3,037 or 2.5% over the study period and presently at 89% of the region's planned buildout under existing land use policies

Estimated resident totals within all seven affected agencies has increased by a combined net of 3,073 persons and reflects an overall 2.54% or 0.51% growth rate over the five-year study period. Nearly all of the estimated net addition in residents over the study period is directly tied to growth within three agencies: SRSD; RVSD; and – to a lesser extent – LGVSD. These three agencies collectively

Overall estimated resident growth in the region during the study period has been disproportionately concentrated within SRSD and RVSD. These two agencies alone account for 88% of all new estimated growth in the region over the preceding 60-month period.

²⁰ The estimated total resident service population of 124,182 as of the term of this study period has been independently calculated by the Commission and premised on deference to occupied housing driving resident estimates based on data collected within the subject census tracts. Four distinct calculations underlie the estimates and involve projecting a) total housing units, b) local occupancy rates, c) occupied housing units, and d) household sizes. The calculation also includes a flat assignment of 4,000 residents for the San Quentin State Prison.

²¹ The calculation of planned near-term buildout is drawn analyzing data included in the applicable land use authorities' certified housing elements covering the 2015-2023 period and specific to each agency's service area. The housing unit total is paired with household size averages for each agency calculated by the Commission.

account for 97% of the projected new growth within the region with SRSD and RVSD leading the change with net additions of 1,363 and 1,355, respectively. Estimated resident growth within the other four affected agencies in the region accounts for the remaining 3% of the net change during the study period and led numerically by CSD No. 2 at 86. The other three affected agencies in the region – MPSMD, SQVSMD, and CMSA - collectively account for a net increase of 8 over the preceding 60-month period.²²

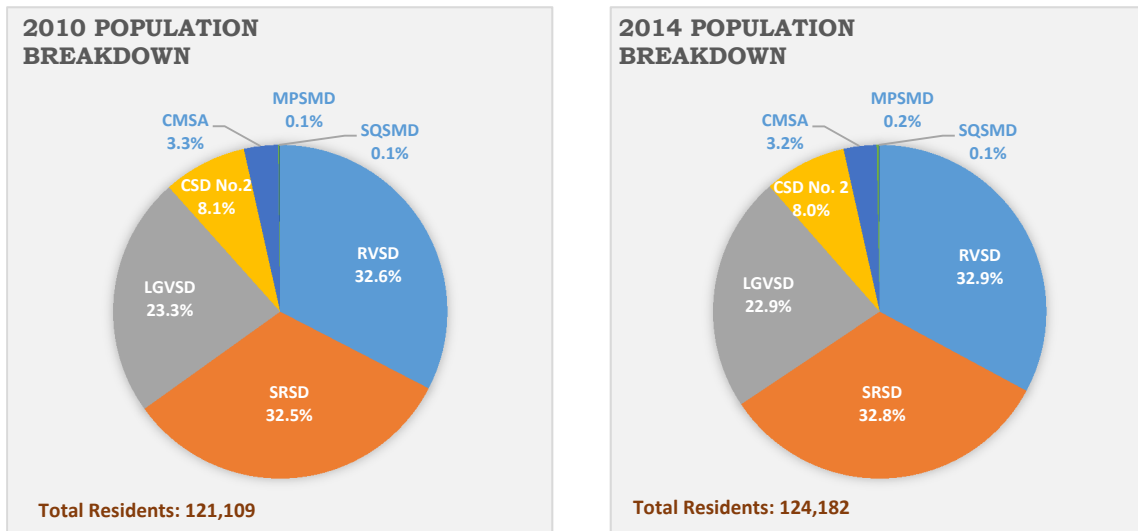


Figure 3.1

With respect to projections going forward, and for purposes of this study, it is assumed the resident growth rate within all seven affected agencies will generally match the five-year study period (2010-2014). This assumption produces an overall and projected annual change of less than one-tenth of a percent or 0.53% in resident growth over the succeeding 10-year period. The substantive result of this assumption would be an overall increase in the combined resident service population of 6,530 and produce a total of 130,712 by

Should growth rates over the five-year study period hold it is projected the region will experience an overall net increase in population of 6,530 over the succeeding 10-year period and total 130,712 by 2024. This latter amount would equal nearly 94% of the region's planned buildout under existing land use policies.

²² Resident population changes during the study period for the affected agencies as projected by Marin LAFCO collectively tallied 3,073 and divided among LGVSD at 261, RVSD at 1,355, SRSD at 1,363, CSD No. 2 at 86, MPSMD at 16, and SQVSMD at (8). The Commission's resident calculation for CMSA reflects a flat and stagnant 4,000 person assignment associated with directly serving the San Quentin State Prison. The remainder of CMSA's service population – estimated at 120,182 as of the study period term – is assigned to the associated collection system operator/district.

2024; an amount equaling 94.0% of the planned buildout of the region under current land use policies.

Resident Population Projections						
Table 3.1 Marin LAFCO						
Agency	2010	2014 -Baseline-	2024	Annual Trend	@ Near-Term Buildout	Population
Las Gallinas Watershed	LGVSD	28,214	28,475	29,005	0.12	32,329
	RVSD	39,454	40,809	43,702	0.71	45,430
Ross Valley and San Rafael Watersheds	SRSD	39,381	40,744	43,655	0.71	46,701
	CSD No. 2	9,788	9,874	10,048	0.18	10,202
	MPSMD	175	191	228	1.94	244
	SQVSM	97	89	74	(1.69)	100*
	CMSA (State Prison)	4,000	4,000	4,000	0.0	4,000
	Totals:	121,109	124,182	130,712	0.53%	139,006

* The term “**buildout**” is specific to near-term planning estimates and based on land inventories conducted by the applicable land use authorities as part of the 2015-2023 housing element cycle. The buildout amount does not take into consideration second units and will be presumably revised and increased for the 2024-2032 period in step with the next housing element cycle.

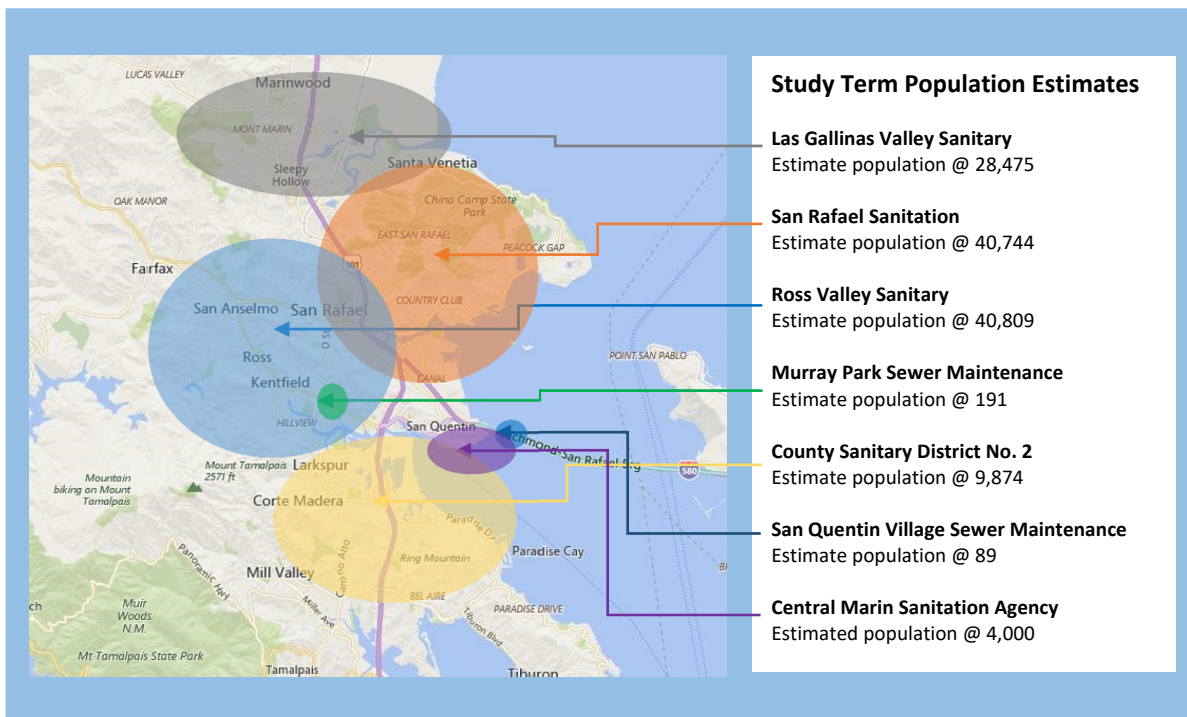


Figure 3.2

1.2 Resident Characteristics | Housing Volume, Density, Type and Buildout

The Commission projects the estimated resident population of 124,182 as of the term of the study period within the seven affected agencies is divided among 49,873 total *occupied* housing units.²³ This total reflects a net increase of 1,199 new occupied housing units within the region over the five-year study period or 2.46% overall or 0.49% annually. It also produces a household density of 2.41 persons for every occupied unit in the region once the population from San Quentin State Prison is discounted; the former of which marks a difference of three-tenths of one percent over the preceding 60 months.²⁴

The Commission estimates there are 1,199 new occupied housing units in the region over the course of the five-year study period. Notably, this produces a corresponding ratio of 2.56 additional residents generated for every new housing unit.

In terms of the distribution of the occupied housing units within the region as of the term of the study period the single largest amount and accounts for nearly four-tenths – or 37% – lies within RVSD with a net total of 18,508. This latter amount also produces a corresponding density ratio of 2.22 persons per home. RVSD also experienced the largest net and percentage increase with the addition of 694 new occupied housing units over the 60-month period; a difference of 3.90% overall or 0.78% annually. The second largest source of occupied housing units among the affected agencies lies within SRSD at 15,260 and accounting for 30% of the regional total. It also produces a corresponding density ratio in SRSD at 2.67; the highest ratio therein among all affected agencies in the region.

RVSD accounts for 37% of all occupied housing units within the region as of the study period term; the most of any of the affected agencies. RVSD also experienced the largest increase in new occupied housing unit during the study period tallying 694 or 3.90% overall.

A summary of occupied housing unit and density ratio estimates therein among all seven of the affected agencies follows.

²³ For purposes of this study the Commission assigned deference to projecting and analyzing occupied housing units as opposed to total housing units.

²⁴ The overall region's housing density as of the study period's term is 2.4097 persons for every one occupied unit. This ratio is nearly identification to the ratio in 2010 totaling 2.4059.

Occupied Housing Volume and Density Estimates Table 3.2 Marin LAFCO						
Agency	2010 Totals		2014 Totals		Study Period Trends	
	Housing	Density	Housing	Density	Housing	Density
Las Gallinas Watershed						
LGVD	11,265	2.505	11,528	2.470	2.33%	(1.40%)
Ross Valley and San Rafael Watersheds						
RVSD	17,814	2.215	18,508	2.205	3.90%	(0.45%)
SRSD	15,107	2.607	15,260	2.670	1.01%	2.42%
CSD No. 2	4,360	2.245	4,448	2.220	2.02%	(1.11%)
MPSMD	87	2.022	88	2.170	1.15%	7.32%
SQSMD	41	2.368	41	2.160	0.0%	(8.78%)
CMSA	0	0	0	0	0.0%	0.0%
Totals	48,674	2.401	49,873	2.409	2.46%	0.33%

Housing Type Estimates Table 3.3 Marin LAFCO						
Agency	2010 Totals		2014 Totals		Study Period Trends	
	Single Family	Multi Family	Single Family	Multi Family	Single Family	Multi Family
Las Gallinas Watershed						
LGVD	79.36%	20.64%	78.37%	21.63%	(1.25%)	4.80%
Ross Valley and San Rafael Watersheds						
RVSD	70.21%	29.79%	69.67%	30.33%	(0.77%)	1.81%
SRSD	54.74%	45.26%	53.37%	46.63%	(2.50%)	3.03%
CSD No. 2	74.75%	25.25%	74.43%	25.57%	(0.43%)	1.27%
MPSMD	66.02%	33.98%	63.30%	36.70%	(4.12%)	8.00%
SQSMD	59.63%	40.37%	63.17%	36.83%	5.94%	(8.77%)
CMSA	61.09%	38.91%	63.36%	36.61%	3.72%	(5.91%)
Average	66.5%	33.5%	66.5%	33.5%	0.1%	0.6%

Additional residential development – albeit to different degrees – is planned within all seven affected local agencies’ service areas, and accordingly represents an impact on the availability of future capacities going forward. The central source for this future planning is largely tied to State law and its requirement for land use authorities (i.e., cities, towns, and counties) to

It is anticipated 3,352 new housing units – producing a projected 8,268 additional residents – will be constructed within the affected agencies’ jurisdictions at buildout based on current land use policies.

include housing elements in their general plans that make adequate provision for existing and projected housing needs of all economic segments of the community. These underlying statutes were amended by Senate Bill 375 in 2008 to require – among other items – housing elements be regularly revised and updated beginning in 2010 to address the State’s new regional housing assignments. The intent of the housing element law is to create a market-based strategy for local land use authorities to facilitate opportunities to increase in the supply and affordability in housing; actual construction of additional

housing is not required by the State.²⁵ The current housing element cycle for all land use authorities extends through 2023.

With the preceding comments in mind, and for purposes of telegraphing near-term buildout conditions as part of this study, the Commission believes it is reasonable to assume the potential development of 3,352 new housing units in the affected agencies' existing jurisdictional boundaries. (There is no specific timetable for actual development of these future housing units; associated buildout years identified in this study are based solely on current growth trends. It is also reasonable to denote the distinction between near-term and ultimate buildout; the latter of which is not readily quantifiable.) This total amount – which equals 93.6% of the total number of existing units – of expected new residential development is based almost entirely on the housing elements of all applicable and land use authorities underlying the region and specific to zoning assignments as it applies to the six affected agencies' jurisdictional boundaries.

Near-Term Buildout: Housing Units Estimates								
Table 3.4 Marin LAFCO								
Type	LGVSD	SRSD	RVSD	CSD No. 2	MPSMD	SQVSMD	CMSA	Total
Existing Units	11,959	16,013	19,503	4,531	92	45	0	52,143
Additional Units at Near-Term Buildout	1,335	1,158	782	69	8	0	0	3,352
% at Buildout	89.9%	93.3%	96.1%	98.5%	92.0%	100%	100%	93.6%

■ Las Gallinas Watershed ■ Ross Valley and San Rafael Watersheds

* The listing of residential units at buildout within each affected agency is based on a review of the applicable adopted housing elements of the associated land use authorities in Marin County as of date. It does not contemplate second units.

²⁵ A pertinent and related section of LAFCO law directs commissions to facilitate orderly growth and development that includes providing housing for persons and families of all incomes under Government Code Section 56001.

1.3 Demographics | Social and Economic Factors

A review of demographic information available for census tracts within the seven affected agencies for the study period indicates most fulltime residents are in good economic positions relative to countywide averages. This includes residents within six of the seven affected agencies finishing the study period with moderately to substantively higher median household incomes and led by CSD No. 2 at \$108,934; an amount finishing 19% higher than the countywide average for the same period. SRSD – the lone outlier within the region

Current demographic information shows marked differences between SRSD and the other six affected agencies in both economic and social measurements. These differences include SRSD finishing the study period with significantly lower household incomes along with high poverty and unemployment rates. Distinctions among and within the other six affected agencies are less evident with limited exceptions.

as it relates to economic indicators – finished the study period with a median household income 18% below the countywide average at \$75,046. This economic distinction also revealed itself in other indicators – including poverty rates, unemployment levels, and commute times – showing commonality between all of the affected agencies with the outlier exception of SRSD. Social indicators also show a notable distinction between SRSD and the other six affected agencies and reflected in statistical gaps in educational attainment and non-english speaking households.

Economic and Social Factors | 2010-2014 Averages
Table 3.5 | Marin LAFCO

Category	LGUSD	RVSD	SRSD	CSD No. 2	MPSM D	SQVSMD	CMSA	County Average
Median Age	46.16	44.98	46.27	48.4	42.3	40.64	43.59	45.1
Prime Working Age	52.6%	52.9%	52.1%	52.9%	52.6%	64.6%	57.8%	55.3%
Median HH Income	\$96,602	\$108,934	\$108,510	\$100,441	\$84,065	\$75,046	\$93,648	\$91,529
Unemployment Rate	3.1%	3.7%	4.8%	5.2%	6.3%	6.1%	5.3%	4.7%
Poverty Rate	7.5%	4.8%	6.5%	3.0%	5.8%	19.1%	11.9%	8.8%
4-Yr College Degree	50.4%	65.7%	65.8%	68.7%	60.4%	41.1%	54.8%	30.8%
Mean Travel to Work	28.6 min	30.4 min	31.1 min	29.1 min	29.0 min	26.9 min	29.0 min	29.4 min
Non-English Speaking	24.0%	21.1%	13.8%	18.5%	24.8%	42.4%	27.3%	23.5%
Pre Prop 13 Resident	18.6%	12.9%	12.4%	8.2%	8.4%	10.7%	11.7%	12.8%

Las Gallinas
Watershed

Ross Valley and San Rafael
Watersheds

Economic

Social

1.4 Jurisdictional Boundaries

The jurisdictional boundaries of the six affected agencies directly subject to the Commission in the region – and as such excludes CMSA – collectively spans 60 square miles.²⁶ Comparatively, the collective jurisdictional boundaries of these six referenced agencies represent 8.8% of the countywide land total. Ten land use authorities overlap the combined

The collective jurisdictional boundaries of the six agencies subject to the Commission’s regulatory oversight providing wastewater services in the region tally 60 square miles. Ten land use authorities overlaps this area and led by County of Marin at 44%.

jurisdictional boundaries with two-thirds falling under the oversight of the County of Marin and San Rafael. The County of Marin is the predominant land use authority in the region and accounts for an estimated 44% of combined jurisdictional boundaries. Another 23% of the combined jurisdictional boundaries in the region falls under the land use authority of San Rafael. The remaining one-third is divided among the land use authorities of San Anselmo at 12%, Fairfax at 9%, Corte Madera at 4%, Ross at 3%, Larkspur at 3%, Tiburon at 1%, and Novato and Mill Valley each at less than 1%.

Jurisdictional Boundaries’ Breakdown: Land Use Authorities

Table 3.6 | Marin LAFCO

Agency	Assessor Parcel Acres	Assessor Parcel Acres % of Total	Total Assessor Parcels	Total Residential Units
County of Marin	9,113	44.1%	11,372	10,255
San Rafael	4,730	22.9%	16,824	23,244
San Anselmo	2,440	11.8%	5,482	6,279
Fairfax	1,904	9.2%	3,173	3,900
Corte Madera	897	4.3%	3,390	3,910
Ross	676	3.3%	847	883
Larkspur	542	2.6%	2,522	3,580
Tiburon	299	1.4%	442	435
Novato	58	0.3%	22	19
Mill Valley	1	0.0%	1	0
	20,660	100%	44,075	52,505

²⁶ CMSA is not subject to the direct regulatory oversight of the Commission as a joint-powers authority.

The combined population density within the referenced six agencies’ jurisdictional boundaries tallies 2,669 residents for every square mile as of the study period term. The square mile total also encompasses 44,223 assessor parcels with a combined assessed value (land and improvements) of \$31.0 billion. This latter amount translates to a per capita value of \$0.257 million based on the joint service population of 120,182.²⁷

The combined assessed land values within the jurisdictional boundaries of the six agencies subject to the Commission totals \$31.0 billion, and equates to a per capita share of \$0.257 million.

The Commission estimates three-fifths of the jurisdictional assessor acreage within the six referenced agencies’ boundaries have already been developed, albeit not necessarily to the maximum density allowed under the respective land use authority. It is also estimated there are an existing and combined total of 1,747 unbuilt assessor parcels within the six agencies’ boundaries that are privately owned and designated for some type of urban type use by the respective land use authority. Additional analysis would be needed to further assess the actual development potential of these unbuilt parcels relative to zoning and other germane local conditions.


Over 70% of assessor acreage within the collection jurisdictional boundaries of the six agencies directly overseen by the Commission has already been developed or improved – though not necessarily at its maximum density. Within the remaining two-fifths there are 1,747 unbuilt and privately owned parcels designated for some type of urban use by the respective land use authority.

Jurisdictional Lands Region				
Table 3.7 Marin LAFCO				
% Parcel Acres Already Developed	Residential Built Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
70.6	44,075	***	1,747	9,647


²⁷ Estimated service population includes only the projections made for the six agencies directly subject to the Commission’s regulatory oversight; it excludes CMSA.

RVSD is the single largest of the six referenced agencies in terms of jurisdictional size with 19.7 square miles and represents more than two-fifths of the combined six-agency total. Population density ratios range from a low of 0.0001 residents for every square mile in SQVSMD to a high of 3,134 residents for every square mile in SRSD as of the term of the study period. Tallies for all six agencies follows.

Jurisdictional Lands Agencies						
Table 3.8 Marin LAFCO						
Category	LGVS	RVSD	SRSD	CSD No. 2	MPSMD	SQVSMD
Total Square Miles	9.4	19.7	13.0	3.8	0.1	0.01
Density (Residents per Square Mile)	3,029	2,072	3,134	2,598	>0	>0
Assessed Value (Land and Structure)	\$5.8 b	\$13.4 b	\$8.2 b	\$3.6 b	\$79.7 m	\$15.7 m
Assessed Value Per Resident	\$0.203m	\$0.328 m	\$0.201 m	\$0.365 m	\$0.417 m	\$0.176 m



Las Gallinas
Watershed



Ross Valley and San Rafael
Watersheds

2.0 WASTEWATER SERVICES

2.1 Overall Demands

The combined average annual system demand among the seven affected public agencies responsible for providing wastewater services in the region during the study period totals 5.3 billion gallons.²⁸ This average amount, which serves as a macro overview of system demands, is equivalent to a daily average flow of 14.6 million gallons or 119.5 gallons per estimated resident.²⁹ This average annual amount – and despite a corresponding projected overall increase in population of 3,073 or 2.5% – experienced a significant decrease during the 60-month period of nearly one-sixth or (16.8%) with year-end totals declining from 6.2 billion gallons in 2010 to 5.2 billion gallons in 2014. A similar reduction is also shown in overall daily per capita usage

Overall average annual wastewater flows generated within the seven affected agencies’ service areas during the study period tallied 5.3 billion gallons. Demands have also fallen with overall flows with the combined service areas decreasing during the study period by (17%).

²⁸ MPSMD flows are incorporated into RVSD. Similarly, SQVSMD – along with San Quentin State Prison – account for the stand-alone flows reflected for CMSA.

²⁹ The per resident daily use amount is based on a separately calculated residential average total of 122,115 within the combined service areas and as independently calculated by the Commission.

among the affected agencies with combined demands decreasing by (18.8%) from 141.0 gallons per resident in 2010 to 114.5 gallons per resident in 2014.

Study period trends show overall average daily wastewater system demands among individual agencies over the corresponding 60-months ranged from a low of 0.862 million gallons for CMSA (SQVSD and San Quentin State Prison) to a high of 5.450 million gallons within RVSD. Markedly, all of the agencies experienced a decrease in annual system demands during the study period of no less than (0.80%). Further, almost of the affected agencies experienced a significant decrease in system demands in 2013 in step with the height of the drought with the exception of RVSD.

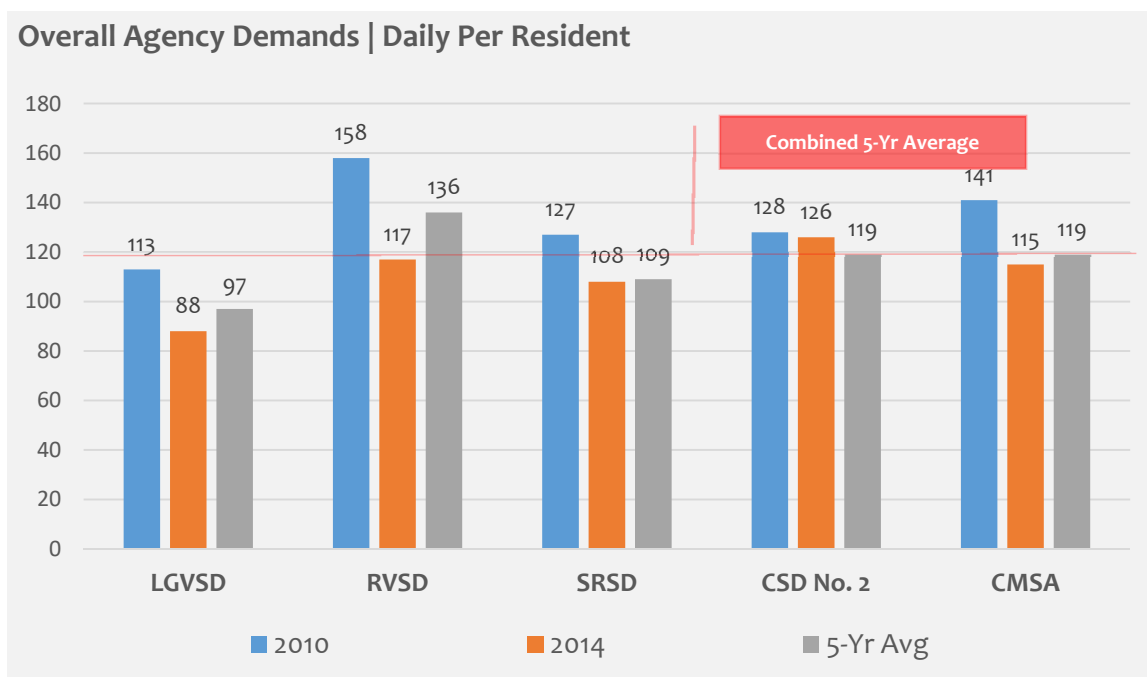
All of the affected agencies experienced a decrease in annual system flows during the study period of no less than (0.8%). With limited exception 2013 proved seminal with dramatic flow decreases for all of the agencies with the exception of RVSD.

Wastewater Demands Annual <u>Daily</u> Averages				
Table 3.9 Marin LAFCO				
Agency	2010	2014 -Baseline-	Average	Overall Trend
LGVSD	3.180	2.520	2.740	(20.91%)
RVSD (w/MPSMD)	6.250	4.800	5.450	(23.20%)
SRSD	5.000	4.400	4.360	(12.00%)
CSD No. 2	1.250	1.240	1.168	(0.80%)
CMSA (SQVSD and State Prison)	1.400	1.260	0.860	(10.00%)
TOTALS	17.080	14.220	14.578	(16.75%)

** Amounts Shown in Million Gallons*

As noted, the review of relative daily demands based on a per capita measurement produces a study period average among the affected agencies of 120 gallons. This average total is bookended by a period low of 103 gallons per capita within CSD No. 2 to a period high of 158 gallons per capita within RVSD; a difference of over one-half or 53.40%.

Relative daily demands during the study period based on average per capita usage year-round among the affected service areas produce an average of 120 gallons. RVSD finished with the highest per capita demand at 158 gallons.



Amounts Shown in Gallons

Figure 3.3

2.2 Overall Dry Weather Day Demands

The combined average annual demand during dry weather months during this study period within the seven affected agencies totals 2.0 billion gallons. This average amount, which serves as one of three standard micro overview of system demands and typically occurs during the months of May through October, is equivalent to a daily average flow of 11.1 million gallons.³⁰ This latter amount represents a daily decrease of 3.5 million gallons – or (23.9%) – compared to the overall average day flows during the study period.

Overall average dry-weather wastewater flows generated within the seven affected agencies’ service areas during the study period and generally between the months of May and October tallied 2.0 billion gallons or 11.1 million gallons daily; the latter representing a decrease of 3.5 million gallons per day compared to overall average day flows.

³⁰ The other two micro overviews of system demands involve average wet-weather and peak-day flows and are addressed in succeeding sections.

Study period trends show average dry-weather demand amounts experiencing a modest decrease over the corresponding 60-months of nearly one-tenth or (9.6%) from 2.1 billion gallons in 2010 to 1.9 billion gallons in 2014. A similar reduction is also shown in overall daily per capita flows among the affected agencies within dry-weather periods with combined demands decreasing by (11.8%) from 96.3 gallons in 2010 to 84.9 gallons in 2014.

Average dry-weather demands generated between April and October during the study period and within all seven affected agencies' service areas have decreased by (10%).

Overall average daily dry-weather wastewater system demands among individual agencies during the study period ranged from a low of 0.820 million gallons for CMSA (SQVSMD and San Quentin State Prison) to a high of 3.780 million gallons within RVSD. All of the affected agencies experienced decreases in annual dry-weather flows over the study period with the lone exception of CSD No. 2, which tallied a 6.90% increase over the 60-month period.

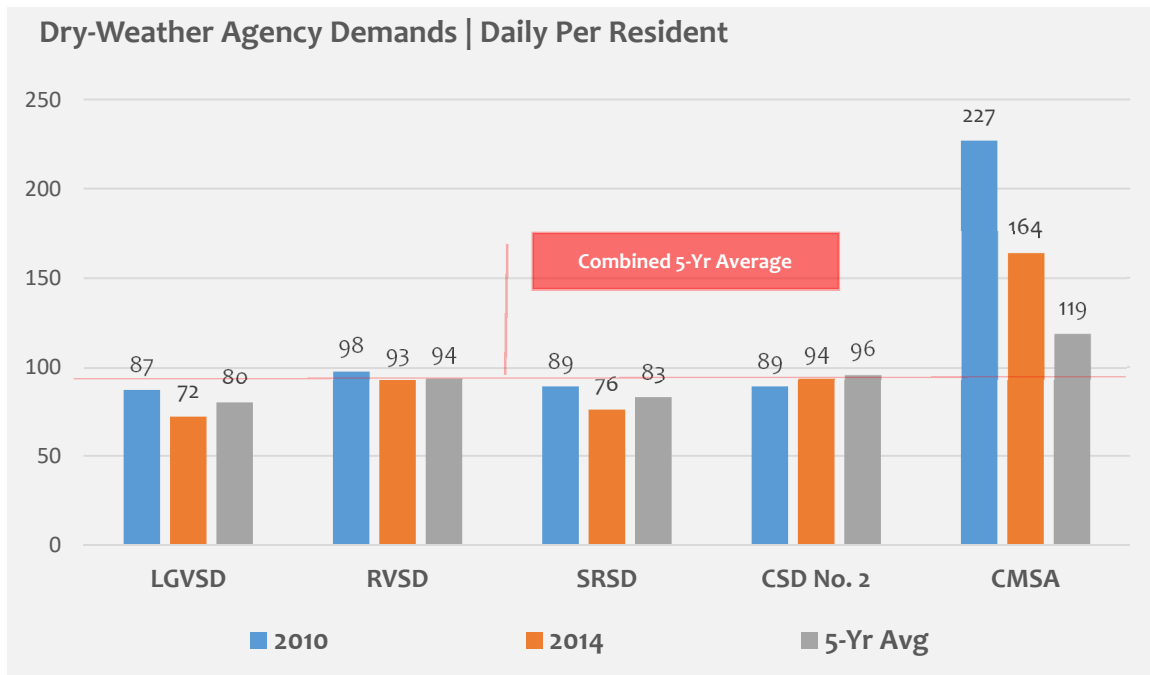
All of the affected agencies experienced decreases in annual dry-weather flows over the study period with the lone exception of CSD No. 2.

Wastewater Demands Dry Weather Day Averages				
Table 3.10 Marin LAFCO				
Agency	2010	2014 -Baseline-	Average	Overall Trend
LGVSD	2.460	2.040	2.250	(17.07%)
RVSD (w/MPSMD)	3.900	3.800	3.780	(2.56%)
SRSD	3.500	3.100	3.300	(11.43%)
CSD No. 2	0.870	0.930	0.940	6.48%
CMSA (SQVSMD and State Prison)	0.930	0.670	0.820	(10.00%)
TOTALS	11.660	10.540	11.090	(9.61%)

* Amounts Shown in Million Gallons

A review of relative dry-day demands among the affected agencies produce a study period average of 90.9 gallons per capita. This average dry-weather day per capita total is bookended by a period low of 71.6 gallons within LGVSD to a period high of 227.0 gallons within CMSA; a difference of 217.0%.

Relative daily dry-weather demands during the study period based on per capita totals among the affected service areas produce an average of 90 gallons. CMSA finished with the highest per capita demand at 227 gallons and generated from its two stand-alone flow sources: SQVSMD and the State Prison



Amounts Shown in Gallons

Figure 3.4

2.3 Overall Wet Weather Day Demands

The combined average annual demand during wet weather months during this study period within the seven affected agencies totals 3.3 billion gallons. This average amount, which serves as one of three standard micro overview of system demands and typically occurs during the months of November through April, is equivalent to a daily average flow of 18.1 million gallons. This latter amount represents a daily increase of 3.5 million gallons – or (23.9%) – compared to the overall average day flows during the study period.

Overall average wet-weather wastewater flows generated within the seven affected agencies' service areas during the study period and generally between the months of November and April tallied 3.3 billion gallons or 18.1 million gallons daily; the latter representing an increase of 3.5 million gallons per day compared to overall average day flows.

Study period trends show average wet-weather amount experienced a sizable decrease over the corresponding 60-months of nearly one-fifth or (20.5%) from 4.1 billion gallons in 2010 to 3.3 billion gallons in 2014. A similar sizable reduction is also shown in overall daily per capita usage among the affected agencies within wet-weather periods with combined demands decreasing by (22.4%) from 185.8 in 2010 to 144.1 gallons in 2014.

Average wet-weather demands generated between April and November during the study period and within all seven affected agencies' service areas have decreased by (21%).

Overall average daily wet-weather wastewater system demands among individual agencies during the study period ranged from a low of 0.94 million gallons for CMSA (SQVSMD and San Quentin State Prison) to a high of 7.120 million gallons within RVSD. Additionally, all of the agencies experienced a decrease in annual system flows during the study period of no less than (20.49%). Markedly, all seven affected agencies faced a significant decrease in wet-weather flows for the year of 2013, with the exception of RVSD which actually experienced a substantial increase.

All of the affected agencies experienced decreases in annual wet-weather flows over the study period with substantial declines seen in 2013.

Wastewater Demands Wet Weather Day Averages				
Table 3.11 Marin LAFCO				
Agency	2010	2014 -Baseline-	Average	Overall Trend
LGVSD	3.900	2.990	3.222	(23.29%)
RVSD (w/MPSMD)	8.600	5.800	7.120	(32.56%)
SRSD	6.500	5.700	5.420	(12.31%)
CSD No. 2	1.630	1.550	1.396	(4.91%)
CMSA (SQVSMD and State Prison)	1.870	1.850	1.180	(1.07%)
TOTALS	22.500	17.890	18.338	(20.49%)

* Amounts Shown in Million Gallons

A review of relative wet-day demands among the affected agencies produce a study period average of 148.1 gallons. This average total is bookended by a period low of 87.0 gallons per capita within LGVSD to a period high of

Relative daily wet-weather demands during the study period based on per capita totals among the affected service areas produce an average of 148 gallons. CMSA finished with the highest per capita demand at 456 gallons and generated from its two stand-alone flow sources: SQVSMD and the State Prison

456.4 gallons per capita within CMSA; a difference of 425%.

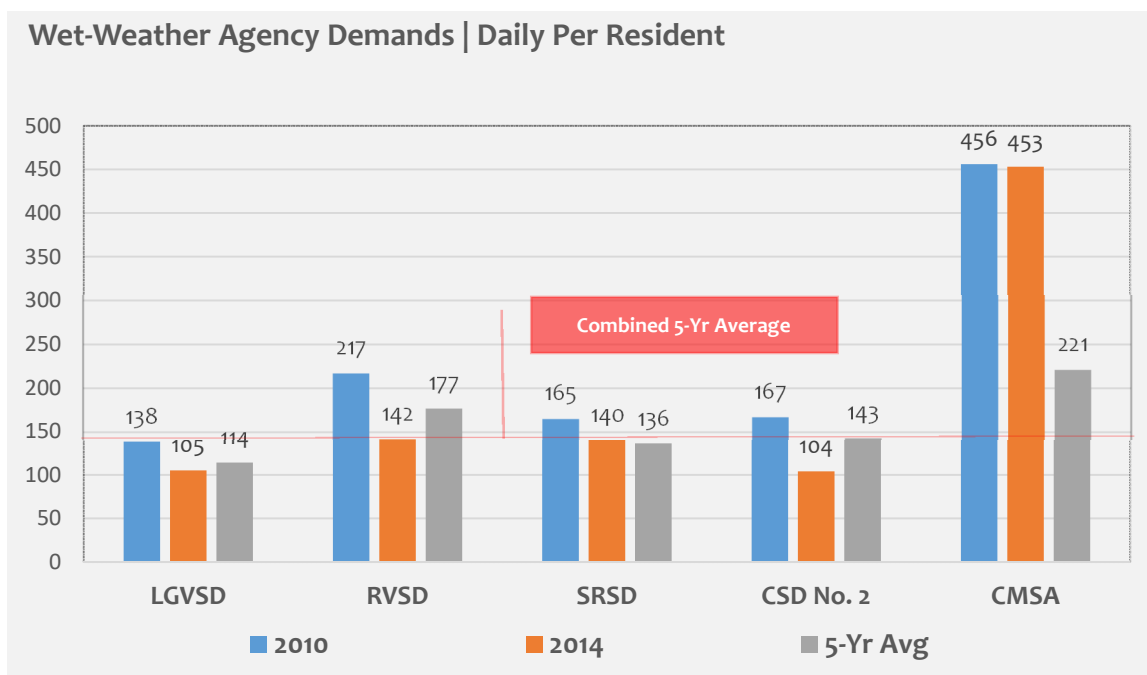


Figure 3.5

2.4 Overall Peak-Day Demands

The combined average peak-day wastewater system demand produced during this study period within the seven affected agencies totals 101.5 million gallons.³¹ (Said differently, should the seven service areas all generate their average peak-day demand at the same time it would equal 101.5 million gallons.) This average amount, which serves as one of three standard micro overview of system demands and typically occurs in January or February, produces a peaking-factor relative to dry-weather day averages of 9.2.

Overall average peak-day wastewater flows generated within the seven affected agencies' service areas during the study period tallied 101.5 million gallons. This amount generates a peaking-factor of 9.2.

³¹ Peak-day demand refers to the highest 24-hour flow recorded during the year by the affected agency.

Study period trends show average peak-day amounts experiencing a moderate increase over the corresponding 60-months of 8.5% with totals rising from 103.2 million gallons in 2010 to 111.7 million gallons in 2014. A similar increase is also shown in overall daily per capita usage among the affected agencies during peak-day periods with combined demands increasing by 5.8% from 852.0 gallons in 2010 to 901.7 gallons in 2014.

Average peak-day demands generated during the study period and within all seven affected agencies' service areas have collectively increased by 9%.

Overall average peak-day wastewater system demands among individual agencies during the study period ranged from a low of 5.920 million gallons for CSD No. 2 to a high of 45.700 million gallons within RVSD; a range difference of nearly eight-fold. Additionally, all of the agencies with the exception of RVSD experienced an increase in peak-day system flows during the study period ranging between a low of 25.5% within LGVSD and a high of 101.4% within CMSA. Markedly, and irrespective of the preceding statement, all seven affected agencies with the exception of RVSD experienced a significant decrease in peak-day flows for the year of 2013.

Peak-day demands for most of the agencies increased during the study period. Only RVSD experienced an overall decrease in peak-day demands during the study period at (33%).

Wastewater Demands | Peak Day Averages

Table 3.12 | Marin LAFCO

Agency	2010	2014 -Baseline-	Average	Overall Trend
LGVSD	10.890	13.670	10.002	25.53%
RVSD (w/MPSMD)	53.300	35.700	45.700	(33.02%)
SRSD	20.200	26.700	19.140	43.70%
CSD No. 2	5.370	8.850	5.192	37.03%
CMSA (SQVSM and State Prison)	13.430	27.050	24.448	101.41%
TOTALS	103.190	111.970	104.482	8.51%

A review of relative peak-day demands based on per capita produce a study period average among the affected agencies of 855.2 gallons. This average total is bookended by a period low of 354.4 gallons per capita within LGVSD to a period high of 5,975.9 gallons per capita within CMSA.

Relative peak-day demands during the study period among the affected service areas produce an average of 855 gallons per capita.

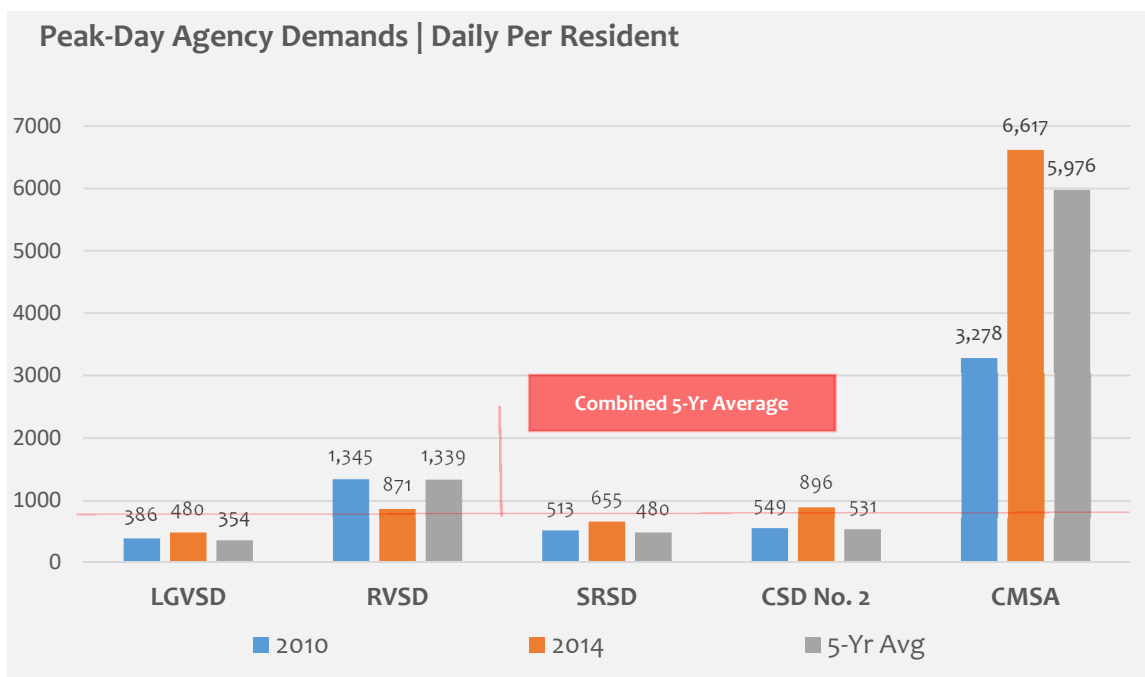


Figure 3.6

3.0 AGENCY FINANCES

3.1 Direct Costs to Customers | User Charges and Connection Fees

All six affected agencies that provide retail wastewater services in the region – and as such excludes CMSA – largely rely on annual user charges to fund day-to-day operations. With respect to CMSA members (SRSD, RVSD, CSD No. 2, MPSMD, and SQVSMD) this includes blending their rates to account for contracted treatment costs. All of the agencies distinguish between residential and non-residential accounts. Residential accounts – which make up no less than 89% of any one agency’s total as of the term of the study period – are collected by each agency on the property tax roll and in the format of a flat per unit charge with some distinctions made for multi-family structures. One agency – RVSD – maintains two distinct fee zones and divided between Larkspur and non-Larkspur ratepayers.

The average annual residential charge among the six public wastewater services in the region directly subject to the Commission currently totals \$710.

None of the six affected agencies have established supplemental charges or fees, such as special assessments, specific to funding wastewater related activities.

The current average annual residential charge among the six affected agencies totals \$710 or \$59 monthly. Individual residential user charges range in annual scope from a low user charge of \$472 within both MPSMD and SQVSMD to a high user charge of \$1,067 for RVSD (Larkspur); a range difference of 126%. Annual user charges for residential ratepayers among the agencies follows.

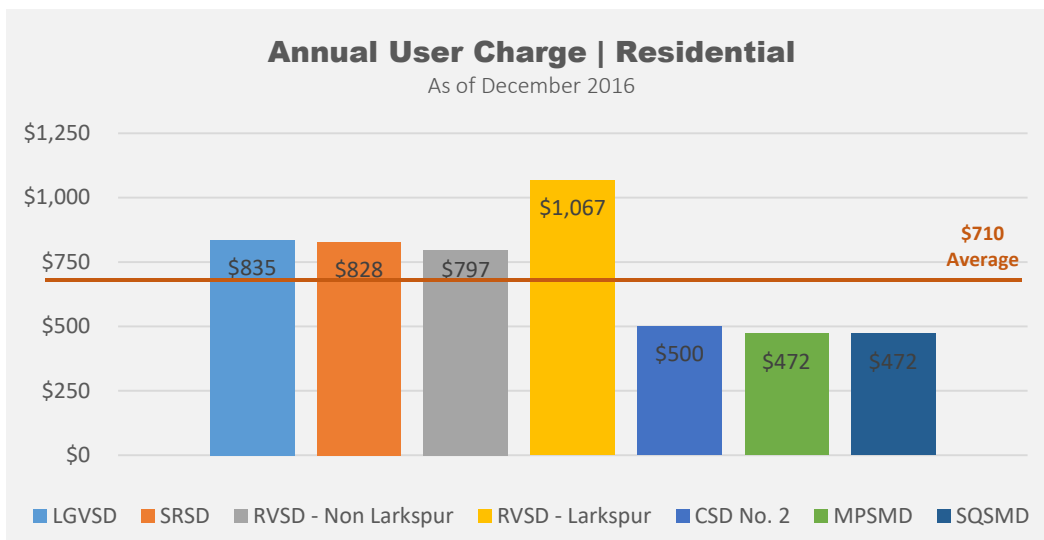


Figure 3.7

In terms of proportional significance the average amount of collected user fees and related service charges by the referenced retail agencies in the region over the course of the study period have accounted for 76.0% of all earned income; i.e., \$0.76 cents of every \$1.00 dollar of collected income has been directly tied to a deliverable service. (This amount excludes fees and charges collected by MPSMD and SQVSMD given this information is not available as of date.) Average earned income ratios among individual agencies generated during the study period ranged from a low of 54.8% by CSD No. 2 to a high of 90.5% by SRSD; a range difference of nearly two-thirds.

The average earned income ratio among the retail wastewater providers in the region during the study period tallied 76%. (MPSMD and SQVSMD are not included.)

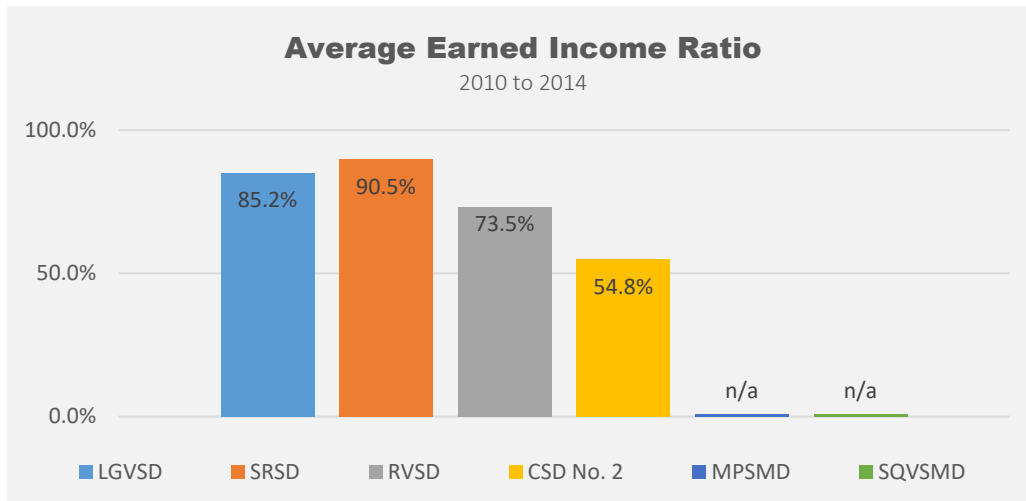


Figure 3.8

Connection fees serve as the “buy-in” charge for new customers and directly go towards funding non-operational activities and most notably capital improvements, such as sewer main replacements and treatment facility upgrades. All six referenced retail agencies in the region have established connection fees

The average residential connection fee among the six retail wastewater providers in the region totals \$9,833.

that distinguish between residential and non-residential users. The affected agencies also similarly calculate residential connection fees based on the number of living units and associated load (i.e., flow demand) projections with some variances as it relates to accommodating multi-family structures as well as affordable housing developments. The current average residential connection fee among the six affected agencies totals \$9,833 and bookend from a low of \$500 within LGVSD to a high of \$17,000 within RVSD; a range difference of over 3,300%.

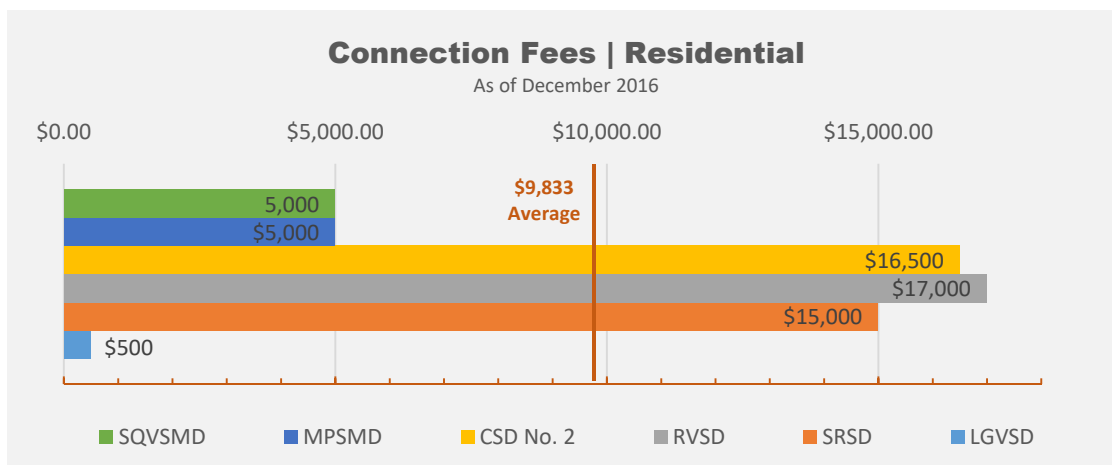


Figure 3.9

3.2 Indirect Costs to Customers | Property Taxes

All six affected agencies directly subject to the Commission’s regulatory oversight – and as such excludes CMSA – receive a portion of property tax generated from landowners within their respective jurisdictional boundaries. Revenues generated from property taxes are used as general purpose income with no statutory restrictions. The average property tax distribution rate among the six referenced agencies – which is a stagnant portion of the overall 1.0% levied and collected on all real property (land and improvements) as provided under Proposition 13 (Assembly Bill 8) – is 1.93%. Significant discrepancies, however, exist with respect to individual agency shares of the 1.0% of property tax collected within the six affected agencies boundaries. Most notably, RVSD receives the highest property tax distribution rate at 7.79% and is more than four times greater than the next highest of 1.47% by SRSD. The lowest property tax distribution rate is SQVSMD at 0.03%.

All six affected agencies directly subject to the Commission (excludes CMSA) in providing wastewater services in the region receive a portion of property taxes. The average distribution rate is 1.9% of the 1.0% annually collected. RVSD has the highest distribution rate at 7.79%.

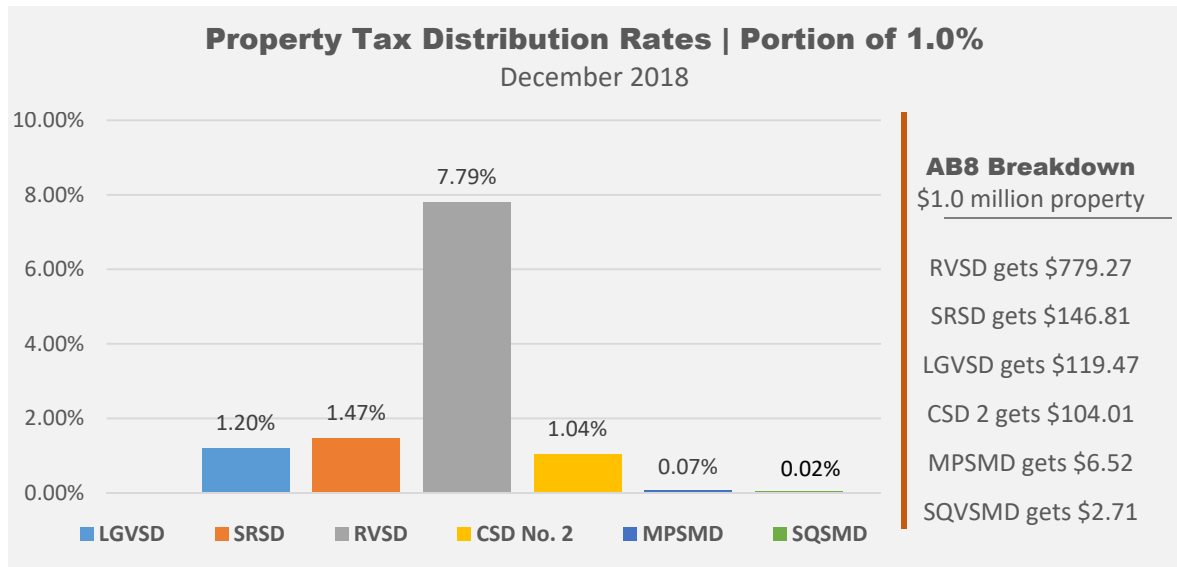
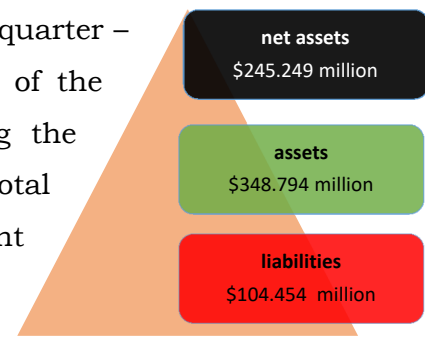


Figure 3.10

3.3 Net Assets | Unrestricted Fund Balances

Overall five of the seven affected agencies providing public wastewater services in the region and included in this report have produced audited financial statements covering the study period. The two exceptions involve MPSMD and SQVSD. Accordingly, all references to “affected agencies” in this section shall mean only LGVSD, SRSD, RVSD, CSD No. 2, and CMSA.

Overall the affected agencies finished the study period with a combined net asset or equity total of \$245.249 million. Slightly more than one-quarter – or 27% – of this amount has been categorized as part of the agencies’ unrestricted fund balances. Trends covering the preceding 48-month period show the collective net asset total among the agencies having increased by 13%; an amount that translates to an annual rate of 3.25%.³² This annual average increase is more than one-half greater than the corresponding inflation rate for the San Francisco Bay Region as determined by the



³² Audited statements covering FY2010 were not readily available for review and as such the referenced data reflects net assets between FY11 and FY14.

Department of Labor.³³ Three of the agencies – RVSD, SRSD, and LGVSD – experienced significant gains in their overall financial standing by no less than 24% as measured by total net assets or equity during the course of the preceding 48-month period. The remaining agencies – CSD No. 2 and CMSA – have experienced relatively minor decreases in their total net assets over the same period in the amounts of (5%) and (1%), respectively. Collective totals among the affected agencies at the end of the study period with respect to assets, liabilities, and net assets follow.

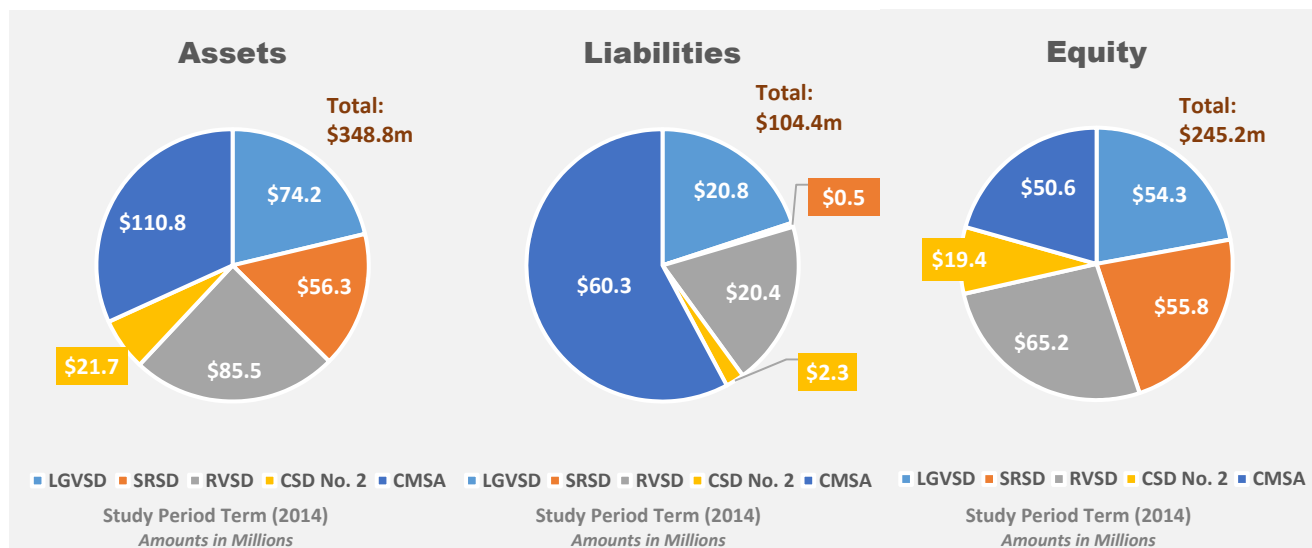


Figure 3.11

Overall unrestricted fund balances for the affected agencies at the end of the study term tallies \$66.0 million and produces a corresponding per capita ratio of \$300.95. The overall amount in unrestricted fund balances has increased over the preceding 48-month period among the affected agencies by nearly two-thirds or 65%.³⁴ LGVSD has experienced the largest percentage increase in unrestricted fund balances at 132% followed in order by RVSD at 94%, SRSD at 78%, CMSA at 23%, and CSD No. 2 at (16%).

Overall unrestricted fund balances as of the study term for the five affected agencies that have issued year-end financial statements collectively tallies \$66.0 million and represents a per capita share of \$301.

³³ The average annual inflation index for the San Francisco Bay Area Region between FY11 to FY14 tallied 2.04%.

³⁴ The overall percentage change tracks net assets from 2011 to 2014. Audited statements for 2010 were not readily available for two of the five agencies, SRSD and CMSA.

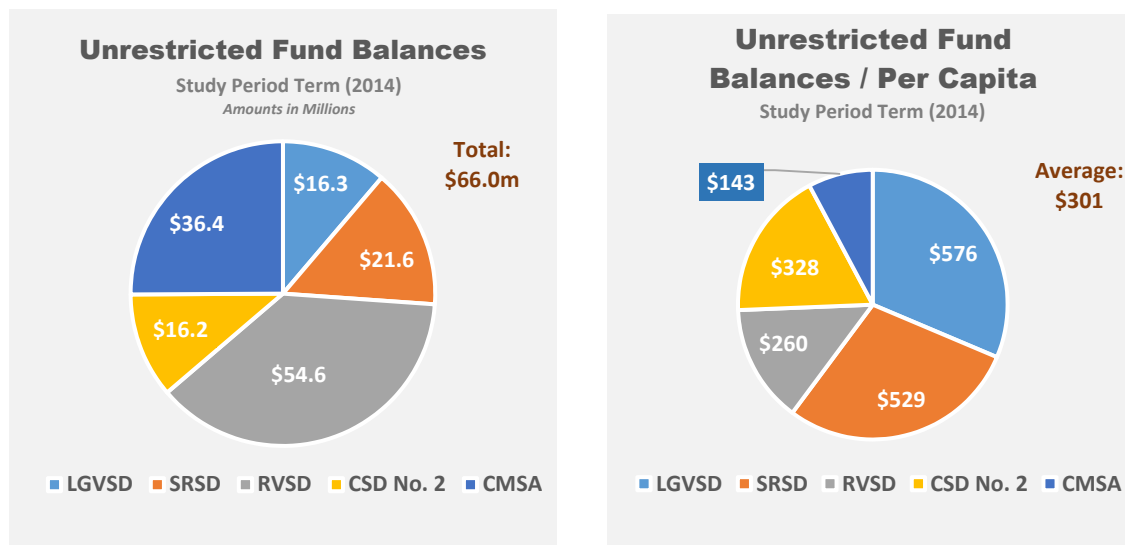


Figure 3.12

3.4 Liquidity, Capital, and Profitability

A review of the financial statements issued by five of the seven affected agencies providing wastewater services in the region – and excluding the aforementioned MPSMD and SQVSMD – through the study period generally shows relatively strong ending positions with respect to liquidity and the ability to address short-term obligations. This includes noting all of the affected agencies finished the study period with no less than 315 days’ cash on hand to

All of the affected agencies that have issued year-end financial statements finished the study period with no less than 315 days’ cash on hand.

cover budgeted operating expenses less depreciation and highlighted with LGVSD finishing the term at 1,298. The combined average days’ cash among the five agencies totaled 678 and sufficient to cover over 22 months of operations. Current ratios – i.e., the amount of available cash and cash equivalents to cover immediate obligations due – also finished in the positive for all of the agencies with a combine average of 12 to 1 and bookend by CSD No. 2 at 2.3 to 1 and SRSD at 41 to 1.

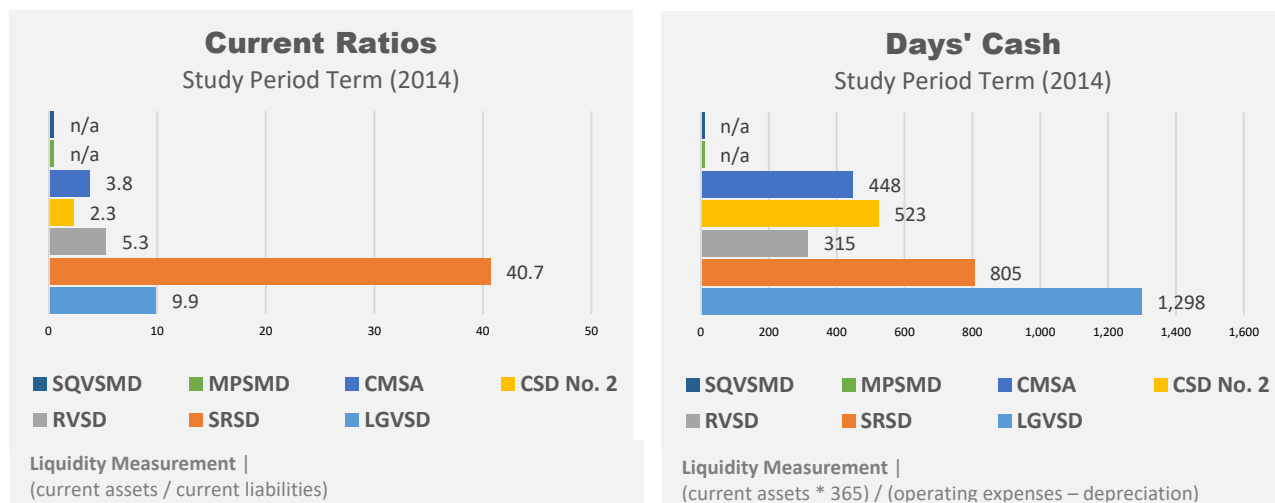


Figure 3.13

All of the affected agencies finished the study period with relatively good to strong capital standing as measured by their debt-to-net assets calculation. (This excludes MPSMD and SQVSMD for aforementioned reasons.) This measurement – which matches up long-term debt as a percentage relative to overall equity – produces a shared tally among the affected agencies as of the study term equaling 24.4%. CMSA finished the study period with the highest measurement of long-term debt at 50.7% and followed in order by LGVSD and RVSD at 25.5% and 20.9%, respectively. The two remaining agencies – CSD No. 2 and SRSD – finished without any long-term debt. Markedly, the combined percentage of long-term debt among the agencies has increased by 9.3% over the preceding 48-month period.³⁵

All of the affected agencies finished the study period with no more than 51% of long-term debt relative to overall equity as of the term of the study period. Long-term debt has collectively increased among the agencies by more than 9% over the preceding 48-month period.

³⁵ The overall percentage change tracks net assets from 2011 to 2014. Audited statements for 2010 were not readily available for two of the five agencies, SRSD and CMSD.

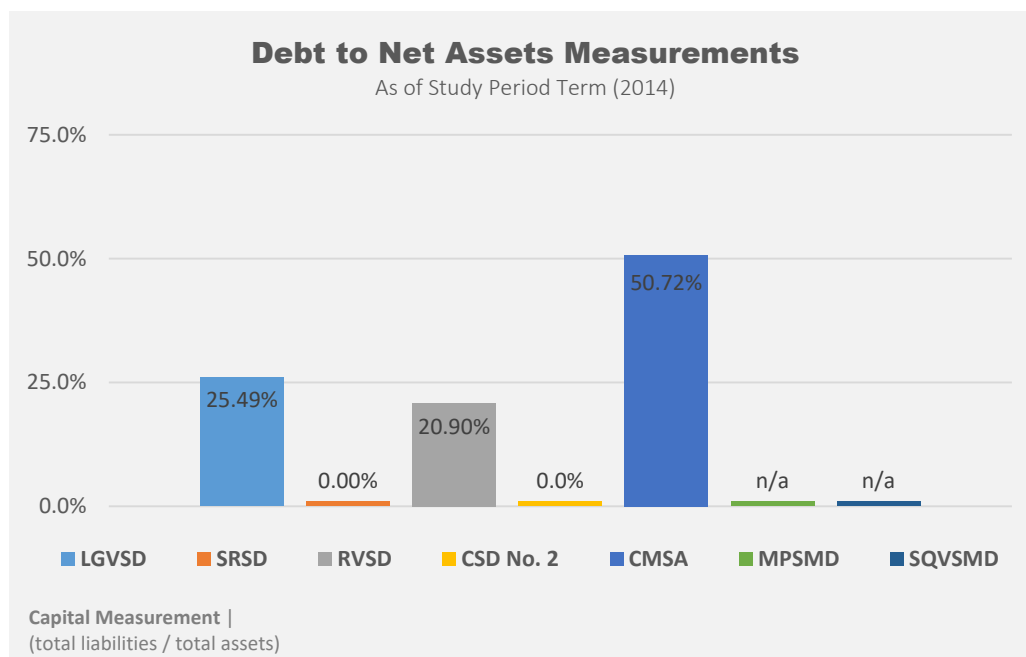


Figure 3.14

Year-end profit levels among the affected agencies as measured by total margin – the net difference between all revenues less all expenses and includes depreciation – largely stayed positive with a combined study period average tallying 13.58%.³⁶ The average is bookended among the affected agencies by a low of (2.50%) by CMSA and a high of 30.30% by LGVSD. The referenced

Profit levels among the affected agencies over the study period have varied with one constant: the combined average trend during the study period in both total and operating margins experienced sizable decreases.

average in total margin, however, has been declining over the study period among all of the affected agencies and producing a collective and downward trend of (135.88%). The combined operating margin – the net difference of normal and reoccurring revenues versus expenses tied to service provision and importantly excludes depreciation as a booked expenditure – also stayed largely positive among the affected agencies, albeit at generally lower profit rates. Operating margins also showed more and divergent variance among the affected agencies with a combined tallying of (3.18%). This average is bookended among the affected agencies by a low of (65.36%) by CSD No. 2 and a high of 26.72% by LGVSD with an overall and shared study period change of (14.36%).

³⁶ Analysis incorporates a four-year period for CSD No. 2 and SRSD given audited statements for FY 2010 were not available for review as of date.

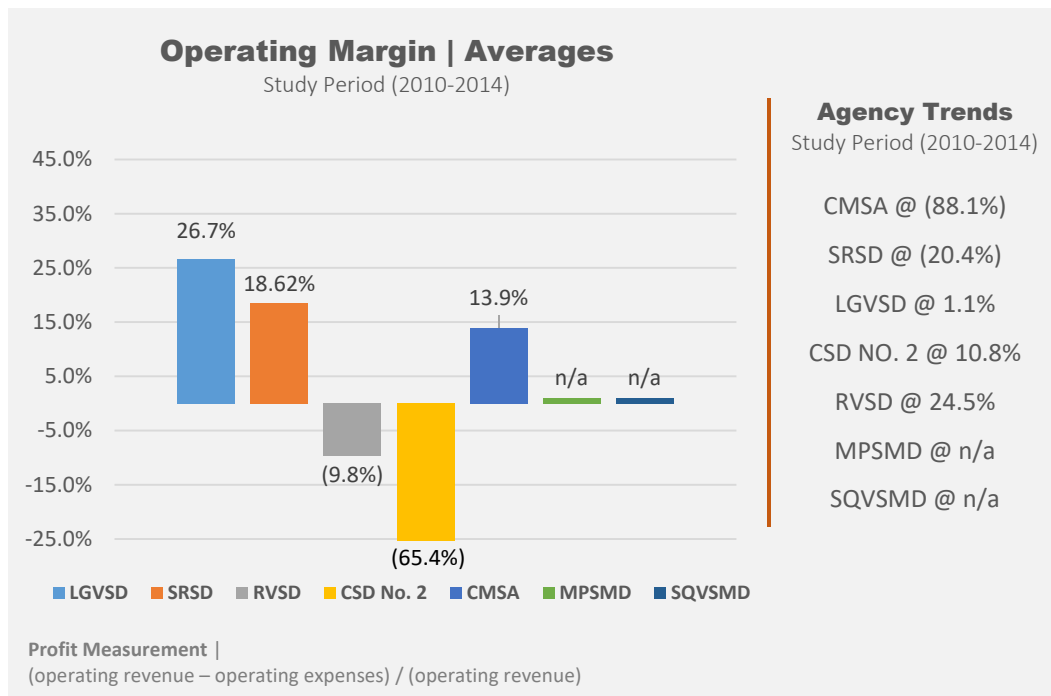
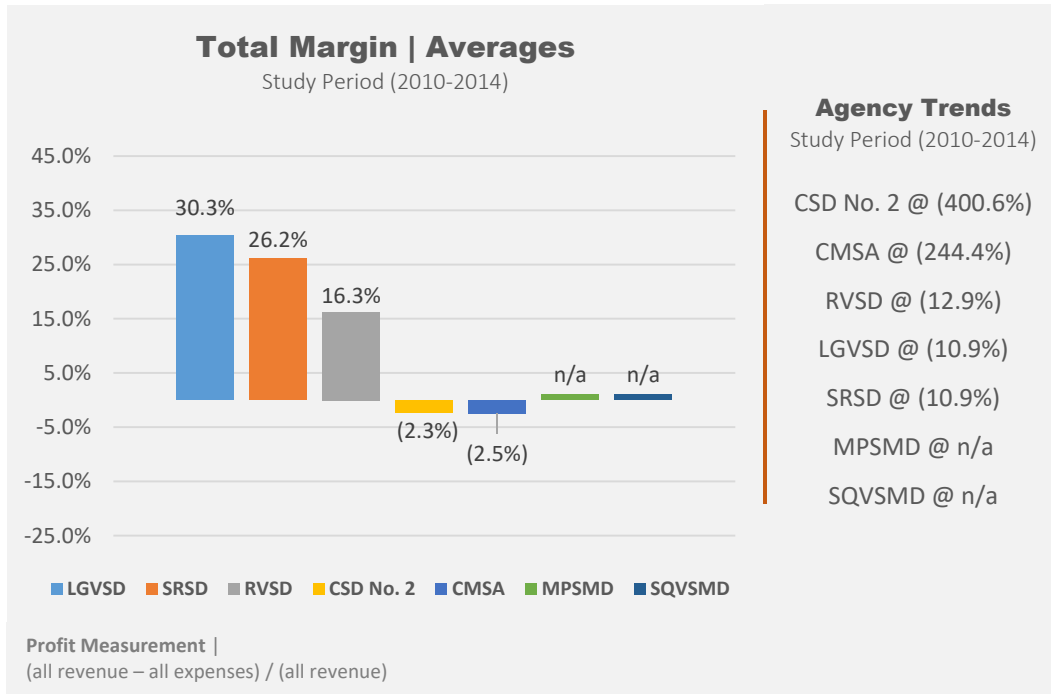


Figure 3.15

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A. LAS GALLINAS VALLEY SANITARY DISTRICT

1.0 OVERVIEW

Las Gallinas Valley Sanitary District (LGVSD) was formed in 1954 and encompasses an approximate 9.4 square mile jurisdictional boundary within east-central Marin County.¹ Governance is provided by an independent five-member Board of Directors whose members are elected at-large to staggered four-year terms. Three local land use authorities overlap LGVSD's jurisdictional boundary. The County of Marin is the single largest land use authority in terms of acreage with an estimated 63% of all LGVSD's lands lying within the unincorporated area and marked by the unincorporated communities of Marinwood and Santa Venetia. Another 36% of the jurisdictional boundary falls under the land use jurisdiction of the City of San Rafael and generally encompasses the Terra Linda area.² The remainder of the jurisdictional boundary – 1% of the total – extends into the City of Novato and specific to the Marin Valley Mobile Home Park and an adjacent open-space property. LGVSD lies within two adjacent watersheds, Miller Creek and Gallinas Creek.



LGVSD is currently organized as a limited-purpose agency with municipal operations restricted to wastewater, recycled water, and solid-waste collection. It is also empowered – subject to LAFCO approval – to provide storm drainage services. Wastewater services are provided through LGVSD's own approximate 112-mile collection system that conveys wastewater to the District's own treatment facility before discharge into Miller Creek or used for beneficial purposes through a recycled water program.³ LGVSD's adopted operating budget at the term of the study period was \$5.347 million and with funding dedicated for the equivalent of 24 fulltime employees. The unrestricted fund balance was \$18.263 million with an associated days-cash ratio totaling 1,298; i.e., the amount of

¹ The jurisdictional-boundary estimates are based on digital mapping records maintained by Marin LAFCO.

² The City of San Rafael includes 65% of all existing residential units within LGVSD.

³ LGVSD's bio-solids are stored temporarily in lagoons and later disposed of at LGVSD's dedicated land disposal site, a process known as surface disposal.

cash on hand to cover operating expenses based on 2013-2014 actuals.

The Commission independently estimates the resident service population within LGVSD totals 28,475 as of the term of the study period (2014). It is also projected LGVSD’s population growth rate over the five-year study period totals 0.92% or 0.19% annually with the underlying change primarily attributed to the estimated increase of 263 new and occupied housing

Las Gallinas Valley Sanitary District	
Formation Date:	1954
Principal Act:	Health and Safety Sections 6400-6982
Service Categories:	Wastewater Recycled Water Solid Waste Collection
Service Population	28,475
Governance Type	Independent

units that – and among other items – absorbed a corresponding projected deintensification of household sizes. The substantive result of these Commission estimates is the projected addition of 261 residents in LGVSD between 2010 and 2014. Overall it is also estimated nearly 65% of the jurisdictional boundary has already been developed and/or improved – though not necessarily at the highest density. Consequently, it is estimated 34% of the jurisdictional boundary remains entirely undeveloped, and this includes 151 existing unbuilt and privately owned parcels that are zoned for some type of urban use.⁴

2.0 BACKGROUND

2.1 Community Development

Records show the modern day development of the LGVSD service area began in the form of cattle ranching in the 1840s with the first formal homestead established as a result of a Mexican land grant to Timothy Murphy, one of Marin County’s first western settlers. The grant included three distinct ranchos - “San Pedro”, “Santa Margarita” and “Las Gallinas” - totaling over 21,000 acres and spanned east to west from present-day Point San Pedro to Big Rock Ridge in Lucas Valley. The majority of lands within Las Gallinas Valley were kept in cattle ranching through the time of Murphy’s death in the early 1850s. Murphy’s death and subsequent decision to leave most of the lands to his nephew

⁴ Additional analysis is needed to assess the actual development potential of these 151 unbuilt lots.

John Lucas proved pertinent in the gradual transition of the community towards more varied uses. Records show it was Lucas that began dividing and selling lots to outside parties, and as such began a slow process to intensify the lands to include more residential and supporting commercial uses. This included selling a large lot to the immigrant Portuguese Manuel T. Freitas whose family established a homestead in what is now present-day Terra Linda.⁵ Markedly, Santa Venetia – which ultimately served as LGVSD’s initial service area several decades later – was built on a marshland filled in the 1910s and originally envisioned as a planned luxury development after Venice, Italy set with canals and an artificial lake. The Great Depression ended these plans from real estate developer Mabry McMahan and the area remained largely undeveloped through the first half of the 20th Century.

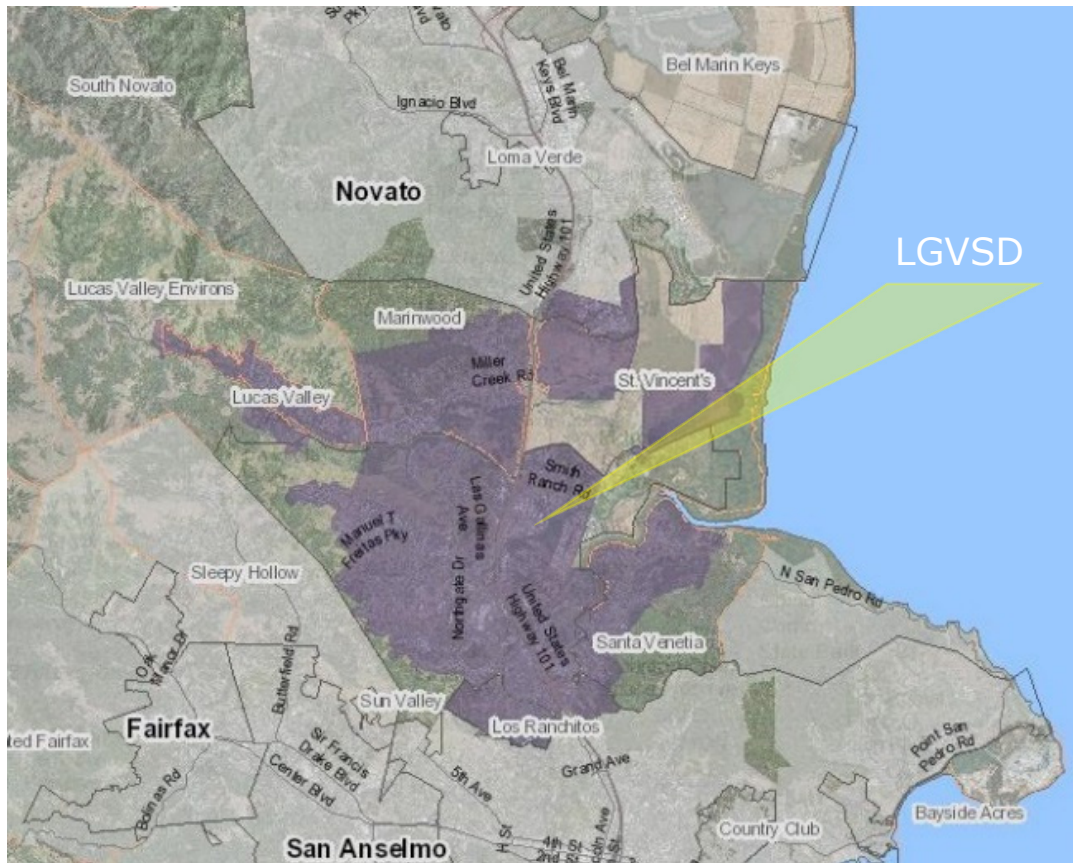


Figure 4.1

⁵ Historical archives show a portion of the Terra Linda territory was originally operated as a dairy farm, and is now the site of St. Isabella’s Catholic Church and School. Two gold mines were also operated in the hillside of Santa Venetia between 1884 and 1889 on North San Pedro Road, with heavy logging in the area for the lumber mills located throughout the county to supply wood for the nearby development of San Francisco.

As in the case for many areas of California, the end of World War II generated significant growth pressures outside of existing urban centers, and in Marin County this resulted in the development of several unincorporated fringe communities immediately north of San Rafael in the Las Gallinas Valley. Santa Venetia was the first of these communities to be systematically developed with several subdivisions – and utilizing the subdivision map first penned decades earlier by Mabry McMahan – getting constructed by the late 1940s and early 1950s. The intensity of Santa Venetia’s development, however, proved taxing to the underlying soils with the County beginning to suspend additional new construction approvals in lieu of establishing a community wastewater system.

2.2 Formation Proceedings

LGVSD’s formation was petitioned by area landowners and ultimately approved in 1954 by way of the County of Marin’s Boundary Change Commission and upon a successful vote. Formation proceedings, notably, appear premised on the desire of area landowners to remain independent of nearby San Rafael and its surrogate wastewater provider, San Rafael Sanitation District, which had been formed only a few years earlier in 1947. Topography also played an integral role in the District’s formation as creating an independent treatment facility proved cost-effective for residents and future growth in the area.

2.3 Post-Formation Activities

A summary of notable activities undertaken by LGVSD and/or affecting the District’s service area following formation in 1954 is provided below.

- LGVSD completed construction on its first wastewater treatment facility in 1955. Major expansions were completed in 1958, 1972, and most recently in 1984.
- From 1955 to 1965, architect Joseph Eichler, known for his contemporary-styled homes, built roughly 900 single-family residences in Terra Linda and Marinwood.
- By 1962, Northgate Industrial Park was under development and Northgate Mall began construction in 1963.

- By 1972, the unincorporated area of Terra Linda was annexed to the City of San Rafael and much of its development was complete as well as the other communities in LGVSD’s service area. New growth thereafter shifted primarily to the east of U.S Highway 101.
- In 1982, the City of San Rafael adopted the Northgate Activity Center Plan to identify more detailed land uses for vacant sites in the area, as well as needed circulation improvement.
- In 1985, LGVSD purchased and developed 383 acres of land for wastewater disposal adjacent to its wastewater treatment facility.
- In 1989, LGVSD entered into an agreement with Marin Municipal Water District (MMWD) to provide reclaimed water supplies for landscape irrigation and other uses within LGVSD’s boundary.
- In 2004, LGVSD installed an 81-kilowatt photovoltaic system to provide green power for its reclamation area.
- In 2006, LGVSD installed an 850,000 kwh/year photovoltaic system to power its treatment plant facilities with green power.
- In 2011, LGVSD entered into an agreement with North Marin Water District (NMWD) to provide fully treated recycled water supplies for distribution in the Novato and surrounding communities.

3.0 BOUNDARIES

3.1 Jurisdictional Boundary

LGVSD’s jurisdictional boundary spans approximately 9.4 square miles in size and covers 6,026 total acres (parcels and right-of-ways). There are three land use authorities overlapping the jurisdictional boundary. The County of Marin is the single largest land use authority in terms of acreage

LGVSD’s jurisdictional boundary spans 9.4 square miles and overlaps three land use authorities with the County of Marin being the largest with the unincorporated area covering 63% of all District lands.

with an estimated 63% of all LGVSD’s lying within the unincorporated d area and highlighted by the unincorporated communities of Santa Venetia and Marinwood. Another 36% of the jurisdictional boundary falls under the land use jurisdiction of the City of San Rafael and generally encompasses the City’s Terra Linda area. (San Rafael conversely includes 65% of all existing residential units within LGVSD.) The remaining 1% of the jurisdictional boundary falls under the land use authority of the City of Novato and specific to the Marin Valley Mobile Home Park and an adjacent open-space property.

Total assessed value (land and structure) within LGVSD is calculated at \$5.8 billion and translates to a per acre value ratio of \$962,020. This former amount – \$5.8 billion – further represents a per capita value of \$0.203 million based on the estimated service population of 28,475. LGVSD’s set annual allocation of – i.e., its share of the 1% of property tax proceeds – is 1.195%.

Assessed land values in LGVSD totals \$5.8 billion, and based on receiving 1.195% of the 1% annual property tax the District’s allocated share of the total less deductions and other exchanges is \$0.693 million.

LGVSD Boundary Breakdown: Land Use Authorities					
Table 4.1 Source: Marin LAFCO					
Agency	Assessor Parcel Acres	Assessor Parcel Acres % of Total	Total Assessor Parcels	Total Residential Units	
County of Marin	2,622	62.1%	4,269	4,256	
San Rafael	1,542	36.5%	6,152	7,790	
Novato	58	1.4%	22	19	
	4,222	100	10,443	12,065	

As provided in the preceding table there are overall 10,443 assessor parcels currently within LGVSD and collectively add up to 4,222 acres as of June 2016.⁶ Close to two-thirds – or 65% – of the current assessor parcel acreage have already been developed/improved to date, albeit not necessarily at the highest zoning density. This existing development is highlighted by the standing construction of 12,065 residential units

Almost two-thirds of LGVSD’s jurisdictional boundary has already been developed/improved – though not necessarily at the highest allowable density. This means one-third of the boundary remains entirely undeveloped, and this includes 151 un-built and privately owned parcels zoned for some type of urban use.

⁶ The remaining 1,805 jurisdictional acreage within LGVSD are tied to public right-of-ways and waterways.

and divided between single-family and multi-family on a 78.4% to 21.6% split.⁷ The remaining one-third – or 34% – of the current assessor parcel acreage within LGVSD is undeveloped/unimproved. This includes 151 un-built and privately owned assessor parcels that combine to total 197 acres.⁸ (Additional analysis is needed to assess the actual development potential of these unbuilt parcels.) The remaining undeveloped/unimproved assessor acreage within LGVSD – or 1,280 acres – is publicly owned and generally dedicated to municipal or open space uses.

LGVSD Boundary Breakdown: Land Use Features				
Table 4.2 Source: Marin LAFCO				
% Parcel Acres Already Developed	Residential Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
65.4	12,065	77.3	151	197

3.2 Sphere of Influence

LGVSD’s sphere of influence was initially established by the Commission in 1985 and last reviewed and updated in 2006. The sphere spans approximately 7,993 acres or 12.5 square miles in size. The sphere is exactly one-third – or 33% – larger than LGVSD’s jurisdictional boundary. This

LGVSD’s sphere of influence is one-third larger than the District jurisdictional boundary. This includes 1,967 total acres that are immediately eligible for annexation and or outside service extensions and primarily located within the Lucas Valley and Silvera/St. Anthony areas.

includes approximately 1,967 non-jurisdictional total acres (parcels and right-of-ways) in the sphere that are immediately eligible for either annexation or outside service extension subject to Commission approval. Among the total includes 48 assessor parcels that collectively add up to approximately 1,355 acres. Further, and among this latter sum, 29 of the assessor parcels equaling 722 acres are privately owned with the majority within the Lucas Valley and the Silvera/St. Vincent areas.

⁷ Residential unit total is based on by digital mapping records maintained by the County of Marin Assessor’s Office

⁸ Existing zoning divides the 151 un-built assessor parcels in LGVSD between residential (118), commercial (27) and industrial (6).

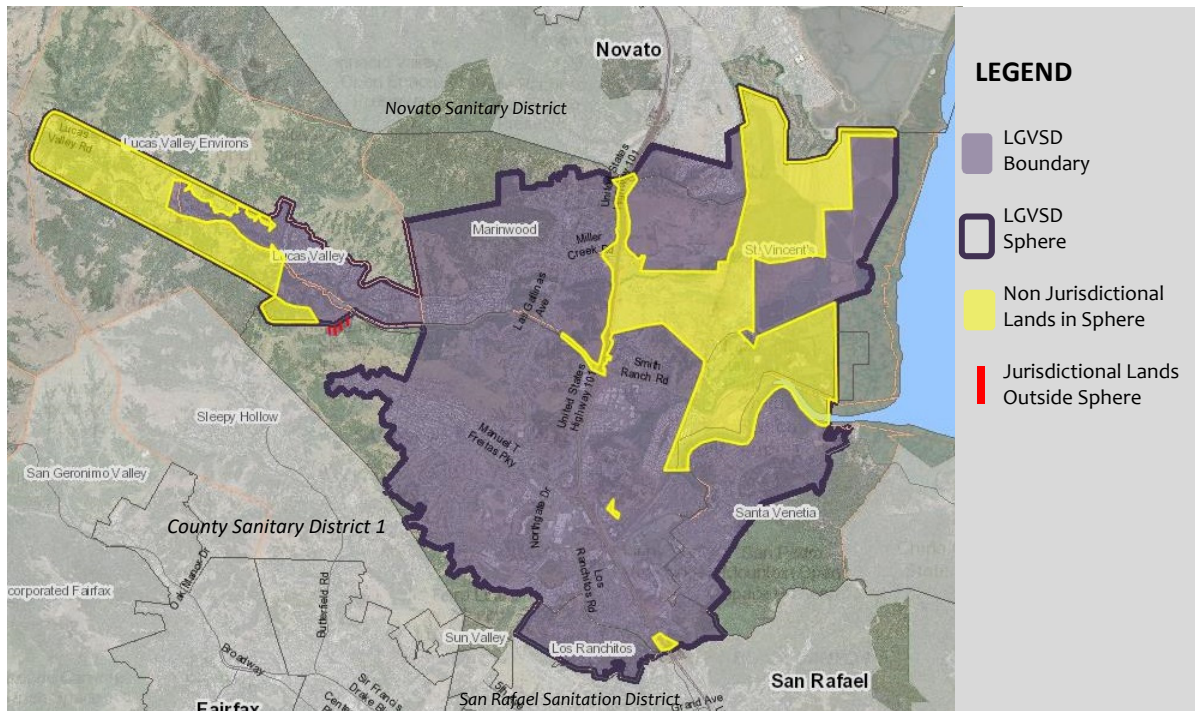


Figure 4.2

4.0 DEMOGRAPHICS

4.1 Population and Housing

LGVSD’s resident population within its jurisdictional boundary is independently estimated by the Commission at 28,475 as of the term of the study period (2014). This projection – which is anchored on a calculation of housing units, occupancy rates, and household sizes within the jurisdictional boundary and detailed in the accompanying footnote – represents 10.9% of the estimated countywide population.⁹ It is also projected

LAFCO estimates there are 28,475 total residents within LGVSD that are explicitly served by the District’s wastewater collection and treatment system as of the term of the study. It is further estimated LGVSD has experienced an overall population increase of 261 over the preceding five-year period, resulting in an annual growth rate of 0.186%. New and occupied housing units over the same period within LGVSD totaled 263 with a net change in persons per household – i.e., an intensity measurement – of (1.2%).

⁹ Marin LAFCO’s resident service population for LGVSD is independently calculated and premised on occupied housing driving resident estimates based on data collected within the four affected census tracts in the District. Four distinct calculations help produce the population estimates within each of the five subject years in the study period and involve identifying: a) total housing units; b) local occupancy rates; c) occupied housing units; and c) household sizes. Key calculations specific to LGVSD over the study period include a weighted annual housing unit change of 0.44% and a

LGVSD has experienced an overall growth rate of 0.92% over the preceding five-year period, or 0.186% annually, all of which generated an estimated net add of 261 persons. This projected increase has been generated by the addition of an estimated 263 new and occupied housing units within the jurisdictional boundary and despite a deintensification of household sizes over the span of the five-year period, starting at 2.50 in 2010 and ending at 2.47 in 2014; the latter being a net intensity decrease of (1.2%). Overall projected growth within LGVSD falls well below the concurrent annual change estimated for the entire county – 0.60%.¹⁰

LGVSD Resident Population: Past and Current Estimates					
Table 4.3 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
a) Total Housing Units	11,749	11,801	11,853	11,906	11,959
b) Local Occupancy Rate	96.40	95.8	95.8	94.7	95.9
c) Occupied Housing Units	11,265	11,180	11,353	11,403	11,528
d) Projected Household Size	2.50	2.50	2.49	2.48	2.47
Estimated Population	28,214	27,904	28,237	28,264	28,475

* rounded for reporting purposes

With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate within LGVSD will generally match the preceding five-year period with an overall yearly population change of 0.186%. The substantive result of this assumption would be an overall increase in LGVSD’s resident population of 531, producing a total population of 29,005 by 2024. This growth rate, similarly, would generate the addition of 134 new and occupied housing units within LGVSD through 2024 assuming the preceding five-year average ratio of 2.49 persons for every one occupied housing unit holds. These collective projections are summarized below.

LGVSD Resident Population: Future Estimates						
Table 4.4 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	28,475	28,580	28,686	28,792	28,898	29,005
Occupied Housing Units	11,528	11,490	11,533	11,576	11,619	11,662
- residents per housing unit	2.47	2.49	2.49	2.49	2.49	2.49

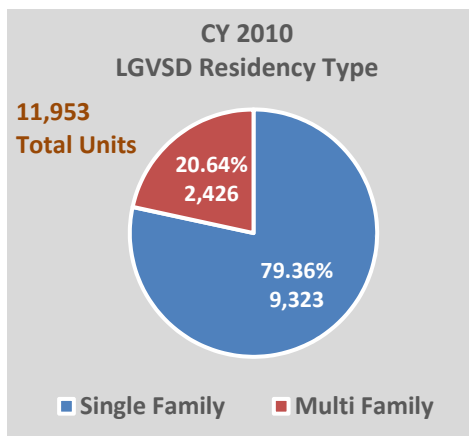
Baseline

weighted annual household size change of (0.35%). The annual weighted population change is 0.186%.

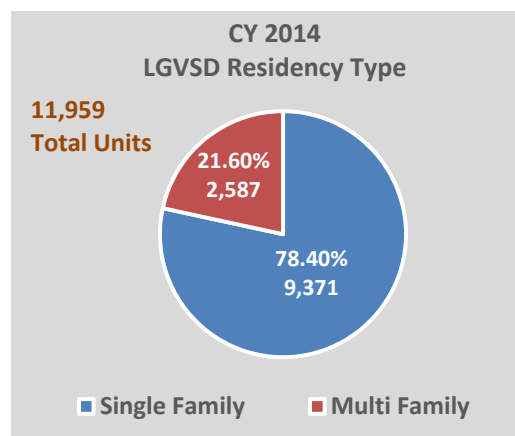
¹⁰ Marin County’s estimated population as of January 1, 2014 totaled 260,294 based on information published by the State of California’s Department of Finance and marks a 3.12% increase over the preceding five-year period.

4.2 Residency Type

The Commission projects LGVSD’s residential unit total (occupied and unoccupied) of 11,959 as of the study term is divided between single family and multi-family use at a 78.4% (9,371) to 21.6% (2,587) split, respectively. These totals produce an estimated ratio of 3.62 single-family units for every 1 multi-family unit. The overall stock of housing type has experienced a significant inverting change with single-family unit totals decreasing by (1.25%) while multi-family unit totals increasing by 4.80% over the corresponding 60-month period. The substantive change in residency type (i.e., single-family to multi-family units) has been (5.77%) from 3.85 to 1 in 2010.



Single Family to Multi Family:
3.85 to 1



Single Family to Multi Family: Figure 4.3
3.62 to 1

4.3 Social and Economic Indicators

A review of recent demographic information covering the LGVSD jurisdictional boundary for the study period indicates fulltime residents are generally in better economic positions compared to countywide averages. This information is drawn from census data collected between 2010 and 2014 that shows area residents’ household income, unemployment rate, and poverty rate are at advantageous levels compared to countywide totals. Many of these economic indicators also improved for LGVSD residents over the

LGVSD’s fulltime residents are moderately and increasingly more affluent than most of the county populace and highlighted by a median household income average over the study period of \$96,602. Also of note there has been relative stability in LGVSD in terms of household tenure with 19% having been in place since the enactment of Proposition 13 in 1979; a ratio that is almost 50% higher than the countywide average.

preceding five-year period, highlighted with the median household income rising by over one-fourth from \$75,322 to \$96,602. Notable social indicators show LGVSD residents have relatively high levels of formal education with over one-half having at least earned a bachelor degree along with a statistically high percentage of residents – 11% – working at home; the latter of which is five times greater than the countywide average for the same period. LGVSD residents are also relative long-timers to the community with an average 18.60% of occupied households having arrived before Proposition 13 in 1979. This amount exceeds the countywide average of 12.80%.

LGVSD: Resident Trends in Social and Economic Indicators				
Table 4.5 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$75,322	\$96,602	28.25%	\$91,529
Median Age	45.74	46.16	0.41%	45.10
Prime Working Age (25-64)	51.71%	52.66%	1.84%	55.28%
Unemployment Rate (Labor Force)	3.66%	3.14%	(0.52%)	4.70%
Persons Living Below Poverty Rate	6.72%	7.49%	11.41%	8.80%
Mean Travel to Work	26.6 min	28.6 min	7.66%	29.4 min
Working at Home (Labor Force)	7.26%	11.43%	57.59%	2.50%
Adults with Bachelor Degrees or Higher	51.17%	50.39%	(1.52%)	30.80%
Non English Speaking	23.05%	23.95%	3.91%	23.50%
Householder Pre Proposition 13 (1979)	20.29%	18.60%	(8.34%)	12.80%

* Amounts represent the result of a weighted calculation by estimated population performed by Marin LAFCO taking into proportional account of all four census tracts underlying LGVSD.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

LGVSD’s governance authority is established under the Sanitary District Act of 1923 (“principal act”) and codified under Public Health and Safety Code Sections 6400-6982. This principal act empowers LGVSD to provide a moderate range of municipal services upon approval by LAFCO. As of date, LGVSD is authorized to provide three municipal services: (a) wastewater (b) recycled water (c) solid waste; collection. All other latent powers enumerated under the principal act would need to be formally activated by LAFCO before LGVSD would be allowed to initiate. Similarly, should it ever seek to divest itself of directly providing its two active services, LGVSD would also need to seek LAFCO approval. A list comparing LGVSD’s active and latent powers follows.

Active Service Powers

Wastewater
Recycled Water
Solid Waste; Collection Allowed

Latent Service Powers

Storm Drainage

LGVSD has been governed since its formation in 1954 as an independent special district with registered voters comprising a five-member governing board. Members are either elected or appointed in lieu of a consented election to staggered four-year terms with a rotating president system and receive a \$252 meeting per diem. The Board regularly meets on the second and fourth Thursday each month at the LGVSD Administrative Office located at 300 Smith Ranch Road in San Rafael. A current listing of LGVSD Board of Directors along with respective backgrounds and years served with the District follows.



LGVSD Current Board Roster			
Table 4.6 Source: LGVSD			
Member	Position	Background	Years on Board
Judy Schriebman	President	Zoologist	9
Russ Greenfield	Vice President	Utility Supervisor	15
Megan Clark	Member	Computer Programmer	9
Rabi Elias	Member	Civil Engineer	3
Craig K. Murray	Member	Housing / Redevelopment	9
Average Years of Board Experience			10.0

5.2 Administration

LGVSD appoints an at-will General Manager to oversee all District operations. The current General Manager – Mark Williams – was appointed by the Board in 2007 and is fulltime. The General Manager presently oversees 20 other full-time employees, which includes four senior management support positions: Administrative Services Manager; Collection System Manager; District Engineer; and Treatment Facility Manager. LGVSD contracts for legal services with Byers/Richardson (San Rafael).

LGVSD Administrative Offices
300 Smith Ranch Road
San Rafael, California 94903



Courtesy: LGVSD

6.0 WASTEWATER SERVICES

6.1 System Structure

LGVSD provides wastewater collection and treatment services through its own infrastructure supported by an approximate 112-mile collection system with 28 pump stations leading to an advanced secondary-level treatment facility. The collection system is divided between 105 miles of gravity lines and 7 miles of force mains. LGVSD reports the average age of the collection system dates between 40 to 50 years with an expected lifespan of up to 70 years. The treatment facility was initially constructed in 1955 and last substantively upgraded in 2008.¹¹ Treated effluent is discharged, stored or further processed by LGVSD’s recycled water facility. As of the study term LGVSD’s equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – is 19 years with a (11%) trend over the corresponding 60-month period.¹²

LGVSD’s equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – as of the study term is 19 years.

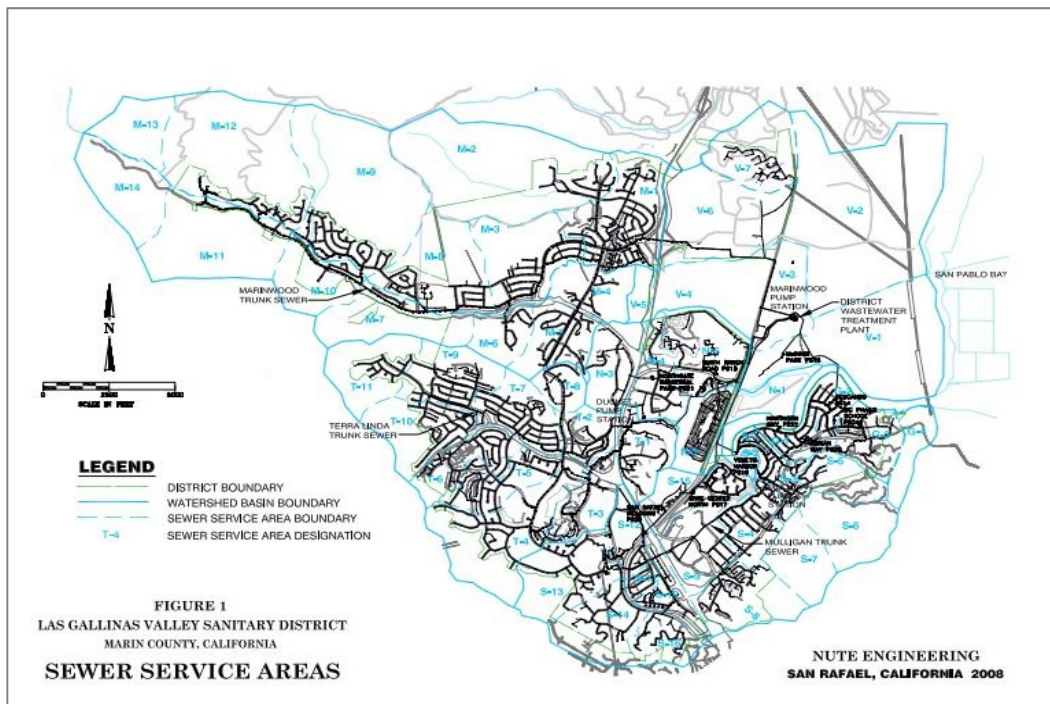


Figure 4.4

¹¹ The treatment facility upgrade in 2008 was incremental, affecting specific processes. A project completed in 2012 resulted in a major upgrade of Primary clarifiers #2 and #3.

¹² The equipment replacement ratio has been calculated by LAFCO and drawn from LGVSD’s 2013-2014 audit.

6.2 Wastewater Demands

Generators | Service Connections and Resident Population

LGVSD reports service to 9,752 active wastewater service connections as of the term of the study period. This connection total is divided among two billing categories: (a) residential at 96.7% and (b) commercial at 3.3%. The connections totals have remained stable within the five-year study period with a 0.92% increase. Overall, residential connections have consistently comprised no less than 96% of the total in any year. A breakdown of reported service connection types over the study period follows:

Service connection totals within LGVSD have remained relatively consistent over the study period and tally 9,752 at the term. Residential users on average have accounted for 96.7% of all active connections.

LGVSD: Service Connection Type Breakdown			
Table 4.7 Source: LGVSD			
Category	Residential	Commercial	Net
2010	9,343	320	9,663
2011	9,422	321	9,743
2012	9,423	322	9,745
2013	9,425	323	9,748
2014	9,429	323	9,752
Overall Change	0.92%	0.93%	0.92%

As detailed in the preceding section the Commission independently estimates LGVSD’s total resident service population at 28,475 as of the study period term. The substantive result when aligning the two demand generators – service connections and resident population – is an average ratio of 2.93 persons for every residential connection. The ratio at the end of the study term tallied 3.02. Recent service connection to resident population ratios follows.

LGVSD’s current resident to residential connection ratio is 3.02 as of the term date of this study.

LGVS D: Resident to Connection Ratio Breakdown				
Table 4.8 Source: Marin LAFCO				
Category	Residential Connection	Estimated Resident Population	Resident to Connection Ratios	
2010	9,343	28,214	3.02	
2011	9,422	27,904	2.96	
2012	9,423	28,237	2.99	
2013	9,425	28,264	2.99	
2014	9,429	28,475	3.02	
Overall Change	0.92%	0.93%	0%	

Recent Measurements | Wastewater Collection System Flows

LGVS D’s average annual wastewater collection demand generated for the current term based on information provided by the District and for ultimate treatment and disposal by its treatment facility have been approximately 998.6 million gallons. This average amount, which serves as a macro overview of system demands, represents a daily average flow of 2.7 million gallons. The average amount also translates to an estimated 97 gallons per day for each resident or 241 gallons per day each occupied housing unit; it also represents 281 gallons for every service connection.

Average day wastewater flows generated in LGVS D during the study period have totaled 2.7 million gallons, and translates to daily use ratios of 97 and 241 gallons for every person and occupied housing unit, respectively.

With respect to trends, annual demands within the five-year study period have shown an overall and steady (20.91%) decrease in flows over the span of the corresponding 60 months. The high year demand point for the collection system during the study period occurred in 2010 with total flows equaling 1.161 billion gallons for an average of 3.2 million gallons each day.

Annual wastewater flows within LGVS D have steadily decreased by one-fifth over the study period’s 60-month point-to-point index; a difference of 242.7 million gallons.

A breakdown of annual and daily wastewater flows over the study period in relation to population and housing is shown below.

LGVS D: Recent Annual and Average Daily Flows Breakdown

Table 4.9 | Source: Marin LAFCO and LGVS D

	2010	2011	2012	2013	2014	Average	Trend
Annual Flow	1.160 bg	1.038 bg	1.026 bg	850.5 mg	918.0 mg	998.6 mg	(20.91%)
Daily Average	3.2 mg	2.9 mg	2.8 mg	2.3 mg	2.5 mg	2.7 mg	(20.91%)
- Daily Resident	112.7	102.0	100.0	82.4	88.3	97.0	(21.64%)
- Daily Per Housing Unit	282.3	254.5	247.5	204.3	218.2	241.4	(22.72%)
- Daily Per Connection	329.1	292.0	288.4	239.0	257.9	281.3	(21.63%)

“bg” refers to billion gallons

“mg” refers to millions gallons

Per resident as estimated by the Commission

Per housing unit refers to occupied status as estimated by the Commission

Along with average annual wastewater flow three other more micro measurements are tracked with respect to LGVS D’s collection system and provide additional context to assessing demand. These measurements are (a) dry weather flow, (b) wet-weather flow, and (c) peak-day flow, and are summarized below.

Dry-Weather Day Flows

Average dry-weather wastewater flows over the study period have been 2.3 million gallons. This flow typically is recorded between May and October and most recently tallied 2.0 million gallons as of the study term. The overall average dry-weather tally translates over the study period to 79.8 gallons for every resident or 189.9 gallons for every occupied housing unit; it also translates to 231.3 gallons per service connection. This measurement has decreased overall during the study period by nearly one-fifth or (17.07%). A breakdown of recent dry-weather flows follows.

LGVS D: Recent Dry Weather Day Flows

Table 4.10 | Source: Marin LAFCO and LGVS D

Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection
2010	2.5 mg	87.2	209.4	254.6
2011	2.4 mg	84.6	199.9	242.2
2012	2.2 mg	77.6	184.8	224.7
2013	2.2 mg	71.8	184.8	225.7
2014	2.0 mg	71.6	170.6	209.2
Average	2.3 mg	79.8	189.9	231.3
Trend	(17.07%)	(17.83%)	(18.53%)	(17.83%)

“mg” refers to million gallons

Wet-Weather Day Flows

Average wet-weather day wastewater flows over the study period have been 3.22 million gallons. This flow typically is recorded between November and April and most recently tallied 3.0 million gallons during the study term. The overall average wet-weather day tally translates over the study period to 114.2 gallons for every resident or 272.0 gallons for every occupied housing unit; it also translates to 331.3 gallons per service connection. This measurement has decreased during the study period by almost one-fourth or (23.33%). A breakdown of recent wet-weather flows follows.

LGVS D: Recent Wet Weather Day Flows				
Table 4.11 Source: Marin LAFCO and LGVS D				
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection
2010	3.9 mg	138.2	331.9	403.6
2011	3.3 mg	119.3	282.2	341.8
2012	3.4 mg	121.5	289.4	351.9
2013	2.5 mg	87.0	206.6	252.4
2014	3.0 mg	105.0	250.0	306.6
Average Trend	3.2 mg (23.33%)	114.2 (24.04%)	272.0 (24.68%)	331.3 (24.03%)

“mg” refers to million gallons

Peak-Day Flows

Average peak-day wastewater flows over the study period have been 10.0 million gallons producing a peak-factor relative to average day totals of 4.5. The average peak-day flow – which represents the highest volume during a 24-hour period for the affected year and typically is recorded during storm events – most recently tallied 13.7 million gallons as of the study term. The average wet-weather peak day tally translates over the study period to 354.3 gallons for every resident or 843.9 gallons for every occupied housing unit; it also translates to 1,028.1 gallons per connection. This measurement has increased overall during the study period by one-fourth or 25.53%. A breakdown of peak-day flows during the study period follows.

LGVSD: Recent Peak-Day Flows					
Table 4.12 Source: Marin LAFCO and LGVSD					
Year	Peak-Day System Total	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection	System Peaking Factor
2010	10.9 mg	385.9	926.9	1,126.9	4.4
2011	10.2 mg	363.8	860.1	1,041.8	4.3
2012	11.7 mg	415.4	989.6	1,203.7	5.4
2013	3.6 mg	126.3	299.9	366.2	1.6
2014	13.7 mg	480.1	1,143.1	1,401.8	6.7
Average	10.0 mg	354.3	843.9	1,028.1	4.5
Trend	25.53%	24.38%	23.32%	24.38%	33.94%

“mg” refers to million gallons per day

6.3 Wastewater Capacities

Projected Measurements | Wastewater Collection System Flows to Treatment Facility

Going forward – and specifically for purposes of this study – it appears reasonable to assume LGVSD’s wastewater flows will generally follow trends over the study period. It is estimated, accordingly and using linear regression to control for variances in the most recent year-end totals, the system will ultimately experience a continued decrease in annual wastewater flows of 108.2 million gallons over the succeeding 10-year period finishing in 2024; a difference of (11.8%) or (1.18%) annually. This projection continues LGVSD’s overall annual flows decrease incurred during the study period, albeit at a deintensified rate of over three-fold. It is also estimated through regression analysis the system’s peak-day flows will ultimately decrease over the succeeding 10-year period by 0.74 million gallons or (5.43%) and resulting in a peaking factor of 5.8; the latter representing a rise in peak day flows relative to average day amounts by one-fourth. The following table summarizes these and related projection flows through 2024.

The Commission independently estimates LGVSD’s annual wastewater demands will continue to decrease over the succeeding 10-year period at an average rate of (1.2%). This will result in the average day demand equaling 2.22 million gallons in 2024.

LGVSD: Projected Wastewater Flows						
Table 4.13 Source: Marin LAFCO						
Year	Average Annual Flows	Average-Day Flows	Dry-Weather Flows	Wet-Weather Flows	Peak-Day Flows	
2014	1,160 mg	2.85 mg	2.04 mg	3.00 mg	13.7 mg	
2015	924.3 mg	2.53 mg	2.08 mg	3.01 mg	11.2 mg	
2016	911.6 mg	2.50 mg	2.05 mg	2.97 mg	11.4 mg	
2017	899.0 mg	2.46 mg	2.02 mg	2.94 mg	11.6 mg	
2018	886.3 mg	2.43 mg	1.99 mg	2.90 mg	11.8 mg	
2019	873.6 mg	2.39 mg	1.96 mg	2.87 mg	12.0 mg	
2020	860.8 mg	2.36 mg	1.93 mg	2.83 mg	12.2 mg	
2021	848.1 mg	2.32 mg	1.90 mg	2.79 mg	12.4 mg	
2022	835.3 mg	2.29 mg	1.87 mg	2.76 mg	12.6 mg	
2023	822.5 mg	2.25 mg	1.84 mg	2.72 mg	12.8 mg	
2024	809.7 mg	2.22 mg	1.81 mg	2.68 mg	13.0 mg	
Average Trend	867.1 mg (11.79%)	2.38 mg (11.79%)	1.95 mg (11.13%)	2.85 mg (10.56%)	12.1 mg (5.43%)	

Constraints | Contractual Provisions

LGVSD operates under the permit provisions of the California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) with respect to discharge allowances. This permit was most recently updated on July 1, 2015 and extends through June 30, 2020.¹³ It authorizes LGVSD to discharge treated wastewater into San Pablo Bay by way of two points along Miller Creek between November 1st and May 31st.¹⁴ The permit allows influent above 8.0 million gallons per day to bypass secondary treatment and recombine the bypassed flows with secondary-treated flow to be disinfected and subsequently discharged into Miller Creek.¹⁵ The permit prohibits discharge into San Pablo Bay between June 1st and October 31st unless an advanced request is made and approved by RWQCB. The permit also stipulates that the treatment facility shall not exceed 2.92 million gallons per day in average dry weather flow.

LGVSD is allowed to discharge into Miller Creek between November and May. No discharges into San Pablo Bay are allowed during the remainder of the year without special approval. Average dry-weather flow through the treatment plant in excess of 2.92 million gallons is prohibited.

¹³ Reference to RWQCB National Pollutant Discharge Elimination System Permit No. CA0037851, Order R2-2015-0021.
¹⁴ The permit does allow for discharge into San Pablo Bay between November 1st and May 31st to avoid overflows and upon advance notice/concurrence of RWQCB.
¹⁵ The permit recognizes that full secondary treatment is provided for flows up to approximately 8 million gallons per day, and above that flow, the discharge consists of “blended” primary plus secondary treated wastewater.

Constraints | Infrastructure and Facilities

LGVSD’s collection system is approximately 112 miles in total length and divided between 105 and 7 miles of gravity and force mains, respectively. The percentage of force mains to gravity flow pipelines has remained stagnant throughout the study period. The majority of the gravity lines are between 6 and 30 inches in diameter and supported by 28 strategically placed public pump stations. LGVSD’s three principal trunk sewer lines, which serve as the main arteries of the wastewater collection system, convey flows to its treatment plant. The peak day collection system capacity during the entire 60-month study period as reported by LGVSD totals 25.0 million gallons per day. For purposes of this review this reported amount – 25.0 million gallons – is deemed the maximum daily capacity of the collection system.

LGVSD’s collection system’s daily capacity to convey flows to the District’s treatment facility is estimated at 25.0 million gallons.

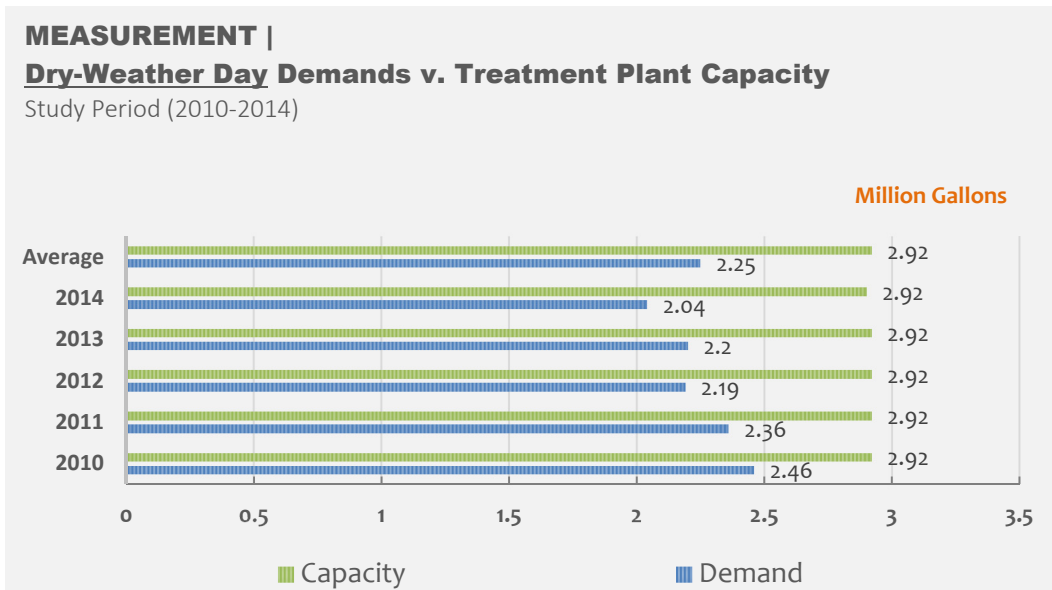
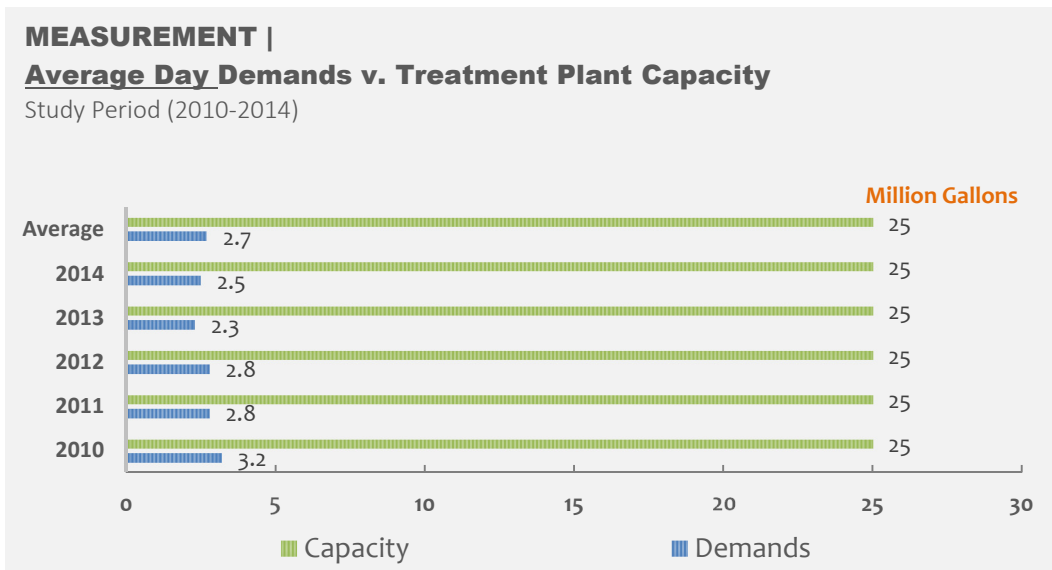
LGVSD’s treatment facility has a daily engineer design capacity of 25.0 million gallons, and as such fully matches the referenced capacity of the District’s collection system. However, and taking into account the referenced permit limitations, the maximum daily capacity of the treatment facility is reduced to a maximum average day flow of 2.92 million gallons during dry months (June 1st and October 31st). The capacity allows for “blended” flows during wet-months (November 1st and May 31st) once 8.0 million gallons have been processed and treated.¹⁶

LGVSD’s treatment facility has a daily design capacity to process up to 25.0 million gallons. Permit requirements lower the daily capacity to no more than a 2.92 million gallons average during dry months for land disposal.

¹⁶ Excess flows generated during storm events are controlled through automated valves, in which flows above 8.0 million gallons receive primary treatment and bypass secondary treatment to be recombined or blended with treated effluent in step with being discharged into San Pablo Bay.

6.4 Demand to Capacity Relationships

Study period flows averages show LGVSD has sufficient available capacities within its collection system to accommodate current and projected demands over the succeeding 10-year period. Average annual demands over the study period equal 10.8% of the collection system capacity and projected to decrease to 8.9% by 2024. Average dry-weather demands during the same period represent the biggest tax on the system and tally 77.1% of the capacity in step with the permit with RWQCB and expected to decrease to 67.8% by 2024. Average peak-day demands over the study period equal 40% of capacity and expected to rise to 52.0% by 2024.



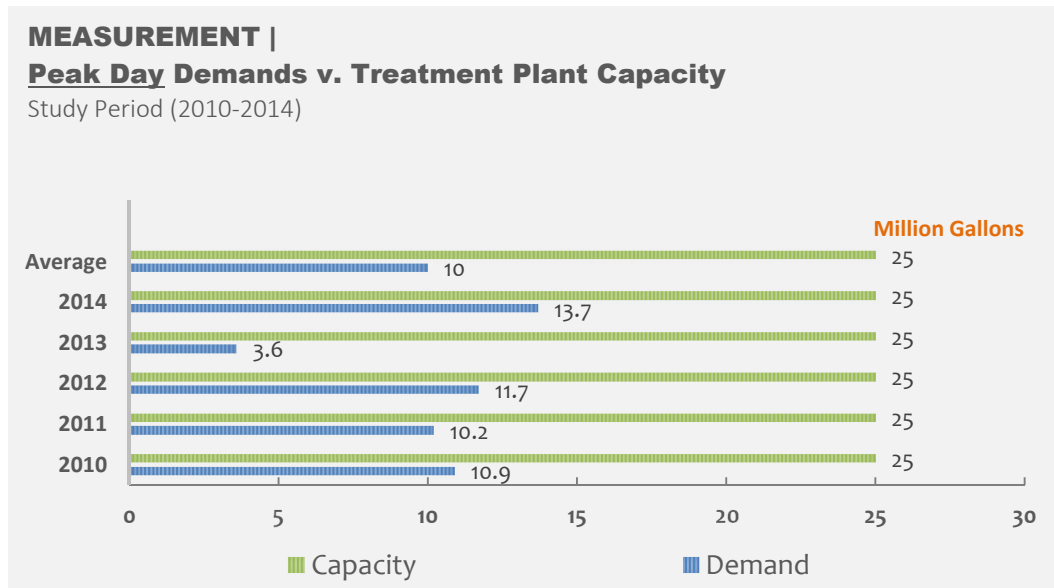


Figure 4.5

6.5 Performance

Measurement | Sanitary Sewer Overflows

The State Water Resources Control Board (SWRCB) requires all public agencies that own or operate sanitary collection systems that are one mile or more in length and convey to a public owned treatment facility comply with the reporting requirements codified in Order No. 2006-0003. This Order mandates all subject agencies to develop and implement a system-specific sewer system management plan (SSMP) that includes a spill response plan as well as requiring immediately reporting to the SWRCB of all sanitary sewer overflows, or SSOs. The ultimate purpose of the SSO reporting process is to provide a uniform means to evaluate system reliability, source control, and operation and maintenance of wastewater systems in California. SSOs are defined as any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, and include any of the following occurrences:

- a) Overflows or releases of untreated or partially treated wastewater that reaches waters of the United States;
- b) Overflows or releases of untreated or partially treated wastewater that do not reach water of the United States

- c) Wastewater backups into buildings and on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

Total number of SSOs recorded by LGVSD during the study period was 18 with an overall spillage volume of 59,802 gal. The most recent year experienced 3 SSOs. The majority of the SSOs were classified by the SWRCB as a Category 1 at 55% of the total for the period, and accounted for spills of 58,862 gal to reach the surface water resulting in the potential for environmental and human health impacts. The average response time to SSOs during the study period was 31 minutes. LGVSD’s adopted response time requirement is a two-hour period that starts upon the notification of an incident. The response time did not exceed the 2 hours throughout the period. The longest response time noted was in 2011 and 2012, tallying at 42 minutes. A review of each accompanying report incident claimed the main causes of SSOs were caused by roots at 55.5% of total causes. Debris and other issues amounted to 33.4% percent of the total with structural and fats, oils and grease (FOG) at 11%. LGVSD reports two SSOs that were repeat occurrences and attributed to roots and debris.¹⁷

LGVSD experienced 18 total SSOs during the five-year study period, and involved the unauthorized overflow of 0.058 million gallons.

LGVSD: Sanitary Sewer Overflows								
Table 4.14 Source: SWRCB								
Year	Category 1		Category 2		Category 3		Total	
	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons
2010	0	0	0	0	2	225	2	225
2011	2	2,200	0	0	0	0	2	2,200
2012	5	55,580	0	0	3	610	8	56,190
2013	2	1,067	0	0	1	6	3	1,073
2014	1	15	0	0	2	99	3	114
	10	58,862	0	0	8	940	18	59,802

“gallons” are listed in millions

¹⁷ LGVSD refers to its Emergency Response Plan for SSO notification and reporting. Notifications of SSOs may be reported by telephone, in person at District offices, or to police and/or sheriff departments. Calls are directed to the Collection System Manager during business hours (from 6:30 AM to 3:00 PM) who in turn contacts the field crew. Calls to District offices are automatically routed to an answering service during non-business hours and notifications are made to the District staff of essential information. The on-call staff person decides the resources needed, coordinates the response plan and calls the Collection Systems Manager. LGVSD’s line crew are to be the first responders for SSOs and follow the procedures outlined in LGVSD’s *Sewer Overflow Response Manual*. LGVSD noted for SSOs that may substantially impact environmental and human health, water quality monitoring of surface waters should be performed (except for spills greater than 50,000 gallons which reach surface water, for which monitoring is required by Order 2006-003). The District directs the field crew to exercise best judgment in deciding whether to conduct monitoring and consult with the Collection System Manager, Plant Manager, or General Manager.

Measurement | System Maintenance

System maintenance for purposes of this study includes both corrective and preventative maintenance. Corrective maintenance, is performed when signals indicate a fault, so an asset can be restored to its operational condition. Preventative maintenance, conversely, is initiated according to a predetermined schedule rather than in response to failure. A summary of both measurements follow.

Corrective Maintenance

LGVSD’s corrective maintenance is noted in the number of service calls received to resolve, correct or assist a particular situation. During the entire 60-month study period, LGVSD received 39 service calls with 53.8% of these attributed to a public SSO notification and the remaining to odor complaints. LGVSD did not experience any pump station failures for the period. The following table shows all service calls by category type over the study period.

LGVSD: Number of District Service Calls					
Table 4.15 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
General	0	0	0	0	0
Public SSO	2	2	8	3	6
Private SSO	0	0	0	0	0
Odor Complaints	5	2	6	4	1
Noise Complaints	0	0	0	0	0
Pump Station Alarms	0	0	0	0	0
Non-District Incidents	0	0	0	0	0
Total	7	4	14	7	7

Preventative Maintenance

LGVSD’s preventative maintenance was reported in its actual cleaning activities during the 60-month study period which amounted to 2,738,069 feet of sewer lines cleaned. According to LGVSD, inspections on equipment are overseen by staff and include rodding, flushing, and CCTV (Closed-circuit television) cameras. LGVSD operates a preventative maintenance program designed to maintain the integrity of the system, reduce the frequency of SSOs and reduce inflow/infiltration (I/I). The database issues a monthly schedule that specifies preventative maintenance

activities for the month. The maintenance of the system’s larger pump stations is performed by LGVSD’s treatment facility operators and are inspected three times per week. LGVSD has established goals for inspecting the entire collection system over a four-year period. The agency also has a joint ongoing program with CMSA to reduce FOGs by distributing a quarterly newsletter to property owners indicating the proper disposal techniques for FOGs to prevent blockages and SSOs, and provides educational outreach to contractors and plumbers working on private systems. Proper procedures when cleaning laterals are provided so as not to cause an SSO or structural issue. LGVSD does not track the number of blocked sewer pipes separately from SSOs.

LGVSD has completed and added future rehabilitation and replacement projects during the study period. In 2012, LGVSD completed a \$4.2 million-dollar upgrade to its primary clarifiers in its treatment plant. Additional projects to update the treatment plant have been budgeted including replacing its grit classifier and upgrading its biogas digester system. A Predesign Report was reviewed for the upgrade and expansion of the treatment plant to provide full secondary treatment during wet weather events for peak flows up to 25 million gallons per day. During the entire study period, LGVSD accounted for 19,025 feet of sewer line replacement. According to LGVSD, line replacements are capital projects and are not performed on a work order basis.

PLANNED <u>CLEANING</u> ACTIVITIES COMPLETED			PLANNED <u>LINE REPLACEMENT</u> COMPLETED		
Year	Planned Feet	Actual Feet	Year	Planned Feet	Actual Feet
2010	n/a	538,127	2010	-	-
2011	n/a	535,844	2011	8,112	8,112
2012	n/a	596,551	2012	-	-
2013	n/a	561,940	2013	8,000	8,000
2014	n/a	505,607	2014	-	-
TOTAL	n/a	2,738,069		16,112	16,112
Planned Work Orders Completed		n/a	Planned Work Orders Completed		n/a

Figure 4.6

6.6 User Charges and Fees

LGVSD bills one fee to its customers in recovering the District’s wastewater service costs. This fee is in the form of an annual service charge and is billed to landowners and collected on the property tax roll and recovers both collection and treatment/disposal

Most single-family customers in LGVSD currently pay \$835 a year for wastewater services.

expenses. Rates are divided between residential and non-residential customers. Residential users are currently charged \$835 for every dwelling unit (2016). Non-residential users are currently charged based on a calculation of water use and strength factor as determined by LGVSD staff. There are no voter-approved special assessments.

7.0 AGENCY FINANCES

7.1 Financial Statements

LGVSD contracts with an outside accounting firm to prepare an annual audit for each fiscal year to review the District’s financial statements in accordance with established governmental accounting standards. This includes vetting LGVSD’s statements with respect to verifying overall assets, liabilities, and equity. These audited statements provide the Commission with quantitative measurements in assessing LGVSD’s short and long-term fiscal health with specific focus on delivering wastewater services.

LGVSD’s most recent financial statements for the study period were issued for 2013-2014 and shows the District experienced a moderate and positive change over the prior fiscal year as its overall equity or fund

End of Study Term Financial Statements	
Assets	\$74.229 m
Liabilities	\$20.875 m
Equity	\$54.263 m

balance increased by 1.96% from \$53.222 to \$54.263 million. Underlying this most recent change in equity standing is the result of rises in current assets. A summary of year-end totals and trends therein drawn from the audited statements over the study period follows with the qualifier LGVSD has indicated some of the numbers were subject to a subsequent reissuance.

Agency Assets

LGVSD’s audited assets at the end of 2013-2014 totaled \$74.229 million; more than 13% higher than the average sum - \$65.420 million - generated over the course of the five-year study period. As of the study term, assets classified as current with the expectation they could be liquidated within a year, represented more than one-fourth of the total amount and tied to cash and investments, rising by 87% over the 60-month period. Assets classified as non-current make up the remaining three-fourths of the total as of the study term. The single-largest capital asset source is tied to treatment/disposal facilities at 66% less depreciation. Overall capital assets have increased by 35% over the 60-month period.

LGVSD Assets Study Period							
Table 4.16 Source: LGVSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	10.374	18.699	15.335	18.716	19.409	87.09%	16.506
Non-Current	40.485	41.266	54.609	53.390	54.820	35.41%	48.914
	50.859	59.965	69.944	72.106	74.229	45.95%	65.420

Amounts in Millions

Agency Liabilities

LGVSD’s audited liabilities at the end of 2013-2014 totaled \$20.875 million; an amount that is more than 20% higher than the average sum – \$16.884 million – generated over the course of the study period’s five-year period. As of the study term liabilities classified as current representing obligations owed in the near-term equaled nearly one-tenth of the total and largely tied to accounts payable and pending debt payments. Current liabilities overall have increased by 10% through the study period. Non-current liabilities represent the remaining nine-tenths of the total and have increased by 134% over the study period, and the result of two loans booked in 2012-2013 tied to construction of a recycled water treatment facility.

LGVSD Liabilities Study Period							
Table 4.17 Source: LGVSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	1.777	2.695	8.399	1.877	1.956	10.07%	3.340
Non-Current	8.099	12.138	11.556	17.007	18.919	133.6%	13.543
	9.876	14.883	19.955	18.884	20.875	111.4%	16.884

Amounts in Millions

Agency Equity | Net Assets

LGVSD’s audited equity or net assets at the end of 2013-2014 totaled \$54.263 million and represent the difference between the District’s total assets and total liabilities. This amount has increased by 32% over the five-year study period and primarily attributed to rises in non-current assets and the referenced construction of recycling facilities. The unrestricted portion of the net assets as of the study term totals \$16.394 million and marks an overall decrease over the 60-month period of (51%) and attributed to capital investment. This latter amount also translates to a per capita reserve ratio of \$576 within LGVSD based on a corresponding and projected resident total of 28,475.

LGVSD’s net assets have increased by 32% over the five-year period and largely driven by a rise in non-current assets generated from the establishment of recycled water facilities. The unrestricted fund balance as of the study term total of \$16.394 million equates to a per capita reserve ratio of \$576.

LGVSD Net Assets Study Period							
Table 4.18 Source: LGVSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Unrestricted	33.232	7.071	11.351	17.580	16.394	(50.7%)	17.125
Restricted	7.751	38.061	38.638	35.642	37.869	388.6%	31.592
	40.983	45.132	49.989	53.222	54.263	32.4%	48.717

Amounts in Millions

7.2 Measurements Liquidity, Capital, Margin, and Structure

A review of the audited financial statement issuances by LGVSD covering the study period shows the District finished the term with a relatively high and improving liquidity. This includes noting LGVSD finished the study term with a current ratio of nearly 10 to 1 as well as over three years – or 1,298 days – of cash on hand to cover operating expenses. These measurements also improved by no less than 39% over the 60-month period. LGVSD also finished the study term with moderate and stable levels of capital with less than 25% of its net assets being tied to long-term debt financing. LGVSD also finished each year with positive total and operating margins with the former and latter averaging 26% and 23%, respectively. The referenced operating profits are also reflected

in LGVSD’s average earned income ratio – i.e., the percent of direct service fees relative to annual revenues – of 85% for the 60-month period. A summary of year-end liquidity, capital, margin, and structure ratios follow.

LGVSD: Financial Measurements Study Period						
Table 4.19 Source: LGVSD Financials and Marin LAFCO						
Fiscal Years	Current Ratio	Days' Cash	Debt Ratio	Total Margin	Operating Margin	Earned Income Ratio
2009-2010	5.84	932	15.92%	29.06%	23.00%	86.37%
2010-2011	6.94	1,608	20.24%	35.42%	31.16%	83.57%
2011-2012	1.83	1,246	16.52%	35.83%	31.80%	80.13%
2012-2013	9.97	1,275	23.59%	25.29%	24.39%	87.12%
2013-2014	9.92	1,298	25.49%	25.90%	23.24%	88.84%
Average	6.90	1,272	20.35%	30.30%	26.72%	85.21%
Trend	69.9%	39.2%	60.05%	(10.87%)	1.08%	2.86%

■ Liquidity

■ Capital

■ Margin

■ Structure

Notes

Current Ratio (liquidity) relates to the ability of the agency to pay short-term obligations (current liabilities) relative to the amount of available cash and cash equivalents (current assets). Higher is better.

Days' Cash (liquidity) measures the number of days' worth of average operating expenses the agency can meet with cash on hand. Higher is better.

Debt Ratio (capital) measures the portion of agency's total assets that are directly tied to debt financing. Lower is better.

Total Margin (profit) represents the year-end profit level of the agency and includes all revenues and expenses. Higher is better.

Operating Margin (profit) represents the year-end profit level of the agency specific to its normal and reoccurring revenues and expenses tied to service provision. Higher is better.

Earned Income (structure) measures the portion of annual revenues that are directly tied from fees for services. Higher is better for enterprise agencies.

7.3 Pension Obligations

LGVSD provides a defined benefit plan to its employees through an investment risk-pool contract with the California Public Employees Retirement Systems



(CalPERS). This pension contract provides employees with specified retirement benefits and includes disability benefits, annual cost-of-living adjustments, and death benefits to members and their beneficiaries. Actual pension benefits are based on the date of hire. Employees hired before January 1, 2013 are termed “Category One” while employees hired afterwards are termed “Category Two.” Additional details of the pension program based on actuarial valuations issued by CalPERS follows.

Participants | Pension Formulas

As of the study period's term (2014) there are a total of 51 participants within LGVSD's pension program. This total amount – which represents an overall increase of 6% in participants since 2012 – is further divided between enrollee type (i.e., active, separated, transferred, retired) and marked by a worker-to-retiree ratio of 0.9 to 1 as of the study term. Category One participants represent 94% – or 48 – of the total program enrollees and are eligible to receive one of two types of retirement payments. The first and predominate tier within Category One is based on a 2.7 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 54% of their highest one year salary beginning at age 55 and continuing each year thereafter. The second tier is based on a 2.0 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 40% of their highest one year salary beginning at age 55 and continuing each year thereafter. Category Two participants account for the remaining 6% – or 3 – of the total program enrollee amount as of the study period's term and are subject to a flat 2.0% at 62 pension formula. This tier provides eligible retirees with 20 years of total service credit 40% of their highest three years of average salary beginning at age 62 and continuing annually thereafter.

Most LGVSD employees receive one of two types of defined pensions based on either a 2.7 @ 55 or 2.0 @ 55 formula. Employees hired after January 1, 2013 receive a 2.0 @ 62 pension formula.

LGVSD's Pension Enrollee Information					
Table 4.20 Source: CalPERS and Marin LAFCO					
Type	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Active	n/a	n/a	19	18	20
Transferred	n/a	n/a	2	3	4
Separated	n/a	n/a	4	4	4
Retired	n/a	n/a	20	21	23
Total Enrollees	n/a	n/a	45	46	51
Worker-to-Retiree Ratio	n/a	n/a	0.95 to 1	0.86 to 1	0.87 to 1

Annual Contributions

LGVSD’s total annual pension contributions as of the study period’s term tallied \$0.399 million. This amount represents an overall increase over the five-year study period of 20% and is two-fold greater than the corresponding inflation rate calculated for the San Francisco Bay Region.¹⁸

LGVSD’s pension contributions have increased by 20% over the five-year study period, and as of 2013-2014 account for 18% of total payroll.

The most recent annual pension contribution by LGVSD for the study period marked 18% of the District’s total annual payroll for the corresponding year (2013-2014).¹⁹

LGVSD’s Pension Contributions

Table 4.21 | Source: CalPERS and Marin LAFCO

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
\$283,055	\$327,304	\$403,005	\$411,624	\$339,757
Average				\$352,757
Trend				20.03%

Funded Status

LGVSD’s unfunded liability – tally of pension monies owed and not covered by assets – ended the study period at \$1.801 million and as such represents 9.9% of the District’s unrestricted fund balance as of June 30, 2014. This former amount produces a funded ratio of 83% based on market value. It also reflects an overall improvement in the funded ratio of 15% over the preceding four-year period.²⁰

LGVSD’s unfunded pension liability has decreased over the last four years of the study period by (20%) and ended the term at \$1.801 million; the equivalent of a 83% funded ratio.

LGVSD’s Pension Trends

Table 4.22 | Source: CalPERS and Marin LAFCO

	Unfunded Liability	Funded Ratio
2009-2010	n/a	n/a
2010-2011	\$2,261,743	71.63%
2011-2012	\$2,742,701	68.06%
2012-2013	\$2,523,650	72.49%
2013-2014	\$1,801,307	82.71%
Average	\$2,332,350	73.72%
Trend	(20.36%)	15.46%

¹⁸ According to the United States Department of Labor the overall inflation rate in the San Francisco Bay Area region between 2010 and 2014 tallied 10.77%.

¹⁹ LGVSD’s covered annual payroll in 2013-2014 totaled \$1.874 million.

²⁰ Pension information for 2009-2010 is not available.

Amounts above are show in market form and reflects the immediate and short term values of the pension with respect to assets and liabilities (i.e., here and now).

7.4 Revenue to Expense Trends

A review of LGVSD’s overall actual revenues and expenses during the study period as shown in the audited financial statements and specific to 2009-2010 to 2013-2014 shows revenue surpluses in each year ranging in value from 25% to 42%. Overall actual revenues averaged \$10.810 million over the 60-month period compared to \$7.274 million in actual expenses; a difference of nearly one-half or 49%. The referenced separation, however, has been narrowing with the growth rate of expenses at 38% outpacing the growth rate of revenues at 31% over the 60-month period.

LGVSD’s overall revenues have outgained overall expenses – including booked depreciation – in each of the five years comprising the study period with an average monetary separation of \$3.536 million – or 49%. This separation, however, has narrowed over the same period with expenses outpacing revenues by more than one-fifth. Removing depreciation as a booked expense produces a higher positive revenue over expense average for LGVSD over the 60-months at 98%.

LGVSD’s revenue ledger consists of 10 distinct categories with sewer service charges accounting on average for 85% of the total. Another 10% of the revenue average has been drawn from property taxes. The remaining revenue total has been drawn and in proportional magnitude from intergovernmental proceeds, connection fees, interest earnings, other, franchise fees, recycled water, and asset disposal. LGVSD’s expense ledger also consists of 10

Top Revenue Categories:
1) Sewer Charges @ 85%
2) Property Taxes @ 10%

Top Expense Categories
1) Depreciation @ 28%
2) Administration @ 24%

distinct categories with depreciation accounting for the single largest resource demand and on average over the 60 months tallying 28% of the total. Other prominent expenses have been tied to administration, treatment, and collection and on average have accounted for 24%, 17%, and 13%, respectively. The remaining expense total have been drawn and in proportional magnitude from interest expense, lab, engineering, and recycled water activities.

LGVSD Actual Revenue Trends | Study Period

Table 4.23 | Source: LGVSD Financials and Marin LAFCO

Category	2009	2010	2011	2012	2013	Trend	Average	% of
	2010	2011	2012	2013	2014			
Sewer Charges	7.604	8.835	9.233	10.069	10.157	33.57%	9.179	84.91
Miscellaneous	0.041	0.032	0.054	0.034	0.046	12.20%	0.041	0.38
Recycled Water	-	-	-	0.037	0.075	-	0.022	0.21
Intergovernmental	0.005	0.005	0.005	0.005	0.005	0.0%	0.005	0.05
Franchise Fees	0.025	0.025	0.025	0.025	0.25	0.0%	0.025	0.23
Property Taxes	1.054	1.009	1.005	0.983	1.118	6.07%	1.033	9.56
Asset Disposal	0.007	0.006	-	-	-	-	0.002	0.002
Interest	0.076	0.093	0.065	0.046	0.047	(38.16%)	0.065	0.60
Grants	-	0.075	1.107	0.386	-	-	0.313	2.90
Connection Fees	(0.008)	0.530	0.028	0.015	0.044	(650.0%)	0.122	1.13
Totals	8.804	10.610	11.522	11.600	11.517	30.82%	10.810	100.00

amounts in millions

LGVSD Actual Expense Trends | Study Period

Table 4.24 | Source: LGVSD Financials and Marin LAFCO

Category	2009	2010	2011	2012	2013	Trend	Average	% of
	2010	2011	2012	2013	2014			
Collection	1.009	0.854	0.937	0.951	1.089	7.93%	0.968	13.31
Treatment	1.088	1.138	1.295	1.312	1.519	39.61%	1.270	17.46
Disposal	0.085	0.143	0.147	0.267	0.340	300.0%	0.196	2.70
Lab/Testing	0.313	0.353	0.387	0.377	0.402	28.43%	0.366	5.04
Administration	1.564	1.756	1.726	2.093	1.692	8.18%	1.766	24.28
Engineering	-	-	-	0.296	0.325	-	0.124	1.71
Depreciation *	1.828	1.756	1.726	2.093	1.692	33.04%	2.054	28.25
Recycled Water	-	-	-	0.060	0.090	-	0.030	0.41
Loss of Disposal	-	-	-	0.048	0.002	-	0.010	0.14
Interest Expense	0.364	0.357	0.331	0.652	0.735	102.14%	0.487	6.71
Totals	6.251	6.416	6.665	8.367	8.626	38.01%	7.274	100.00
... Less Depreciation	4.423	4.660	4.939	6.274	6.934	56.77%	5.446	100.00

amounts in millions

Net with Depreciation

Year Ending	\$2.553	\$4.149	\$4.857	\$3.233	\$2.890
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Net without Depreciation

Year Ending	\$4.381	\$5.950	\$6.583	\$5.326	\$4.583
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* Please note depreciation is shown as an operating expense in the financial statements in step with generally accepted government accounting standards, and as such impacts – and often negatively – gross profit or total margin. Depreciation takes into account the wear and tear on physical infrastructure, such as sewer lines, pumps, and other capital equipment. Government accounting standards direct agencies to spread out the costs of replacing these assets over the long term, which generates the term depreciation or amortization. The “charge” for using these assets during the period is a fraction of the original cost of the assets based on the expected life of the assets and presumably is rolled into the agencies’ fund balance at the end of the fiscal year and as part of the restricted reserve.

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B. SAN RAFAEL SANITATION DISTRICT

1.0 OVERVIEW

The San Rafael Sanitation District (SRSD) was formed in 1947 and encompasses an approximate 13-square mile jurisdictional boundary in east-central Marin County. Governance is provided dependently by a three-member board whose members are appointed to staggered four-year terms with two drawn from the San Rafael City Council



and a third drawn from the County of Marin Board of Supervisors. Three local land use authorities overlap SRSD's jurisdictional boundary and headlined by the aforementioned City of San Rafael, which presently accounts for three-fifths – or 58% – of the subject lands. The rest of SRSD's jurisdictional boundary is divided between the County of Marin's unincorporated area – including the island communities of Country Club and Bay View – at 42% with a small remainder in the City of San Anselmo.

SRSD is currently organized as a single-purpose agency with municipal operations limited to wastewater collection though it is empowered – subject to LAFCO approval – to provide three other distinct services: water (potable and non-potable); garbage transfer/disposal; and street cleaning/sweeping services. Wastewater service activities directly performed by SRSD focuses on engineering aspects of the District's approximate 146 mile collection system along with cost-recovery through the setting and collection of charges and fees. SRSD also provides routine and emergency cleaning and maintenance of the collection system. SRSD – and as a signatory – utilizes Central Main Sanitation Agency (CMSA) for wastewater treatment and disposal services. SRSD's adopted operating budget at the term of the study period was \$17.1 million with funding dedicated for the equivalent of 15 fulltime employees. The unrestricted fund balance was \$21.5 million with an associated days-cash ratio totaling 805; i.e., the amount of cash on hand to cover operating expenses based on 2013-2014 actuals.

The Commission independently estimates the resident service population within SRSD is 40,744 as of the term of this study period (2014). It is also projected SRSD’s population growth rate over the five-year study period has averaged 0.69% annually and primarily tied to an increase in occupancy levels; the substantive result being the net addition of 1,363 persons. Overall it is also estimated by the Commission nearly two-thirds of the jurisdictional boundary has been developed and or improved – though not necessarily at the highest density. This means one-third of the boundary area remains entirely undeveloped, and this includes 638 existing unbuilt and privately owned parcels that are zoned for some type of urban use by the respective land use authority.²¹

San Rafael Sanitation District	
Formation Date:	1947
Principal Act:	Health and Safety Sections 4700 et seq.
Service Categories:	Wastewater Collection
Service Population	40,744
Governance Type:	Dependent

2.0 BACKGROUND

2.1 Community Development

SRSD’s central service area – San Rafael – began its present-day development at the start of the 19th century with the establishment of the Mission San Rafael. Originally constructed to treat sick Native Americans whom fell ill at the Mission Dolores in San Francisco, the San Rafael Mission expanded its residency to nearly 1,000 by 1830 due to its agricultural activities and its function as a commerce site for the region. Development of the area further advanced in 1844 as three contiguous ranchos – “Las Gallinas,” “Santa Margarita,” and “San Pedro” – totaling over 21,000 acres were granted by Mexico to Irish settler, Timothy Murphy. Murphy kept the majority of the ranchos in cattle grazing through the time of his death in the early 1850s before leaving most of the lands to nephew John Lucas who subsequently began selling lots while retaining a homestead in present-day Terra Linda. John Lucas’ decision to begin selling pieces of his newfound holdings, notably, coincided with outside developer interest in the region.

²¹ Additional analysis is needed to assess the actual development potential of the 638 unbuilt parcels.

This interest was led by the establishment of the ferry and railroad service byway of San Quentin Point, connecting San Rafael to San Francisco by 1860.



Figure 4.7

Following in the footsteps of Timothy Murphy and his nephew John Lucas the next seminal phase in San Rafael's urban development is accredited to mining merchant William Tell Coleman. In the late 1860s Coleman purchased 1,100 acres of land east of the Mission site he named Magnolia Valley. He landscaped the property for the inclusion of a 12-acre nursery, filled with a variety of trees and hired Hall Hammond of Golden Gate Park to subdivide the land into smaller lots for purchase. Coleman helped facilitate lot sales in Magnolia Valley – subsequently termed Dominican – by securing an adequate water supply through the creation of the Marin County Water Company in 1871. The Marin Water Company proceeded to immediately purchase the neighboring San Rafael Water Company and its water rights to Lagunitas Creek. It also began providing basic

sanitary services, such as sewage flushing and constructing drainage systems conveying waste into San Rafael Bay byway of San Rafael and Erwin Creeks.

Coleman's investment in Magnolia Valley proved successful as lots were sold and developed that – and among other outcomes – contributed to an influx of new landowners and their successful efforts to incorporate San Rafael in 1874 with an initial resident count of 840. Coleman transitioned his focus thereafter on commercial and public-use projects in and around the mission site – now the downtown area – and marked by building the County of Marin's first courthouse and later Hotel Rafael. These and other projects, including the development of Gerstle Park, aided an early population surge for San Rafael as its resident base increased by nearly 500% over the next twenty five years and reached 3,879 by 1900; an amount representing one-fourth of the countywide total at the time. Another population surge occurred after the end of World War I with resident totals increasing from 5,512 in 1920 to 8,022 in 1930; a 10-year difference of nearly 50% and marked by the development of the Montecito area.

2.2 Formation Proceedings

The formation of SRSD was completed in 1947 with the County of Marin's Boundary Change Commission approving the official service area of the District in conjunction with the voter approval. The original boundaries included the then-incorporated boundary of the City of San Rafael along with adjacent unincorporated lands to the east towards Bayside Acres and south to California Park.

2.3 Post Formation Activities

A summary of notable activities undertaken SRSD and/or affecting the District's service area following formation in 1947 is provided below.

- Upon formation SRSD owned and operated two treatment plants.
- The population within SRSD's core service area - San Rafael - reaches 13,848 in 1950. It expands ten years later to 20,460 by 1960.

- SRSD became an original signatory in the creation of CMSA in 1979; a joint powers authority created for the purposes of planning, constructing, and operating wastewater treatment and disposal services for its member-agencies with the latter achieved through a deep-water outfall to the San Francisco Bay.
- CSMA completed construction and initiated operation of a wastewater treatment facility on the north side of Point San Quentin Point in 1985; SRSD flows are redirected accordingly.

3.0 BOUNDARIES

3.1 Jurisdictional Boundary

SRSD’s jurisdictional boundary spans approximately 12.8 square miles in size and covers 8,184 total acres (parcels and right-of-ways). Three land use authorities overlap the jurisdictional boundary. And in terms of acreage the City of San Rafael is the predominant land use authority with an estimated 58% of all SRSD lands lying with the City. Another 42% of the jurisdictional lands fall under the land use jurisdiction of the County of Marin and include the unincorporated island communities of Country Club and Bayview. The remaining amount – or 0.1 % – lies within the City of San Anselmo and specific to eight properties located on or near Spring Grove Avenue.

SRSD’s jurisdictional boundary spans 12.8 square miles and overlaps three land use authorities with San Rafael being the largest with the City covering 58% of all District lands.

Total assessed value (land and structure) within SRSD is calculated at \$8.196 billion and translates to a per acre value ratio of \$1.0 million. This former amount – \$8.196 billion – further represents a per capita value of \$0.201 million based on the estimated service population of 40,744. SRSD’s set allocation of property tax proceeds – i.e., its share of the 1% – is 1.47%.

Assessed land values in SRSD totals \$8.2 billion, and based on receiving 1.47% of the 1% annual property tax the District’s allocated share of the total less deductions and other exchanges is \$1.204 million.

SRSD Boundary Breakdown: Land Use Authorities

Table 4.25 | Source: Marin LAFCO

Agency	Assessor Parcel Acres	Assessor Parcel Acres % of Total	Total Assessor Parcels	Total Residential Units
San Rafael	3,153	58.1%	10,628	15,414
County of Marin	2,268	41.8%	1,577	621
San Anselmo	8	0.1%	16	15
	5,429	100	12,221	16,050

As provided in the preceding table there are overall 12,221 assessor parcels currently within SRSD and collectively add up to 5,429 acres as of June 2016.²² Close to two-thirds – or 64% – of the current assessor parcel acreage have already been developed/improved to date, albeit not necessarily at the highest zoning density. This existing development is highlighted by the standing construction of 16,050 residential units and divided between single-family and multi-family on a 55% to 45% split. The remaining one-third plus – or 36% – of the current assessor parcel acreage is undeveloped/unimproved. This includes 638 un-built and privately owned assessor parcels that combine to total 480 acres.²³ (Additional analysis would be needed to assess actual development potential of these unbuilt parcels.) The remaining undeveloped/unimproved assessor acreage within SRSD – or 1,459 acres – is publicly owned and generally dedicated to open space uses.

Almost two-thirds of SRSD’s jurisdictional boundary has already been developed or improved – though not necessarily at its maximum density. This means almost one-third of the boundary remains entirely undeveloped. This includes 638 un-built and privately owned parcels zoned for some type of urban use.

SRSD Boundary Breakdown: Land Use Features

Table 4.26 | Source: Marin LAFCO

% Parcel Acres Already Developed	Residential Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
64.3	16,050	54.9	638	480

²² The remaining 2,755 jurisdictional acreage within SRSD are tied to public right-of-ways and waterways.

²³ Existing zoning divides the 638 un-built assessor parcels in SRSD between residential (509), commercial (109) and industrial (20) sites.

3.2 Sphere of Influence

SRSD’s sphere of influence was initially established by the Commission in 1984 and last reviewed and updated in 2006. The sphere spans approximately 7,434 acres or 11.6 square miles in size. The sphere is nearly one-tenth – or 9% – smaller than SRSD’s jurisdictional boundary. Most notably, there are two distinct areas within SRSD that lie outside the sphere – North San Pedro Road and Loch Lomond Marina – and collectively add up to 943 acres. Non-jurisdictional lands included in SRSD’s sphere total approximately 119 acres (parcels and right-of-ways) and as such are immediately eligible for annexation or outside service extension subject to Commission approval. This includes 102 assessor parcels with nine-tenths – or 89% – privately owned and zoned for an urban type use.

SRSD’s sphere of influence includes two unique features. First, the sphere excludes 943 jurisdictional lands concentrated in two unincorporated areas: North San Pedro Road and the Loch Lomond Marina. Second, the sphere includes 119 acres of non-jurisdictional land – including nearly a dozen parcels located within County Sanitary District 1. The majority of the non-jurisdictional lands are located within County Club.

North San Pedro Road and Loch Lomond Marina – and collectively add up to 943 acres. Non-jurisdictional lands included in SRSD’s sphere total approximately 119 acres (parcels and right-of-ways) and as such are immediately eligible for annexation or outside service extension subject to Commission approval. This includes 102 assessor parcels with nine-tenths – or 89% – privately owned and zoned for an urban type use.

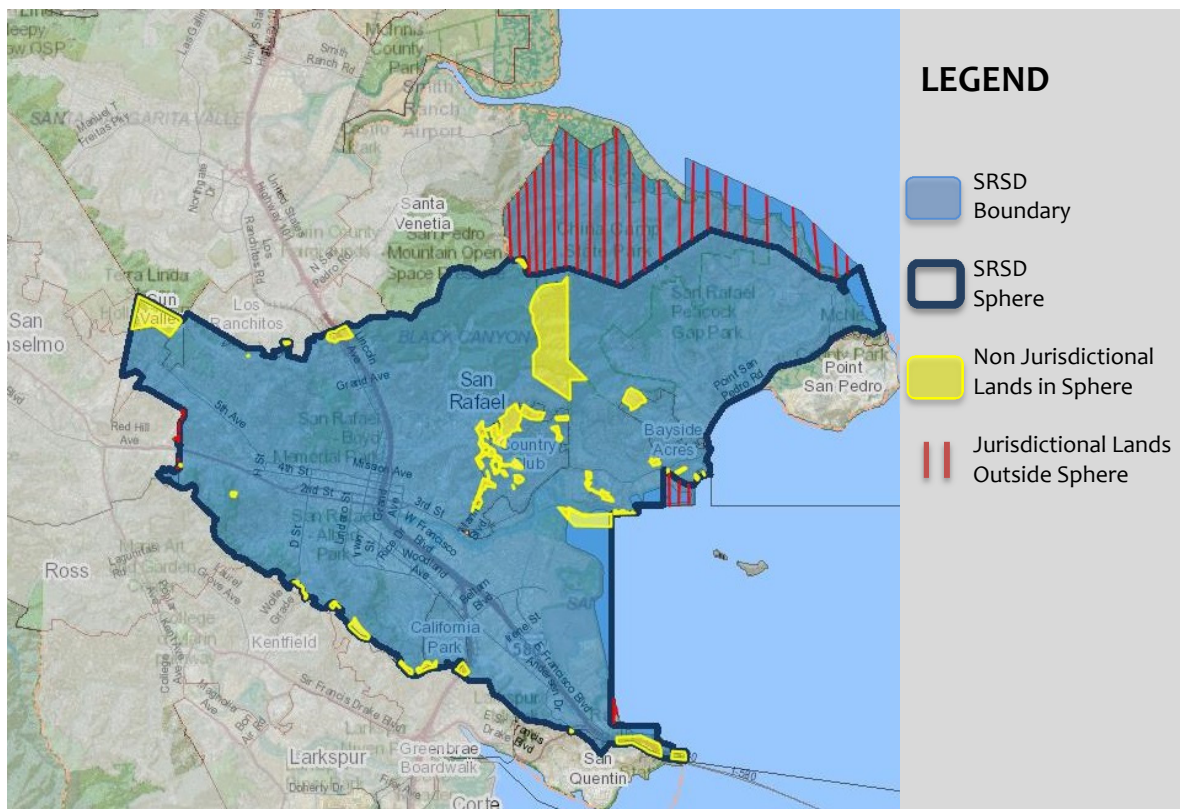


Figure 4.8

4.0 DEMOGRAPHICS

4.1 Population Estimates

SRSD’s resident population within its jurisdictional boundary is independently estimated by the Commission at 40,744 as of the term of the study. This projection – which is anchored on a calculation of housing units, occupancy rates, and household sizes within the jurisdictional boundary and detailed in the accompanying footnote – represents 15.6% of the estimated countywide population.²⁴ It is also projected SRSD has experienced an overall growth rate of 3.46%

LAFCO estimates there are 40,744 total residents within SRSD that are explicitly served by the District’s wastewater collection system as of the term of the study. It is further estimated SRSD has experienced an overall population increase of 1,363 over the preceding five-year period, resulting in an annual growth rate of 0.692%. New and occupied housing units over the same period within SRSD totaled 153 with a net change in persons per household – i.e., an intensity measurement – of 2.69%.

over the preceding five-year period or 0.692% annually; all of which produces an estimated net add of 1,363 persons. This projected increase has been generated by the addition of an estimated 153 new occupied housing units within the jurisdictional boundary and aided by an intensification of household sizes over the span of the five-year period starting at 2.60 in 2010 and ending at 2.67 in 2014; the latter being a net intensity increase of 2.69%. Overall projected growth within SRSD falls above the concurrent annual change estimated for the entire county – 0.62%.²⁵

SRSD Resident Population: Past and Current Estimates					
Table 4.27 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
a) Total Housing Units	15,938	15,957	15,975	15,994	16,013
b) Local Occupancy Rate	94.78	93.66	94.68	94.68	95.30
c) Occupied Housing Units	15,107	14,945	15,126	15,144	15,260
d) Projected Household Size	2.60	2.62	2.64	2.65	2.67
Estimated Population	39,381	39,191	39,906	40,192	40,744

²⁴ Marin LAFCO’s resident service population for SRSD is independently calculated and premised on occupied housing driving resident estimates based on data collected within the nine affected census tracts in the District. Four distinct calculations help produce the population estimates within each of the five subject years in the study period and involve identifying: a) total housing units; b) local occupancy rates; c) occupied housing units; and c) household sizes. Key calculations specific to SRSD over the study period include a weighted annual housing unit change of 0.116% and a weighted annual household size change of 0.598%. The annual weighted population change is 0.692%.

²⁵ Marin County’s estimated population as of January 1, 2014 totaled 260,750 based on information published by the United States Census and marks a 3.01% increase over the preceding five-year period.

With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate with SRSD will generally match the preceding five-year period with an overall yearly population change of 0.692%. The substantive result of this assumption would be an overall increase in SRSD’s resident population of 2,911 and produce a total of 43,655 by 2024. This growth rate, similarly, would generate the addition of 1,288 new and occupied housing units within SRSD through 2024 assuming the preceding five-year average ratio of 2.63 persons for every one occupied housing unit holds. These collective projections going forward are summarized below.

SRSD Resident Population: Future Estimates						
Table 4.28 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	40,744	41,311	41,885	42,467	43,057	43,655
Occupied Housing Units	15,260	15,689	15,877	16,098	16,321	16,548
- residents to housing units	2.67	2.64	2.64	2.64	2.64	2.64

baseline

4.2 Residency Type

The Commission projects SRSD’s residential unit total (occupied and unoccupied) of 16,013 as of the study term is divided between single family and multi-family use at 53.37% (8,546) and 46.63% (7,467), respectively. These totals produce an estimated ratio of 1.14 to 1 with respect to single-family to multi-family units within the jurisdictional boundary. The overall stock of housing type has experienced a significant inversing change with single-family unit totals decreasing by (2.51%) while multi-family unit totals increasing by 3.03% over the corresponding 60-month period. The substantive change in the residency type ratio (i.e., single-family to multi-family units) has been (5.37%) from 1.21 to 1 in 2010.

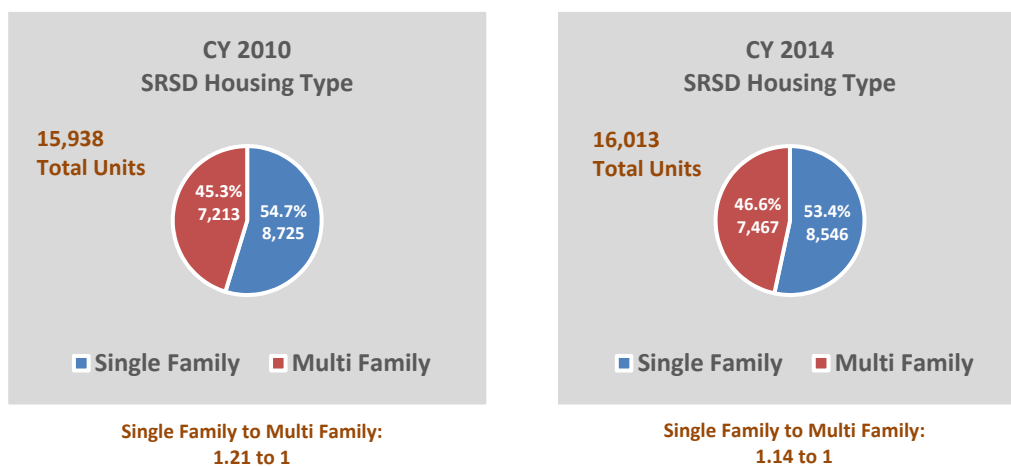


Figure 4.8

4.3 Social and Economic Indicators

A review of recent demographic information covering the SRSD jurisdictional boundary for the study period shows fulltime residents are relatively younger and with less economic standing compared to countywide averages. This information is drawn from census data collected between 2010 and 2014 and shows area residents' average median household income of \$75,046 is close to one-fifth below the countywide amount. Comparisons also show SRSD residents have significantly higher average unemployment and poverty rates compared

SRSD's fulltime residents are generally younger and less affluent than most of the county populace and highlighted by a median household income average over the study period of \$75,046; which is one-fifth below the county average. Also of note there has been sizeable amount of transition in SRSD over the last 40 years with only 11% of household owners have resided in their homes before the enactment of Proposition 13 in 1979.

to countywide amounts and have significantly increased over the preceding five-year data collection period. SRSD residents are also close to being one-tenth younger with a median age of 40.6. Notable social indicators show SRSD residents are more ethnically diverse with 42.4% being non-native speakers and is nearly double the countywide rate. SRSD residents are also relative newcomers to the community with an average of 10.66% of occupied households arriving before Proposition 13 in 1979. This amount is nearly one-fifth below the countywide average of 12.80%.

SRSD: Resident Trends in Social and Economic Indicators				
Table 4.29 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$76,534	\$75,046	(1.94%)	\$91,529
Median Age	39.45	40.64	3.04%	45.10
Prime Working Age (25-64)	58.17%	64.59%	11.02%	55.28%
Unemployment Rate (Labor Force)	3.61%	6.09%	68.43%	4.70%
Persons Living Below Poverty Rate	9.67%	19.08%	97.40%	8.80%
Mean Travel to Work	25.25 min	26.68 min	5.53%	29.4 min
Working at Home (Labor Force)	7.4%	6.1%	(16.48%)	2.50%
Adults with Bachelor Degrees or Higher	45.25%	41.07%	(9.23%)	30.80%
Non English Speaking	39.66%	42.40%	6.91%	23.50%
Householder Pre Proposition 13 (1979)	12.86%	10.66%	(17.14%)	12.80%

* Amounts represent the result of a weighted calculation by estimated population performed by Marin LAFCO taking into proportional account of all nine census tracts underlying SRSD.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

SRSD’s governance authority is established under the County Sanitation District Act of 1923 (“principal act”) and codified under Public Health and Safety Code Sections 4700-4858. This principal act – which was enacted concurrently with an update to the similar provisions of the California Sanitary District Act – empowers SRSD to provide a moderate range of municipal services upon approval by LAFCO. As of date, SRSD is authorized to provide only one municipal service: (a) wastewater. All other latent powers enumerated under the principal act would need to be formally activated by LAFCO before SRSD would be allowed to initiate. Similarly, should it ever seek to divest itself of directly providing wastewater services, SRSD would also need to seek LAFCO approval. A list of active and latent powers for SRSD follows.

Active Service Powers

Wastewater

Latent Service Powers

Solid Waste; Not Collection
Recycled Water
Storm Drainage
Street Cleaning/Sweeping

SRSD has been governed since its formation in 1947 as a dependent special district with three appointments to its Board of Directors with two made by the San Rafael City Council and the third by the County Board of Supervisors. Appointees’ serve staggered four-year terms and receive a \$100 meeting per diem. The Board currently meets on the 4th Friday each month at 9:00 a.m. at the San Rafael City Hall located at 1400 Fifth Avenue in San Rafael. A current listing of SRSD Board of Directors along with respective backgrounds and years served follows.



Current SRSD Board Roster

Table 4.30 | Source: SRSD

Member	Position	Background	Years on Board
Gary O. Phillips San Rafael	Chair	Certified Public Accountant	n/a
Maribeth Bushy San Rafael	Director	Administrative Law Judge	n/a
Katie Rice County of Marin	Director	Local Government Employee	n/a

5.2 Administration

SRSD appoints an at-will General Manager to oversee all District operations. The current District Manager – Doris Toy – was appointed by the Board in 2009 and is fulltime. The General Manager oversees 14 other full-time employees and this includes two senior management support positions: Senior Civil Engineer and Sewer Maintenance Superintendent. SRSD contracts with San Rafael for a variety of staff support services ranging in scope from accounting with Maher Accountancy to information technology. SRSD also contracts with the County for legal through County Counsel.

SRSD Administrative Offices

111 Morphew Street
San Rafael, California 94901



Courtesy: Google

6.0 WASTEWATER SERVICES

6.1 System Structure

SRSD directly provides wastewater collection services through its own infrastructure headlined by an approximate 146-mile collection system and 32 pump stations. The current infrastructure dates back to 1947 with the collection system divided between 133 miles of gravity lines and 13 miles of force mains. SRSD reports the average of its collection system ranges between 20 years for its force mains to 57 years for its gravity lines with an overall expected lifespan of 80 years for the entire system. Other integral aspects of wastewater service – and specifically treatment and disposal – are provided by contract to SRSD by CMSA and separately reviewed as part of this study.

SRSD's equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – as of the study term is 20 years.

6.2 Wastewater Demands

Generators | Service Connections and Resident Population

SRSD reports service to 10,913 active wastewater service connections as of the term of the study period. This connection total is divided among three billing categories: (a) residential at 89.4% connections; (b) commercial at 7.7% connections and (c) other at 2.9% (industrial, public, etc.). The connections totals have experienced have remained stable within the five-year study period with only a 0.12% increase. Overall, the residential connections have consistently comprised no less than 89% of the total in any year. A breakdown of reported service connection types over the study period follows.

Service connection totals within SRSD have remained relatively consistent over the study period and 10,913 at the term. Residential users on average have accounted for 89.43% of all active connections.

SRSD: Service Connection Type Breakdown				
Table 4.31 Source: SRSD				
Category	Residential	Commercial	Other	Net
2010	9,757	836	307	10,900
2011	9,761	846	310	10,917
2012	9,763	842	314	10,919
2013	9,761	842	312	10,915
2014	9,758	840	315	10,913
Overall Change	0.01%	0.48%	2.61%	0.12%

As detailed in the preceding section the Commission independently estimates SRSD’s total resident service population at 40,744. The substantive result when aligning the two demand generators – service connections and resident population – is an average ratio of 4.09 persons for every residential connection. The ratio at the study term tallied 4.18. A breakdown of this ratio over the entire study period follows.

SRSD’s current resident to residential connection ratio is 4.18 as of the term date of this study.

SRSD: Resident to Connection Ratio Breakdown				
Table 4.32 Source: Marin LAFCO				
Category	Residential Connection	Estimated Resident Population	Resident to Connection Ratios	
2010	9,757	39,381	4.04	
2011	9,761	39,191	4.02	
2012	9,763	39,906	4.09	
2013	9,761	40,192	4.12	
2014	9,758	40,744	4.18	
Overall Change	0.01%	3.46%	3.47%	

Recent Measurements | Wastewater Collection System Flows

SRSD’s average annual wastewater collection demand generated over the study period as reported by the District and for ultimate treatment and disposal by CMSA has been approximately 1.591 billion gallons. This average amount, which serves as a macro overview of system demands, represents a daily average flow of 4.4 million gallons. It also translates over the study period to an estimated 109.4 gallons per day for each resident or 288.4 gallons per day for each occupied housing unit; it also translates to 400.0 gallons for every service connection.

Average annual wastewater flows generated within SRSD during the study period have produced the daily equivalent of 4.4 million gallons; an amount that further translates to 109 and 288 daily gallons for every person and occupied housing unit.

With respect to trends, annual demands within the five-year study period have shown an overall and steady (12.0%) decrease in flows over the span of the affected 60 months. The high annual demand point for the collection system occurred in 2010 with annual flow equaling 1.825 billion gallons. This high demand year translates over the study period to an estimated 127.0 gallons per day for each resident or 331.0 gallons per day of each occupied housing; it also translates to 458.7 gallons per day for each service connection. A breakdown of annual and daily wastewater flows over the study period in relation to population and housing follows.

Annual wastewater flows within SRSD have decreased by (12%) over the study period’s 60-month point-to-point index; a difference of 219 million gallons.

SRSD: Recent Annual and Average Daily Flows Breakdown

Table 4.33 | Source: Marin LAFCO and SRSD

	2010	2011	2012	2013	2014	Average	Trend
Annual Flow Totals	1.825 bg	1.606 bg	1.643 bg	1.278 bg	1.606 bg	1.591 bg	(12.0%)
Daily Average	5.0 mg	4.4 mg	4.5 mg	3.5 mg	4.4 mg	4.4 mg	(12.0%)
- Daily Per Resident	127.0	112.3	112.8	87.1	108.0	109.4	(14.9%)
- Daily Per Housing Unit	331.0	294.4	297.5	231.1	288.3	288.5	(12.9%)
- Daily Per Connection	458.7	403.0	412.1	320.7	403.2	400.0	(12.1%)

“bg” refers to billions gallons

“mg” refers to millions gallons per day

Per resident as estimated by the Commission

Per housing unit refers to occupied status as estimated by the Commission

Along with average annual wastewater flow three other more micro measurements are tracked with respect to SRSD’s collection system and provide additional context to assessing demand. These measurements are (a) dry weather flow, (b) wet-weather flow, and (c) peak-day flow and summarized below.

Dry-Weather Day Flows

Average dry-weather wastewater flows over the study period have been 3.3 million gallons. This flow typically is recorded between May and October and most recently tallied 3.1 million gallons as of the study term. The overall average dry-weather tally translates during the study period to 82.8 gallons for every resident or 206.7 gallons for every occupied housing unit; it also translates to 302.4 gallons per service connection. This measurement has decreased overall during the study period by (11.42%). A breakdown of flows during the study period follows.

SRSD: Recent Dry Weather Day Flows

Table 4.34 | Source: Marin LAFCO and SRSD

Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection
2010	3.5 mg	88.9	219.6	321.1
2011	3.4 mg	86.8	213.1	311.4
2012	3.3 mg	82.7	206.6	302.2
2013	3.2 mg	79.6	200.7	293.2
2014	3.1 mg	76.1	193.6	284.1
Average	3.3 mg	82.8	206.7	302.4
Trend	(11.42%)	(15.35%)	(11.84%)	(11.52%)

“mg” refers to million gallons

Wet-Weather Day Flows

Average wet-weather day wastewater flows over the study period has been 5.42 million gallons. This flow typically is recorded between November and April and most recently tallied 5.7 million gallons at the study term. The overall average translates over the study period to 136 gallons for every resident or 339.5 gallons for every occupied housing unit; it also translates to 469.7 gallons for every service connection. This measurement has decreased overall during the study period by (12.31%). A breakdown of flows during the study period follows.

SRSD: Recent Wet Weather Day Flows				
Table 4.35 Source: Marin LAFCO and SRSD				
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection
2010	6.5 mg	165.1	407.8	596.3
2011	5.4 mg	137.8	338.4	494.6
2012	5.7 mg	142.8	356.8	522.0
2013	3.8 mg	94.6	238.3	348.1
2014	5.7 mg	139.9	356.0	522.3
Average Trend	5.42 mg (12.31%)	136.0 (0.51%)	339.5 (12.70%)	469.7 (12.41%)

“mg” refers to million gallons

Peak-Day Flows

Average peak-day wastewater flows over the study period has been 19.14 million gallons producing a peak-factor relative to average day totals of 4.35. The average peak-day flow – which represents the highest volume during a 24-hour period for the affected year and typically is recorded during storm events – most recently tallied 26.7 million gallons as of the study term. The average wet-weather peak day tally translates to 479.7 for every resident or 1,198.3 gallons for every occupied housing unit; it also translates to 1,754 gallons for every service connection during the affected 60 months. This measurement has increased overall during the study period by 32.18%. A breakdown of flows during the study period follows.

SRSD: Recent Peak Day Flows					
Table 4.36 Source: Marin LAFCO and SRSD					
Year	Peak Day System Total	Gallon Per Resident	Gallons Per Housing Unit	Gallons Per Connection	Peaking Factor
2010	20.2 mg	512.9	1,267.4	1,853.2	5.8
2011	18.0 mg	459.3	1,128.0	1,648.8	5.3
2012	24.8 mg	621.5	1,552.4	2,271.3	7.5
2013	6.0 mg	149.3	376.3	549.7	1.9
2014	26.7 mg	655.3	1,667.4	2,446.6	8.6
Average	19.14 mg	479.7	1,198.3	1,754.0	5.8
Trend	32.18%	27.76%	31.56%	32.02%	49.23%

“mg” refers to million gallons

Projected Measurements | Wastewater Collection System Flows

Going forward – and specifically for purposes of this study – it appears reasonable to assume SRSD’s wastewater flows will generally follow trends over the study period. It is estimated, accordingly and using linear regression to control for variances in the most recent yearend totals, the system will ultimately experience an overall decrease in annual wastewater flows of 521.3 million gallons over the succeeding 10-year period finishing in 2024; a difference of (48.05%) or (4.81%) annually. This projection continues SRSD’s overall annual flows decrease incurred during the study period, albeit at a deintensified rate of two-fold. It is also estimated – in using regression analysis - the system’s peak-day flows will ultimately decrease over the succeeding 10-year period by 0.74 million gallons or (2.48%) and resulting in a peaking factor of 8.7. The following table summarizes these and related projection flows through 2024.

The Commission independently estimates SRSD’s annual wastewater demands will continue to decrease over the succeeding 10-year period at an average rate of (4.81%). This will result in the average day demand equaling 1.084 billion gallons in 2024.

SRSD: Projected Wastewater Flows						
Table 4.37 Source: Marin LAFCO and SRSD						
Year	Average Annual Flows	Average-Day Flows	Dry-Weather Flows	Wet-Weather Flows	Peak-Day Flows	
2014	1.825 bg	4.40 mg	3.10 mg	5.70 mg	26.7 mg	
2015	1.438 bg	3.94 mg	3.03 mg	4.85 mg	21.2 mg	
2016	1.400 bg	3.83 mg	2.96 mg	4.71 mg	21.7 mg	
2017	1.361 bg	3.73 mg	2.89 mg	4.57 mg	22.2 mg	
2018	1.323 bg	3.62 mg	2.82 mg	4.42 mg	22.8 mg	
2019	1.284 bg	3.52 mg	2.78 mg	4.28 mg	23.3 mg	
2020	1.244 bg	3.41 mg	2.69 mg	4.13 mg	23.8 mg	
2021	1.205 bg	3.30 mg	2.62 mg	3.99 mg	24.3 mg	
2022	1.165 bg	3.19 mg	2.55 mg	3.84 mg	24.9 mg	
2023	1.125 bg	3.08 mg	2.47 mg	3.69 mg	25.4 mg	
2024	1.085 bg	2.97 mg	2.40 mg	3.54 mg	26.0 mg	
Average Trend	1.263 bg (48.05%)	3.46 mg (48.05%)	2.72 mg (28.98%)	4.20 mg (61.00%)	23.6 mg (2.48%)	

“bg” refers to billion gallons
“mg” refers to million gallons

6.3 Wastewater Capacity

Constraints | Contractual Provisions

As referenced, SRSD utilizes CMSA to provide treatment and disposal services for all collected wastewater services generated within the District. This contract was established in 1979 with CMSA’s treatment facility going online in 1984. The current contract does not establish any limitations or related constraints on total volume of wastewater conveyed to CMSA by SRSD or any of the other member agencies.

SRSD is under no contractual constraints with respect the volume of wastewater the District conveys to CMSA for treatment and disposal.

Constraints | Infrastructure and Facilities

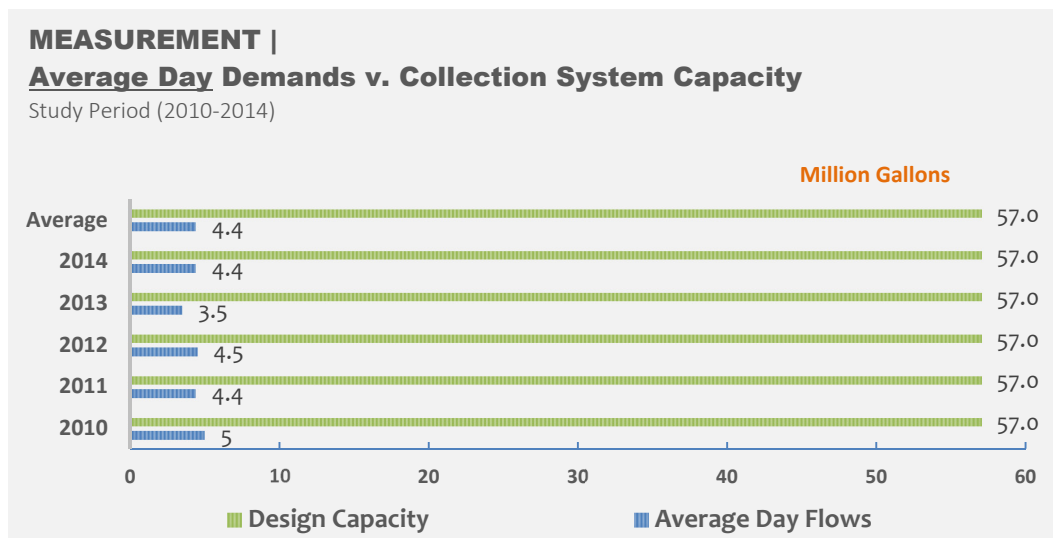
SRSD’s collection system is approximately 146-miles in total length and divided between 133 and 13 miles of gravity and force lines, respectively. The percentage of forced mains to gravity flow pipelines has remained at 10% throughout the study period. The majority of the gravity lines are between 4 and 45 inches in diameter and supported by 32 strategically placed public pump stations that ultimately convey flows to CMSA. SRSD has two force main lines that direct flows

SRSD’s collection system’s daily capacity to convey flows to CMSA is estimated at 40.3 million gallons.

to CMSA. One force main flows from the South Francisco Pump Station with a design pump capacity of 1,800 gallons per minute or 2.592 million gallons a day and collects flows from the southern service area. The other force main known as the North Francisco Pump Station is located along Andersen Drive and collects from several pump stations. It is the largest pump station, which has a design capacity of 28,600 gallons per minute or 40.320 million gallons per day, and takes flows from Central San Rafael. The Anderson Drive Force Main also collects flows from East San Rafael to CSMA. For purposes of this review this latter reported amount – 5 million gallons – is deemed the maximum daily capacity of the collection system.

6.4 Demand to Capacity Relationships

Study period flows averages show SRSD has sufficient available capacities within its collection system to accommodate current and projected demands over the succeeding 10-year period. Average annual demands over the study period equal 7.7% of the collection system capacity. Average dry-weather demands during the same period tally 5.4% of the collection system capacity. Average peak-day demands represent the biggest tax on the collection system and account over the study period to equal 33.6% of the collection system capacity. None of the capacity ratios are expected to significantly and adversely change over the succeeding 10-year period.



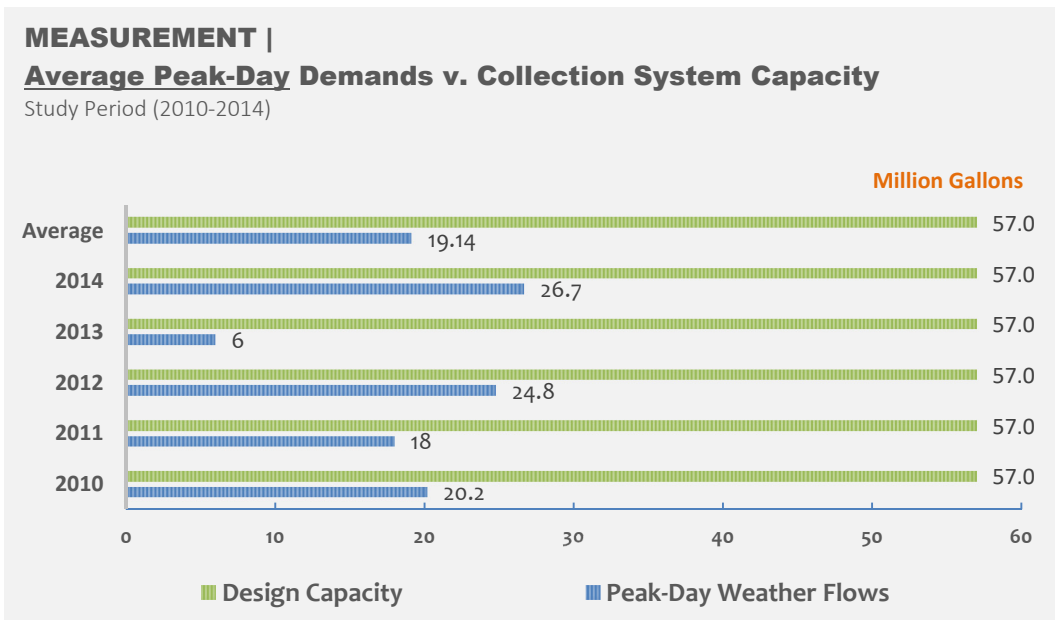
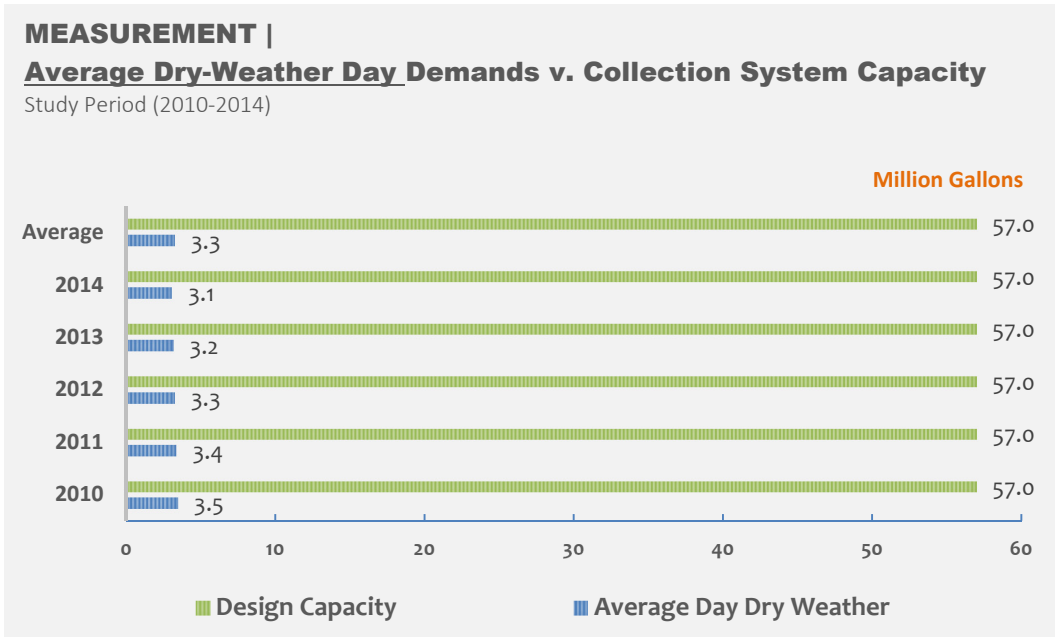


Figure 4.9

6.5 Performance

Measurement | Sanitary Sewer Overflows

The State Water Resources Control Board (SWRCB) requires all public agencies that own or operate sanitary collection systems that are one mile or more in length and convey to a public owned treatment facility comply with the reporting requirements codified in Order No. 2006-0003. This order mandates all subject agencies to develop and implement a system-specific sewer system management plan that includes a spill response plan as well as requiring immediately reporting to the SWRCB of all sanitary sewer overflows, or SSOs. The ultimate purpose of the SSO reporting process is to provide a uniform means to evaluate system reliability, source control, and operation and maintenance of wastewater systems in California. SSOs are defined as any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, and include any of the following occurrences:

- a) Overflows or releases of untreated or partially treated wastewater that reaches waters of the United States;
- b) Overflows or releases of untreated or partially treated wastewater that do not reach water of the United States; and
- c) Wastewater backups into buildings and on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

Total number of SSOs recorded by SRSD during the study period was 119 with an overall spillage volume of 23,403 gal. The most recent year experienced 30 SSOs. The majority of the SSOs, a total of 130, were classified by the SWRCB as a Category 3, a spill of less than 1,000 gallons to not reach the

SRSD experienced 119 total SSOs during the five-year study period, and involved the unauthorized overflow of 0.025 million gallons.

surface water. SRSD experienced 11 SSOs classified as a Category 1 in which wastewater reached the surface water threatening public safety and environmental health. The average response time for SSOs during the study period was 27 minutes. A review of

each accompanying report incident suggests the main factors resulting in discharges were caused by the disturbance of roots, suggesting maintenance is needed to prevent future spillage and maintain system flows. According to SRSD, the District only accounted for 1 SSO that was a repeat occurrence and was attributed to roots.²⁶

SRSD: Sanitary Sewer Overflows								
Table 4.38 Source: SWRQB								
Year	Category 1		Category 2		Category 3		Total	
	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons
2010	2	600	1	1,825	20	1,851	23	4,276
2011	1	200	1	1,125	22	1,070	24	2,395
2012	3	510	0	0	26	1,056	3	1,566
2013	3	3,258	1	2,735	35	3,643	39	9,636
2014	3	1,575	0	0	27	3,955	30	5,530
	11	6,143	3	5,685	130	11,575	119	23,403

Measurement | System Maintenance

System maintenance for purposes of this study includes both corrective and preventative maintenance. Corrective maintenance, is performed when signals indicate a fault so that an asset can be restored to its operational condition. Preventative maintenance, conversely, is initiated according to a predetermined schedule rather than in response to failure. A summary of both measurements follow.

Corrective Maintenance

SRSD’s corrective maintenance is noted in the number of service calls received to resolve, correct, or assist a particular situation. Through the entire 60-month study period the total number of service calls equaled 1,392, and produces an annual average sum 278. Close to two-thirds of all calls were tied to pump station alarms or non-District incidents at 34% and 32%, respectively. Another one-fifth involved public and private calls notifying sewer overflows at 10% and 12%, respectively.

²⁶ SRSD’s has identified a chain of communication for reporting SSOs. The District’s sewer maintenance staff are responsible for responding to SSOs. When an SSO is observed during normal business hours, it is expected to be reported to the sewer maintenance staff and during non-business hours the SSO is alerted to an on-call contractor to respond. The sewer maintenance staff assess and document the SSO, and provide the necessary information to the Maintenance Supervisor for mitigation, reporting and cleanup.

SRSD: Number of District Service Calls							
Table 4.39 Source: Marin LAFCO							
Factor	2010	2011	2012	2013	2014	Total	% of Total
General	26	2	26	28	37	117	8.4%
Public SSO	22	24	29	39	30	144	10.3%
Private SSO	11	37	28	36	48	160	11.5%
Odor Complaints	4	6	9	7	12	38	2.7%
Noise Complaints	3	2	3	8	7	23	1.7%
Pump Station Alarms	139	103	111	71	47	471	33.8%
Non-District Incidents	106	89	67	76	101	439	31.5%
	311	261	273	265	282	1,392	100%

Preventive Maintenance

SRSD’s preventative maintenance was reported in its planned cleaning activities during the 60-month study period, which accounted for 731-miles. According to SRSD, all gravity sewer pipes are scheduled to be cleaned at least once every three years. Scheduled cleaning of gravity lines is based on list of maintained sewer lines, with some lines receiving frequent cleaning that are at a high risk of an SSO. SRSD cleans gravity sewer lines with high occurrences of fats, oils and grease (FOG) more regularly with a hydro flusher and cleans these areas at a minimum of twice per year. SRSD also has a system in place for pump stations to be checked 3 times per week. During the 60-month period, SRSD experienced (0) pump station failures.

SRSD does not record soft blockages that are relieved through regular maintenance, only SSOs. The agency utilizes a map application for tracking maintenance activities. SRSD implements closed-circuit televising (CCTV) inspection for the District’s sewer mains that experience frequent backup and has a history of overflows. The District contracts most work for CCTV inspection, but utilizes a small lateral camera for shorter sections, and aims to perform CCTV inspection on ten percent of its sewer mains within 750 feet of surface water for the next five years. The District has performed outreach to plumbers and building contractors on its standard specifications and has reached out to the public for preventing blockages in private laterals. SRSD’s rehabilitation and replacement plan calls to address the risk of collapsed pipes and frequent blockages due to defects and capacity issues. SRSD expects to meet preventative maintenance goals to replace all of its gravity sewer lines on an 80-year cycle. The level of infrastructure reinvestment the District achieved

during the entire study period came in at 89% byway completing 18,845 feet of the planned 21,125 feet of line replacement.

6.6 User Charges and Fees

SRSD bills one fee to its customers in recovering the District’s wastewater service costs. This fee is in the form of an annual service charge and is billed to landowners and collected on the property tax roll and recovers both collection and contracted treatment/disposal expenses. Residential customers pay \$828 each year for every dwelling unit.²⁷ Non-residential customers pay a rate based on estimated flows. There are no voter-approved special assessments.²⁸

Most single-family customers in SRSD currently pay \$828 a year for wastewater services.

7.0 AGENCY FINANCES

7.1 Financial Statements

SRSD contracts with an outside accounting firm (Vavrinek, Trine, Day and Company) to prepare an annual report for each fiscal year to review the District’s financial statements in accordance with established governmental accounting standards. This includes vetting SRSD’s statements with respect to verifying overall assets, liabilities, and equity. These audited statements provide the Commission with quantitative measurements in assessing SRSD’s short and long-term fiscal health.

SRSD’s most recent financial statements for the study period were issued for 2013-2014 and shows the District experienced a relatively sizable and positive change over the prior fiscal year as its overall equity or fund balance increased by 7.46% from \$51.916 to \$55.789 million. Underlying this most recent change in equity standing is the result of

End of Study Period Financial Statements	
Assets	\$56.332 m
Liabilities	\$0.543 m
Equity	\$55.789 m

²⁷ Rates are subject to change each year. The rate listed is for Fiscal Year 2016-2017.

²⁸ SRSD also collects a dual connection fee in step with initiating new services. The connection fee for residential uses presently totals \$9,290 for each dwelling unit and incorporates the buy-in charge for both collection (SRSD) and treatment/disposal (CMSA). Non-residential users’ connection charges are based on the number of plumbing fixtures.

a notable rise in current assets and aided by a sharp increase in connection fees and sewer charges in 2013-2014. A summary of year-end totals and trends therein over the study period follows.

Agency Assets

SRSD’s audited assets at the end of 2013-2014 totaled \$56.332 million; more than 10% higher than the average sum generated over the course of the study period’s prior four years (2009-2010 was not reviewed). As of the study term, assets classified as current with the expectation they could be liquidated within a year, represented approximately two-fifths of total assets tied to cash and investments and have risen by 60.70% over the 48-month period. Assets classified as non-current make up the remaining three-fifths of the asset total as of the study term and predominately comprise capital infrastructure with 66% less depreciation tied to sewer lines and have increased by 2.69% over the preceding 48 months.

SRSD Assets Study Period							
Table 4.40 Source: SRSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	n/a	13.758	14.793	19.078	22.109	60.70%	17.434
Non-Current	n/a	33.328	34.110	33.340	34.223	2.69%	33.750
	n/a	47.086	48.904	52.419	56.332	19.64%	51.185

amounts in millions

Agency Liabilities

SRSD’s audited liabilities at the end of 2013-2014 totaled \$0.543 million; close to three fifths lower than the average sum generated over the course of the study period’s prior four years. As of the study term liabilities classified as current representing obligations owed in the near-term represented the entire amount and tied to accounts payable and have overall decreased by (74.11%) over the preceding 48 months. SRSD booked no long-term liabilities throughout the 48 month period.

SRSD Liabilities Study Period							
Table 4.41 Source: SRSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	n/a	2.097	0.491	0.503	0.543	(74.11%)	0.908
Non-Current	n/a	0.0	0.0	0.0	0.0	0.0%	0.0
	n/a	2.097	0.491	0.503	0.543	(74.11%)	0.908

amounts in millions

Agency Equity | Net Assets

SRSD’s audited equity / net assets at the end of 2013-2014 totaled \$55.789 million and represent the difference between the District’s total assets and total liabilities. This amount has increased by 24.01% over the prior four years and primarily attributed to rises in current assets and aided therein by consistent operating surpluses. The unrestricted portion of the net assets as of the study term totals \$21.566 million and translates to a per capita reserve ratio of \$529 based on a corresponding and projected resident total of 40,744.

SRSD’s net assets have increased by 24.01% over the prior four year period and largely driven by a rise in current assets generated by profit gains. The unrestricted fund balance as of the study term total of \$21.566 million equates to a per capita reserve ratio of \$529.

SRSD Net Assets Study Period							
Table 4.42 Source: SRSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Unrestricted	n/a	12.143	14.302	18.575	21.566	77.59%	16.646
Restricted	n/a	32.845	34.110	33.340	34.223	4.20%	33.629
	n/a	44.988	48.412	51.916	55.789	24.01%	50.276

amounts in millions

7.2 Measurements | Liquidity, Capital, Margin, and Structure

A review of the audited financial statements issued by SRSD covering the study period’s last four years and specifically 2010-2011 through 2013-2014 shows the District finished the term with high and improving liquidity. This includes noting SRSD’s current ratio finished the term with a current ratio of over 40 to 1 as well as over two years – or 805 days – of cash on hand to cover operating expenses. Both of these measurements also improved by no less than 35% over the preceding 48 month period. SRSD also finished the study term with high and stable levels of available capital and did not incur any long-term debt over the 48-month period. SRSD also finished each year with positive total and operating margins with the former and latter averaging 26.17% and 18.59%, respectively. The referenced operating profits are also reflected in SRSD’s average earned income ratio – i.e., the percent of direct service fees relative to annual revenues – of 90.54% for the 48 month period. A summary of year-end liquidity, capital, margin, and

structure ratios are shown in the following table.

SRSD: Financial Measurements Study Period						
Table 4.43 Source: SRSD Financials and Marin LAFCO						
Fiscal Years	Current Ratio	Days' Cash	Debt Ratio	Total Margin	Operating Margin	Earned Income Ratio
2009-2010	n/a	n/a	n/a	n/a	n/a	n/a
2010-2011	6.559 to 1	593.63	0.0%	28.51%	21.47%	90.50%
2011-2012	30.083 to 1	609.60	0.0%	25.16%	17.65%	90.85%
2012-2013	37.911 to 1	787.38	0.0%	25.63%	18.08%	90.79%
2013-2014	40.706 to 1	805.16	0.0%	25.40%	17.15%	90.04%
Average	28.815 to 1	698.94	0.0%	26.17%	18.59%	90.54%
Trend	520.58%	35.63%	0.0%	(10.91%)	(20.14%)	(0.50%)

Liquidity

Capital

Margin

Structure

Notes

Current Ratio (liquidity) relates to the ability of the agency to pay short-term obligations (current liabilities) relative to the amount of available cash and cash equivalents (current assets). Higher is better.

Days' Cash (liquidity) measures the number of days' worth of average operating expenses the agency can meet with cash on hand. Higher is better.

Debt Ratio (capital) measures the portion of agency's total assets that are directly tied to debt financing. Lower is better.

Total Margin (profit) represents the year-end profit level of the agency and includes all revenues and expenses. Higher is better.

Operating Margin (profit) represents the year-end profit level of the agency specific to its normal and recurring revenues and expenses tied to service provision. Higher is better.

Earned Income (structure) measures the portion of annual revenues that are directly tied from fees for services. Higher is better for enterprise agencies.

7.3 Pension Obligations

SRSD through the City of San Rafael provides a defined benefit plan to its employees through an investment risk-pool contract with the Marin County Employees' Retirement Association (MCERA).



This pension contract provides employees with specified retirement benefits and includes disability benefits, annual cost-of-living adjustments, and death benefits to members and their beneficiaries. Actual pension benefits are based on the date of hire. Employees hired before January 1, 2013 are termed "Category One" while employees hired afterwards are termed "Category Two." Additional details of the pension program based on actuarial valuations issued by MCERA follows.

Participants | Pension Formulas

As of the study period's term (2014) there are a total of 623 participants within San Rafael's miscellaneous pension program (i.e., non-public safety). This total amount – which represents an overall increase of 6.1% in participants since 2010

Most San Rafael employees receive one of two types of defined pensions based on either a 2.7 @ 55 or 2.0 @ 55 formula. Employees hired after January 1, 2013 receive a 2.0 @ 62 pension formula.

– is further divided between enrollee type (i.e., active, separated, transferred, retired) and marked by a worker-to-retiree ratio of 1.03 to 1 as of the study term; meaning there is effectively one active member contributing to the retirement program for everyone one retiree. Category One participants are eligible to receive one of two types of retirement payments. The first and predominate tier within Category One is based on a 2.7 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 54% of their highest one year of salary beginning at age 55 and continuing each year thereafter. The second tier is based on a 2.0 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 40% of their highest one year of salary beginning at age 55 and continuing each year thereafter. Category Two participants are subject to a flat 2.0% at 62 pension formula. This tier provides eligible retirees with 20 years of total service credit 40% of their highest three years of average salary beginning at age 62 and continuing annually thereafter.

San Rafael's Pension Enrollee Information Miscellaneous					
Table 4.44 Source: MCERA and Marin LAFCO					
Type	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Active	233	240	217	220	217
Transferred	67	64	57	55	56
Separated / Other	114	112	131	132	139
Retired	173	178	195	202	211
Total Enrollees	587	594	600	609	623
Worker-to-Retiree Ratio	1.35	1.35 to 1	1.11 to 1	1.09 to 1	1.03 to 1

Annual Contributions

San Rafael’s total annual pension contributions as of the study period’s term tallied \$17.576 million. This amount represents an overall increase over the five-year study period of 38% and is almost four-fold greater than the corresponding inflation rate calculated for the San Francisco Bay Region.²⁹ The most recent annual pension contribution by San Rafael for the study period equaled 56% of the City’s total annual payroll for the corresponding fiscal year (2013-2014).³⁰

San Rafael’s pension contributions have increased by 38% over the five-year study period, and as of 2013-2014 account for 56% of total payroll.

San Rafael’s Pension Contributions				
Table 4.45 Source: MCERA and Marin LAFCO				
2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
\$12,745,613	\$15,409,519	\$14,627,709	\$15,522,832	\$17,576,796
Five-Year Average				\$15,176,493
Five-Year Trend				37.90%

Funded Status

San Rafael’s unfunded liability – tally of pension monies owed and not covered by assets – ended the study period at \$136.200 million and as such represents 112.1% of the City’s unrestricted fund balance as of June 30, 2014. This former amount produces a funded ratio of 72% based on market value. It also reflects an overall improvement of 13% in the funded ratio over the preceding four-year period.³¹

San Rafael’s unfunded pension liability has decreased over the last four years of the study period by (8%) and ended the term at \$136.200 million; the equivalent of a 72% funded ratio (market).

²⁹ According to the United States Department of Labor the overall inflation rate in the San Francisco Bay Area region between 2010 and 2014 tallied 10.77%.

³⁰ San Rafael’s covered annual payroll in 2013-2014 totaled \$31.4 million.

³¹ Pension information for 2009-2010 is not available.

San Rafael's Pension Trends		
Table 4.46 Source: MCERA and Marin LAFCO		
	Unfunded Liability	Funded Ratio
2009-2010	n/a	n/a
2010-2011	\$148,300,000	64.07%
2011-2012	\$169,300,000	61.33%
2012-2013	\$143,241,000	68.00%
2013-2014	\$136,200,000	72.36%
Four-Year Average	\$149,260,250	66.44%
Four-Year Trend	(8.16%)	12.94%

Amounts above are show in market form and reflects the immediate and short term values of the pension with respect to assets and liabilities (i.e., here and now).

7.4 Revenue to Expense Trends

A review of SRSD’s overall actual revenues and expenses as shown in the audited financial statements during the last four years of the study period and specific to 2010-2011 to 2013-2014 shows operating surpluses in each year. Overall actual revenues averaged \$14.010 million over the 48 month period compared to \$10.353 million in actual expenses; a difference of more than one-third or 35.32%. The referenced separation, however, has been narrowing with the growth rate of expenses at 17.57% outpacing the growth rate of revenues at 12.94% over the 48 month period.

SRSD’s overall revenues have outgained overall expenses – including booked depreciation – in each of the last four years of the study period with an average monetary separation of \$3.656 million – or 35%. Nonetheless, this separation has narrowed over the same period with expenses outpacing revenues by more than one-third. Removing depreciation as a booked expense produces a higher positive revenue over expense average for SRSD over the 48-months at 55%.

SRSD’s revenue ledger consists of five distinct categories with sewer service charges accounting on average for 90.53% of the total. Another 8.80% of the revenue average has been drawn from property taxes. The remaining revenue total – 0.67% – has been drawn and in proportional magnitude from investment earnings, connection fees, and intergovernmental contributions. SRSD’s expense ledger also consists of five distinct

- Top Revenue Categories:
- 1) Sewer Charges @ 90.5%
 - 2) Property Taxes @ 8.8%

- Top Expense Categories
- 1) CMSA Contract @ 54.2%
 - 2) Collection System @ 34.4%

categories with contract costs with CMSA for treatment and disposal services accounting for the single largest resource demand and on average over the 48 months tallying

54.15% of the total. Operation and maintenance of the collection system on average has tallied another 30.36% of the resource demand total and followed in magnitude by capital depreciation, general administration, and interest expenses at 12.43%, 2.85%, and 0.21%, respectively.

SRSD Actual Revenue Trends Study Period								
Table 4.47 Source: SRSD Financials and Marin LAFCO								
Category	2009	2010	2011	2012	2013	Trend	Average	% of
	2010	2011	2012	2013	2014			
Sewer Charges	n/a	12.220	12.368	12.413	13.732	12.37%	12.683	90.53
Property Taxes	n/a	1.214	1.192	1.177	1.345	10.74%	1.232	8.80
Intergovernmental	n/a	0.006	0.006	0.056	0.022	240.44%	0.023	0.17
Interest	n/a	0.59	0.24	0.17	0.23	(59.97%)	0.031	0.22
Connection Fees	n/a	0.002	0.018	0.007	0.128	>1000%	0.039	0.28
Total	n/a	13.504	13.614	13.672	15.251	12.94%	14.010	100.00

amounts in millions

SRSD Actual Expense Trends Study Period								
Table 4.48 Source: SRSD Financials and Marin LAFCO								
Category	2009	2010	2011	2012	2013	Trend	Average	% of
	2010	2011	2012	2013	2014			
Collection System	n/a	2.978	3.010	3.12	3.460	16.18%	3.143	30.36
CMSA Contract	n/a	5.228	5.567	5.395	6.234	19.26%	5.606	54.15
Depreciation *	n/a	1.137	1.327	1.325	1.355	19.14%	1.286	12.43
Administration	n/a	0.252	0.280	0.322	0.326	29.45%	0.295	2.85
Interest Expenses	n/a	0.080	0.005	0	0	100.00%	0.021	0.21%
Total	n/a	9.677	10.190	10.169	11.378	17.57%	10.353	100.00
... Less Depreciation	n/a	8.540	8.863	8.844	10.023	17.37%	9.068	100.00

amounts in millions

Net with Depreciation					
Year Ending	n/a	\$3.826	\$3.423	\$3.503	\$3.873

Net without Depreciation					
Year Ending	n/a	\$4.964	\$4.751	\$4.828	\$5.228

* Please note depreciation is shown as an operating expense in the financial statements in step with generally accepted government accounting standards, and as such impacts – and often negatively – gross profit or total margin. Depreciation takes into account the wear and tear on physical infrastructure, such as sewer lines, pumps, and other capital equipment. Government accounting standards direct agencies to spread out the costs of replacing these assets over the long term, which generates the term depreciation or amortization. The “charge” for using these assets during the period is a fraction of the original cost of the assets based on the expected life of the assets and presumably is rolled into the agencies’ fund balance at the end of the fiscal year and as part of the restricted reserve.

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C. ROSS VALLEY SANITARY DISTRICT

1.0 OVERVIEW

County Sanitary District No. 1 or the Ross Valley Sanitary District (RVSD) as it is more commonly known was established in 1899 and encompasses an approximate 19.7 square mile jurisdictional boundary within east-central Marin County. Governance is provided by an independent five-member Board of Directors whose members are elected at-large to staggered four-year terms. Seven local land use authorities overlap RVSD’s



jurisdictional boundary and headlined by the County of Marin, which covers 41% of all jurisdictional lands and includes the unincorporated communities of Greenbrae, Kentfield, and Sleepy Hollow. The rest of RVSD’s jurisdictional boundary is divided between the City of San Anselmo at 26%, Town of Fairfax at 20%, Town of Ross at 7%; City of Larkspur at 5%; and Cities of San Rafael Mill Valley with each less than 1%.

RVSD is currently organized as a single-purpose agency with municipal operations limited to wastewater collection though it is empowered – subject to LAFCO approval – to provide solid waste (including collection), recycled water, and storm drainage services. RVSD maintains an approximate 202-mile

Ross Valley Sanitary District	
Formation Date:	1899
Principal Act:	Health and Safety Sections 6400-6982
Service Categories:	Wastewater Collection
Service Population	40,809
Governance Type	Independent

collection system with its own personnel while contracting – and as a signatory – with the Central Marin Sanitation Agency (CSMA) for wastewater treatment and disposal services. RVSD’s adopted operating budget at the term of the study period was set at \$14.4 million and with funding dedicated for the equivalent of 38 fulltime employees. The year-end unrestricted fund balance was \$10.6 million with an associated days-cash ratio totaling 315; i.e., the amount of cash on hand the District can cover operating expenses based on 2013-2014 actuals.

The Commission independently estimates the resident service population within RVSD totals 40,809 as of the term of this study period (2014). It is also projected RVSD's population growth rate over the five-year study period totaled 3.4% or 0.69% annually with the underlying change primarily attributed to the projected increase of 630 new housing units. The substantive result of these Commission estimates is the projected addition of 1,356 residents in RVSD between 2010 and 2014. Overall it is also estimated by the Commission nearly 73% of the jurisdictional boundary has already been developed and or improved – though not necessarily at the highest density. This means 27% of the jurisdictional boundary remains entirely undeveloped, and this includes 827 existing unbuilt and privately owned parcels that are zoned for some type of urban use.³²

2.0 BACKGROUND

2.1 Community Development

It appears RVSD's central service area – Ross Valley – began its present-day development in the mid-1800s when Mexican land grants were established in California following Mexico's independence from Spain in 1821. During this period, records show that Ross Valley was a small agrarian community of loggers and ranchers. Ross Valley's footprint began to change away from agrarian uses in 1840 when the area was gifted by Mexico to Englishman John Rodgers Cooper as part of an approximate 9,000 land grant known as the "Rancho Punta de Quentin Canada de San Anselmo." Cooper subsequently became a Mexican citizen, married a sister of General Mariano Vallejo, and changed his name to Juan Bautista Cooper. In 1857, James Ross purchased a large segment of the Cooper land grant for \$50,000. Originally from Scotland, Ross ventured to California in 1849 and ran a wholesale wine and liquor business in San Francisco until his purchase of the rancho. Upon Ross' death in 1862, large portions of his land holdings were sold off as new landowners settled in what was to be known as "Ross Valley."

³² Additional analysis is needed to assess the actual development potential of these 827 unbuilt parcels.



Figure 4.10

The advancement of urban development in Ross Valley arose upon the completion of the North Pacific Railroad (NPC) in 1875 and its arterial rail-line connecting Sausalito and San Rafael. It was estimated at the time of the NPC opening rail service that Ross Valley had less than 1,000 in total population. The railroad hub, referred to as the Junction, was located in the heart of Ross Valley in San Anselmo and allowed riders to reach San Francisco by way of ferry from the station within an hour. As a result of the new passage, an incoming flux of inhabitants settled in Ross Valley as more lots were subdivided due to the new accessibility of the area and spurring the establishment of the communities of San Anselmo and Ross followed later by Fairfax.

Towards the end of the 1890s the continued transition of Ross Valley from agrarian to urban uses and marked by an estimated population of nearly 2,000 proved overwhelming for local creeks to handle the resulting wastewater runoff. Dry months became particularly problematic as water quality worsened and – among other considerations – began to adversely affect the San Anselmo Creek, which had recently become a supply

source for the region's expanding water provider, Marin County Water Company.³³ These discussions ultimately led community leaders to the Legislature and make use of a relatively new law established almost 10 years earlier to facilitate a planned development in Fresno County known as the Sanitary District Act of 1891.

2.2 Formation Proceedings

RVSD's formation was petitioned by area landowners directly to the State Legislature and subsequently confirmed by voters in 1899. Formation proceedings preceded RVSD constructing a public sewer main to collect and convey raw wastewater generated from private and community conduits from Fairfax to Greenbrae and into the opening slough of the Corte Madera Creek.

2.3 Post Formation Activities

A summary of notable activities undertaken by RVSD and/or affecting the District's service area following formation in 1899 is provided below.

- The City of San Anselmo was incorporated in April 1907.
- The Town of Ross was incorporated in August 1908.
- RVSD constructs its first wastewater facility in 1922 in Greenbrae to provide basic screening of wastewater before discharging into Corte Madera Creek.
- The Town of Fairfax was incorporated in March 1931.
- RVSD constructs a second wastewater facility in 1945 at the Larkspur Landing in partnership with the City of Larkspur and County Sanitary District No. 2 to provide secondary treatment before discharging into Corte Madera estuary.

³³ The Marin County Water Company and its water rights were purchased in conjunction with the formation of the Marin Municipal Water District in 1912.

- In 1979 – and following the enactment of the Clean Water Quality Act and associated regulations with discharges into open water bodies – RVSD becomes a signatory member in creating CMSA with County Sanitary District No. 2, City of Larkspur, and the San Rafael Sanitation District.
- RVSD deactivates the Larkspur Landing facility in 1984 in conjunction with redirecting all wastewater flows to CMSA’s new wastewater facility.
- RVSD requests and receives approval by the Commission in 1993 to annex the City of Larkspur and assumes wastewater collection responsibilities thereafter.

3.0 BOUNDARIES

3.1 Jurisdictional Boundary

RVSD’s jurisdictional boundary spans approximately 19.7 square miles in size and covers 12,627 total acres (parcels and right-of-ways). There are seven land use authorities overlapping the jurisdictional boundary. The County of Marin is the single largest land use authority in terms of acreage with an estimated 41% of all RVSD lands lying in the unincorporated area and headlined by the inclusion of the Kentfield and Greenbrae communities. Another 26% and 20% of RVSD lands fall under the land use authorities of the City of San Anselmo and Town of Fairfax, respectively. The remaining portion of RVSD lands are distributed under the land use authorities of Town of Ross at 7%, City of Larkspur at 5%, City of San Rafael at 0.4%, and City of Mill Valley at 0.1%.

RVSD’s jurisdictional boundary spans 20 square miles and overlaps seven land use authorities with the County of Marin being the largest with the unincorporated area covering 41% of all District lands.

Total assessed value (land and structure) in RVSD is currently calculated at \$13.4 billion and translates to a per acre value of \$1.1 million. This former amount – \$13.4 billion – further represents a per capita value of \$0.328 million based on an estimated service population of 40,809. RVSD’s set allocation of property tax proceeds – i.e., its share of the 1% – is 7.79%.

Assessed land values in RVSD totals \$13.4 billion, and based on receiving 7.79% of the 1% annual property tax the District’s allocated share of the total less deductions and other exchanges is \$10.438 million.

RVSD Boundary Breakdown: Land Use Authorities					
Table 4.49 Source: Marin LAFCO					
Agency	Assessor Parcel Acres	Assessor Parcel Acres % of Total	Total Assessor Parcels	Total Residential Units	
County of Marin	3,850	40.9%	5,128	5,253	
Town San Anselmo	2,436	25.9%	5,466	6,264	
Town of Fairfax	1,904	20.2%	3,173	3,900	
Town of Ross	676	7.2%	847	883	
City of Larkspur	511	5.4%	2,418	3,486	
City of San Rafael	35	0.4%	44	40	
City of Mill Valley	1	0.1%	1	0	
	9,415	100	17,077	19,826	

As provided in the preceding table there are 17,077 overall assessor parcels currently within RVSD and collectively add up to 9,415 acres as of June 2016.³⁴ Almost three-fourths – or 73% – of the current assessor parcel acreage have already been developed/improved to date, albeit not necessarily at the highest zoning density.³⁵ This existing development is highlighted by the standing construction of 19,826 residential units and divided between single-family and multi-family on a 75 to 25% split. The remaining one-fourth plus – or 27% – of the current assessor parcel acreage within RVSD is undeveloped/unimproved. This includes 827 un-built and privately owned assessor parcels that combine to total 790 acres. (Additional analysis would be needed to determine the actual development potential of these un-built

Almost three-fourths of RVSD’s jurisdictional boundary has already been developed/improved – though not necessarily at the highest allowable density. This means one-fourth of the boundary remains entirely undeveloped, and this includes 827 un-built and privately owned parcels zoned for some type of urban use.

³⁴ The remaining 3,212 jurisdictional acreage within RVSD are tied to public right-of-ways and waterways.

³⁵ This portion of developed acreage includes parcels dedicated as common areas.

assessor parcels.) The remaining undeveloped/unimproved assessor acreage within RVSD – or 1,756 acres – is publicly owned and generally dedicated to municipal or open space uses.

RVSD Boundary Breakdown: Land Use Features				
Table 4.50 Source: Marin LAFCO				
% Parcel Acres Already Developed	Residential Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
73.0	19,826	74.8	827	790

3.2 Sphere of Influence

RVSD’s sphere of influence was initially established by the Commission in 1985 and last reviewed and updated in 2006. The sphere spans approximately 8,774 acres or 13.7 square miles in size. The sphere is nearly one-third – or 30% – smaller than RVSD’s actual jurisdictional boundary. Most notably, there are three distinct areas within RVSD that lie outside the sphere – south Larkspur, unincorporated Fairfax, and north Sleepy Hollow – and collectively tally 3,853 acres. There are also non-jurisdictional lands that are

RVSD’s sphere of influence includes two unique features. First, the sphere excludes almost one-third of the jurisdictional boundary covering 3,853 acres concentrated in three areas: south Larkspur, unincorporated Fairfax, and north Sleepy Hollow. Second, the sphere includes 56 acres of non-jurisdictional land – including all parcels located within the Murray Park and San Quentin Sewer Maintenance Districts.

included in the sphere totaling 56 acres (parcels and right-of-ways) and as such are immediately eligible for annexation or outside service extension subject to Commission approval. This includes 112 assessor parcels with 100% being privately owned and zoned for some type of urban use with the majority lying in Murray Park.

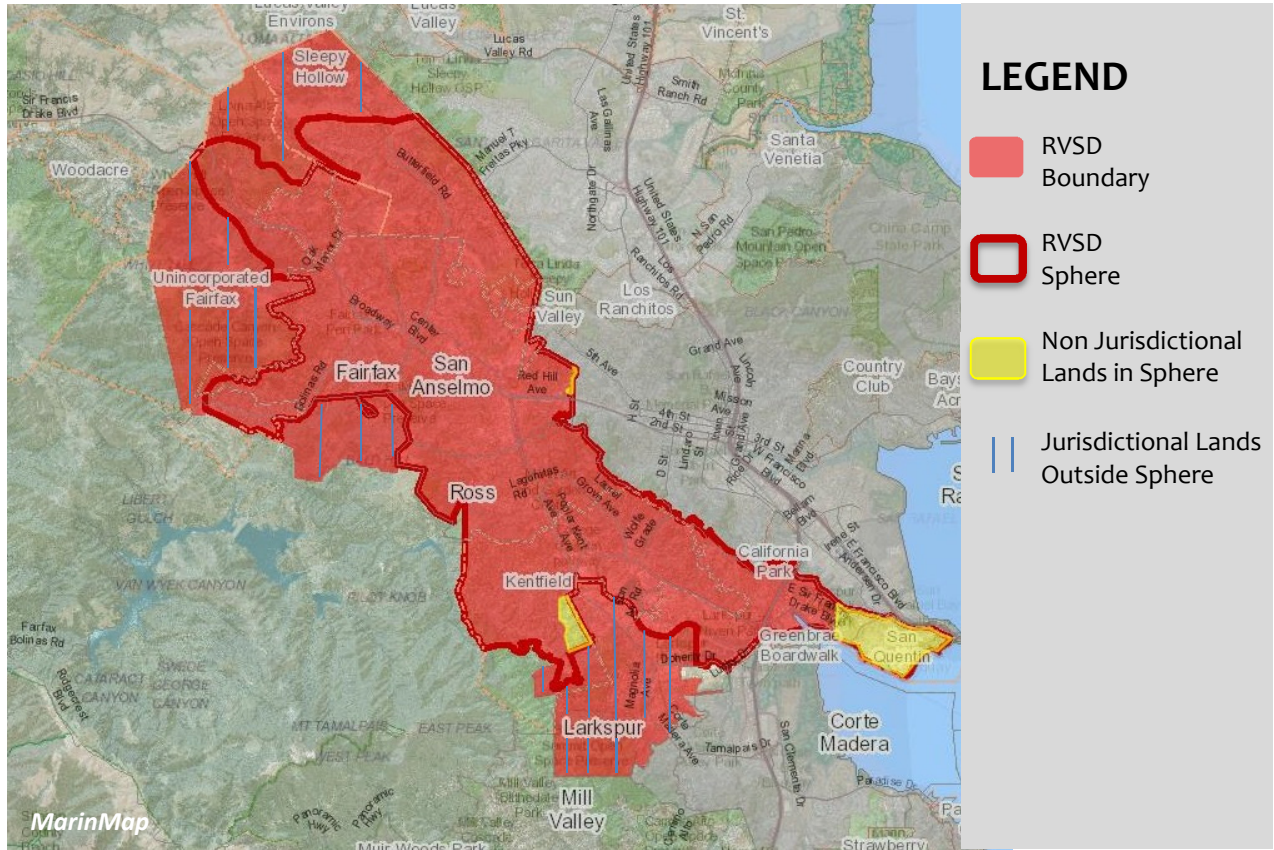


Figure 4.11

4.0 DEMOGRAPHICS

4.1 Population Estimates

RVSD’s resident population within its jurisdictional boundary is independently estimated by the Commission at 40,809 as of the term of the study. This projection – which is anchored on a calculation of housing units, occupancy rates, and household sizes within the jurisdictional boundary and detailed in the accompanying footnote – represents

LAFCO estimates there are 40,809 total residents within RVSD that are explicitly served by the District’s wastewater collection system as of the term of the study. It is further estimated RVSD has experienced an overall population increase of 1,356 over the preceding five-year period, resulting in an annual growth rate of 0.69%. New and occupied housing units over the same period within RVSD totaled 694 with a net change in persons per household – i.e., an intensity measurement – of (4.5%).

15.7% of the estimated countywide population.³⁶ It is also projected RVSD has experienced an overall population growth rate of 3.44% over the preceding five-year period or 0.69% annually. The net effect of the population change in RVSD over the study period is the addition of an estimated 1,356 persons. Underlying this projected increase is the addition of an estimated 694 new and occupied housing units within the jurisdictional boundary despite a corresponding deintensification of household sizes over the span of the five-year period starting at 2.22 in 2010 and ending at 2.21 in 2014; the latter being a net intensity decrease of (4.5%). Overall projected growth within RVSD during the study period is one-tenth above the concurrent annual change estimated for the entire county – 0.62%.³⁷

RVSD Resident Population: Past and Current Estimates					
Table 4.51 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
b) Total Housing Units	18,873	19,029	19,186	19,344	19,503
b) Local Occupancy Rate	94.39	93.27	94.29	94.29	94.90
e) Occupied Housing Units	17,814	17,745	18,089	18,238	18,508
f) Projected Household Size	2.215	2.212	2.210	2.207	2.205
Estimated Population	39,454	39,261	39,974	40,259	40,809

* rounded for reporting purposes

With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate with RVSD will generally match the preceding five-year period with an overall yearly population change of 0.687%. The substantive result of this assumption would be an overall increase in RVSD’s resident population of 2,893 and produce a net total of 43,702 by 2024. This growth rate, similarly, would generate the addition of 1,268 new and occupied housing units within RVSD through 2024 assuming the preceding five-year average ratio of 2.21 persons for every one occupied housing unit holds. These collective projections going forward are summarized below.

³⁶ Marin LAFCO’s resident service population for RVSD is independently calculated and premised on occupied housing driving resident estimates based on data collected within the seven affected census tracts in the District. Four distinct calculations help produce the population estimates within each of the five subject years in the study period and involve identifying: a) total housing units; b) local occupancy rates; c) occupied housing units; and c) household sizes. Key calculations specific to RVSD over the study period include a weighted annual housing unit change of 0.818% and a weighted annual household size change of (0.111%). The annual weighted population change is 0.687%.

³⁷ Marin County’s estimated population as of January 1, 2014 totaled 260,750 based on information published by the United States Census and marks a 3.01% increase over the preceding five-year period.

RVSD Resident Population: Future Estimates						
Table 4.52 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	40,809	41,372	41,943	42,521	43,108	43,702
Occupied Housing Units	18,508	18,772	18,980	19,242	19,507	19,776
- residents to housing units	2.20	2.21	2.21	2.21	2.21	2.21

baseline
year

4.2 Residency Type

The Commission projects RVSD’s residential unit total of 19,503 (occupied and unoccupied) as of the study term being divided between single family and multi-family use at 69.67% (13,588) and 30.33% (5,915), respectively. These totals produce an estimated ratio of 2.30 to 1 with respect to the number of single-family units for each one multi-family unit within the jurisdictional boundary. The overall stock of housing type has experienced an inversing change with single-family unit totals decreasing by (0.78%) while multi-family unit totals increasing by 1.83% over the corresponding 60-month period. The substantive change in the residency type ratio (i.e., single-family to multi-family units) has been (2.56%) from 2.36 to 1 in 2010.

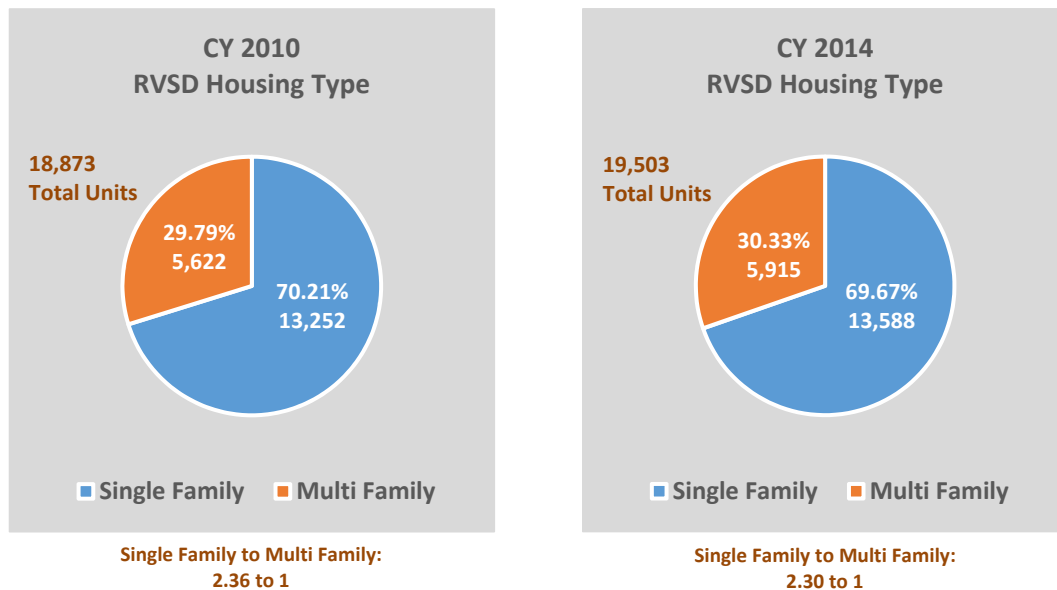


Figure 4.12

4.3 Social and Economic Indicators

A review of recent demographic information covering the RVSD jurisdictional boundary for the study period shows fulltime residents are relatively in better economic positions compared to countywide averages. This information is drawn from census data collected between 2010 and 2014 and shows area residents' average median household income is close to one-fifth above the countywide amount of \$91,529 at \$108,510. Area resident averages also fall measurably below countywide amounts with respect to unemployment and poverty rates. (Albeit the former referenced category – unemployment – did

RVSD's fulltime residents are generally more affluent than most of the county populace and highlighted by a median household income average over the study period of \$108,510. Also of note there has been sizeable amount of transition in RVSD over the last 40 years with only 12% of RVSD household owners having resided in their homes before the enactment of Proposition 13 in 1979.

experience a 50% increase over the preceding five-year data collection period and presumably helps to explain the dual increase in mean travel time to work - 7% - and decrease in prime working age – (10%). Notable social indicators show RVSD residents have significantly higher levels of formal education with 65.8% possessing a bachelor's degree and is more than double the countywide rate. Also recent averages show RVSD residents are less ethnically diverse with 13.8% being non-native speakers and is nearly double less the countywide rate.

RVSD: Resident Trends in Social and Economic Indicators				
Table 4.53 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$105,455	\$108,510	2.9%	\$91,529
Median Age	45.36	46.27	2.0%	45.10
Prime Working Age (25-64)	58.10	52.12	(10.30%)	55.28%
Unemployment Rate (Labor Force)	3.20%	4.79%	49.5%	4.70%
Persons Living Below Poverty Rate	6.24%	6.45%	3.40%	8.80%
Mean Travel to Work	29.02 min	31.05 min	7.0%	29.4 min
Working at Home (Labor Force)	10.3%	11.0%	6.7%	2.50%
Adults with Bachelor Degrees or Higher	61.48%	65.80%	7.0%	30.80%
Non English Speaking	14.56%	13.82%	5.1%	23.50%
Householder Pre Proposition 13 (1979)	17.32%	12.37%	(28.60%)	12.80%

* Amounts represent the result of a weighted calculation by estimated population performed by Marin LAFCO taking into proportional account of all seven census tracts underlying RVSD.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

RVSD’s governance authority is established under the Sanitary District Act of 1923 (“principal act”) and codified under Public Health and Safety Code Sections 6400-6982. This principal act was originally enacted in 1891 and empowers RVSD to provide a moderate range of municipal services upon approval by LAFCO. As of date, RVSD is authorized to provide only one municipal service: (a) wastewater. All other latent powers enumerated under the principal act would need to be formally activated by LAFCO before RVSD would be allowed to initiate. Similarly, should it ever seek to divest itself of directly providing wastewater services, RVSD would also need to seek LAFCO approval. A list comparing RVSD’s active and latent powers follows.

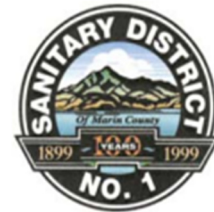
Active Service Powers

Wastewater

Latent Service Powers

Solid Waste (Includes Collection)
Recycled Water
Storm Drainage

RVSD has been governed since its formation in 1899 as an independent special district with registered voters comprising a five-member governing board. Members are either elected or appointed in lieu of consented elections to staggered four-year terms with a rotating president system. Members receive a \$314 meeting per diem. The Board regularly meets on the third Wednesday each month at the Central Marin Police Authority’s Community Room located at 250 Doherty Drive in Larkspur. A current listing of RVSD Board of Directors along with respective backgrounds and years served on the District follows.



Current RVSD Board Roster

Table 4.54 | Source: RVSD

Member	Position	Background	Years on Board
Mary Sylla	President	Public Health	4
Thomas Gaffney	Treasurer	Finance Consultant	2
Michael Boorstein	Secretary	Computer Engineer	2
Doug Kelly	Member	Business	1
Pamela Meigs	Member	Nurse	6
Average Years of Board Experience			3.0

5.2 Administration

RVSD appoints an at-will General Manager to oversee all District operations. The current General Manager – Greg Norby – was appointed by the Board in 2013 and is fulltime. The General Manager oversees 37 other full-time employees and this includes three senior management support positions: Operations and Maintenance Manager; Infrastructure Assets Manager; and Business and Administrative Services Manager.

RVSD contracts for human resources and legal services with Regional Government Services Authority (Carmel Valley) and Downey Brand (Sacramento), respectively.

RVSD Administrative Offices

2960 Kerner Boulevard
San Rafael, California 94901



Courtesy: RVSD

6.0 WASTEWATER SERVICES

6.1 System Structure

RVSD directly provides wastewater collection services through its own infrastructure headlined by an approximate 202 mile collection system that includes 19 pump stations. The collection system is divided between 194 miles of gravity lines and 8 miles of force mains. RVSD reports the average of

RVSD's equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – as of the study term is 30 years.

the entire collection system is around 60 years old with an expected service life between 50 to 75 years. As of the study term RVSD's equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – is 30 years and represents a 20% improvement over the corresponding 60-month period.³⁸ Other integral aspects of wastewater service – and specifically treatment and disposal – are provided by contract to RVSD by CMSA and separately reviewed as part of this study.

³⁸ The equipment replacement ratio has been calculated by LAFCO and drawn from RVSD's 2013-2014 audit.

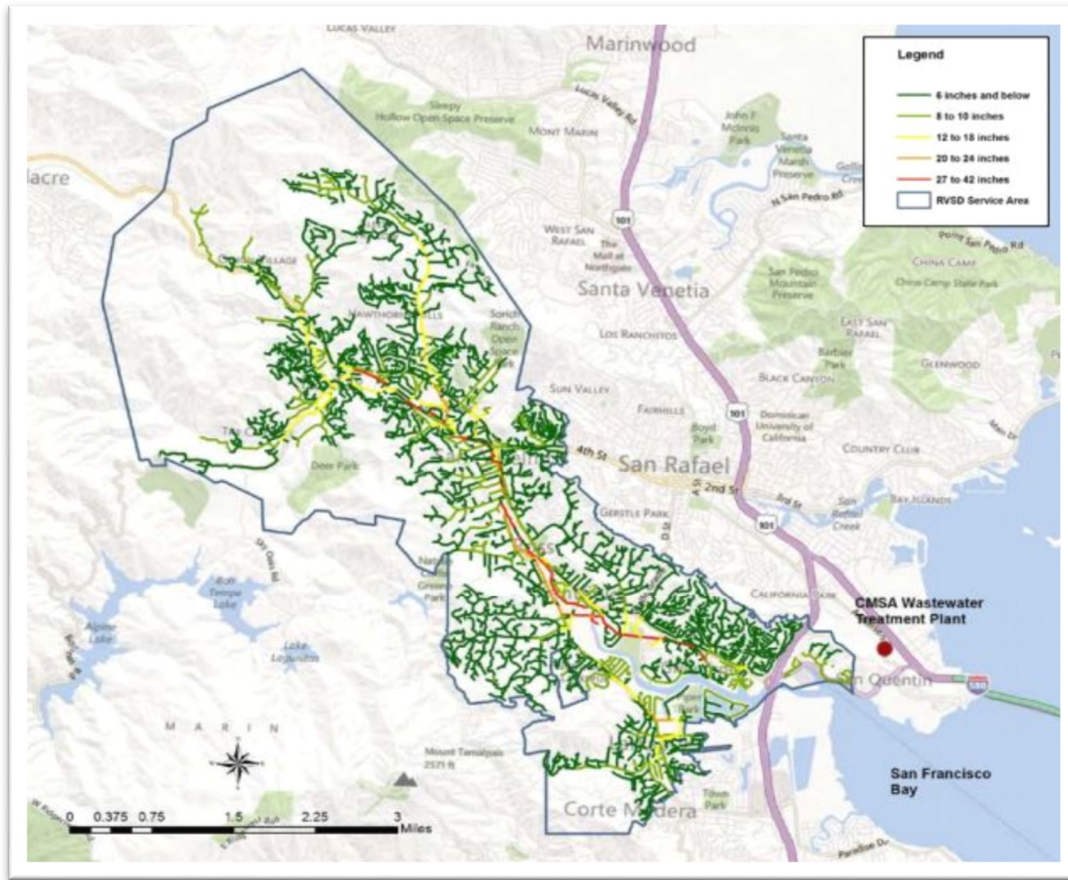


Figure 4.13

6.2 Wastewater Demands

Generators | Service Connections and Resident Population

RVSD reports service to 15,324 active wastewater service connections as of the term of the study period. This connection total is divided into two billing categories: (a) residential at 97.2%; (b) and commercial at 2.8% connections. The connection totals have experienced a relative increase of 0.38% within the five-year study period with relatively noticeable fluctuations between the years 2012 and 2014 and attributed to residential billing updates that have resulted in the removal of discontinued/merged accounts. Overall, residential connections for RVSD have consistently comprised no less than 95% of the total in any year during the study period as shown below.

Service connection totals within RVSD have remained relatively unchanging over the study period and total 15,324 at the term. Residential users on average have accounted for 97.1% of all active connections.

RVSD: Service Connection Type Breakdown			
Table 4.55 Source: RVSD			
Category	Residential	Commercial	Net
2010	14,821	445	15,266
2011	14,656	440	15,096
2012	14,656	452	15,085
2013	14,951	410	15,361
2014	14,900	424	15,324
Overall Change	0.53%	(4.72%)	0.38%

As detailed in the preceding section the Commission independently estimates RVSD’s total resident service population at 40,809 as of the study term. This estimate – which is based on a weighted factor of occupied housing units within the affected census tracts and multiplied by a projected household size – produces a population growth rate for RVSD of 3.44% during the five-year study period. The substantive result when aligning the two demand generators – service connections and resident population – is an average ratio of 2.70 persons for every residential connection. The ratio at the study term tallied 2.75. A breakdown of this ratio over the entire study period follows.

RVSD’s current resident to residential connection ratio is 2.75 as of the term date of this study.

RVSD: Resident to Connection Ratio Breakdown			
Table 4.56 Source: Marin LAFCO			
Year	Residential Connection	Estimated Resident Population	Resident to Connection Ratios
2010	14,821	39,454	2.66
2011	14,656	39,261	2.68
2012	14,656	39,974	2.73
2013	14,951	40,259	2.69
2014	14,821	40,809	2.75
Overall Change	(0%)	3.43%	3.38%

Recent Measurements | Wastewater Collection System Flows

RVSD’s average annual wastewater collection demand generated over the study period as reported in the current term by the District and for ultimate treatment and disposal by CMSA has totaled approximately 1.602 billion gallons. This average amount, which serves as a macro overview of system demands and includes flows from Murray Park Sewer Maintenance District (MPSMD), represents a daily average flow of 5.5 million gallons. It also translates to an estimated 136.0 gallons per day for each resident or 284.4 gallons per day for each occupied housing unit; it also translates to 355.9 gallons per day for each service connection projected within MPSMD.

Average annual wastewater flows generated within RVSD during the study period have produced the daily equivalent of totaled 5.5 million gallons; and amount that further translates to 135 and 284.4 daily gallons for every person and occupied housing unit. Amounts include flows collected on behalf of the Murray Parks Sewer Maintenance District.

With respect to trends, annual demands within the five-year study period have fluctuated each year and capped with a 23.2% decrease over the span of the affected 60 months. The high demand point for the collection system during the study period occurred in 2010 with annual flow equaling 2.281 billion gallons. This high

Annual wastewater flows within RVSD have decreased by slightly one-fourth over the study period’s 60-month point-to-point index; a difference of 529.3 million gallons.

demand year translates to an estimated 157.7 gallons per day for every resident or 331.2 gallons per day for every housing unit; it also translates to 407.0 gallons per day for each service connection. A breakdown of annual and daily wastewater collection flows over the study period in relation to population and housing is shown below.

RVSD: Recent Annual and Average Daily Flows Breakdown

Table 4.57 | Source: Marin LAFCO and RVSD

	2010	2011	2012	2013	2014	Average	Trend
Annual Flow Totals	2.281 bg	2.135 bg	1.843 bg	1.935 bg	1.752 bg	1.602 bg	(23.2%)
Daily Average	6.3 mg	5.9 mg	5.1 mg	5.3 mg	4.8 mg	5.5 mg	(23.2%)
- Daily Per Resident	157.7	148.3	125.7	131.0	117.1	136.0	(25.8%)
- Daily Per Housing Unit	331.2	307.4	263.2	274.0	246.1	284.4	(25.7%)
- Daily Per Connection	407.0	385.3	332.8	343.0	311.4	355.9	(23.5%)

*Table includes flows and related data for Murray Park Sewer Maintenance District
“bg” refers to billion gallons per day
“mg” refers to millions gallons per day
Per resident as estimated by the Commission
Per housing unit refers to occupied status as estimated by the Commission*

Along with average annual wastewater flow three other more micro measurements are tracked with respect to RVSD’s collection system and provide additional context to assessing demand. These measurements are (a) dry weather flow, (b) wet-weather flow, and (c) peak-day flow and summarized below.

Dry-Weather Day Flows

Average dry-weather wastewater flows over the study period have totaled 3.8 million gallons. This flow is recorded between May and October and most recently tallied 3.8 million gallons as of the study term. The overall average dry-weather tally translates to 94.2 gallons per day for every resident or 197 gallons per day for every occupied housing unit; it also translates to 246.8 gallons per connection during the affected 60 months. This measurement has decreased by (2.56%) during the term. A breakdown of dry-weather flows during the study period follows.

RVSD: Recent Dry Weather Day Flows					
Table 4.58 Source: Marin LAFCO and RVSD					
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection	
2010	3.9 mg	98.4	206.6	254.0	
2011	3.4 mg	86.2	178.7	223.9	
2012	3.9 mg	97.1	203.3	257.0	
2013	3.9 mg	96.4	201.6	252.4	
2014	3.8 mg	92.7	194.8	246.6	
Average Trend	3.78 mg (2.56%)	94.2 (5.82%)	197.0 (5.71%)	246.8 (2.93%)	

*Incorporates flows and related data from the Murray Park Sewer Maintenance District
“mg” refers to million gallons*

Wet-Weather Day Flows

Average wet-weather day wastewater flows over the study period have totaled 7.1 million gallons. This flow typically is recorded between November and April and most recently tallied 5.8 million gallons during the study term. The overall average wet-weather day tally translates to 177.8 gallons per day for every resident or 371.8 gallons for every housing unit; it also translates to 465.1 gallons for every service

connection during the affected 60 months. This measurement has decreased overall during the study period by (32.6%) A breakdown of wet-weather flows during the study period follows.

RVSD: Recent Wet Weather Day Flows				
Table 4.59 Source: Marin LAFCO and RVSD				
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection
2010	8.6 mg	217.0	455.7	560.1
2011	8.3 mg	210.4	436.2	546.6
2012	6.2 mg	154.4	323.2	408.6
2013	6.7 mg	165.6	346.4	433.7
2014	5.8 mg	141.4	297.4	376.3
Average Trend	7.1 mg (32.6%)	177.8 (34.8%)	371.8 (34.7%)	465.1 (32.8%)

*Incorporates flows and related data from the Murray Park Sewer Maintenance District
“mg” refers to million gallons*

Peak-Day Flows

Average peak-day wastewater flows over the study period amounts have totaled 45.7 million, and as such translates to a peaking factor relative to average day totals of 12 to 1. The average peak-day flow – which represents the highest volume during a 24-hour period for the affected year and typically is recorded during storm events – most recently tallied 35.7 million gallons as of the study term. The overall average wet-weather peak day tally translates to 1,139.6 gallons per day for every resident or 2,384.2 gallons per day for every housing unit; it also translates to 2,983.0 per day gallons for each service connection during the corresponding 60 months. This measurement has decreased overall during the study period by (33.0%). A breakdown of peak-day flows during the study period follows.

RVSD: Recent Peak Day Flows					
Table 4.60 Source: Marin LAFCO and RVSD					
Year	Peak Day System Total	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection	System Peaking Factor
2010	53.3 mg	1,344.7	2,824.1	3,471.2	13.7
2011	42.5 mg	1,077.4	2,233.4	2,798.8	12.5
2012	42.9 mg	1,068.1	2,236.0	2,827.2	11.0
2013	54.1 mg	1,337.3	2,796.7	3,501.6	13.9
2014	35.7 mg	870.6	1,830.5	2,316.2	9.4
Average Trend	45.7 mg (33.0%)	1,139.6 (35.3%)	2,384.2 (35.2%)	2,983.1 (33.3%)	12.1 (31.3%)

*Incorporates flows and related data from the Murray Park Sewer Maintenance District
“mg” refers to million gallons per day*

Projected Measurements | Wastewater Collection System Flows

Going forward – and specifically for purposes of this study – it appears reasonable to assume RVSD’s wastewater flows will generally follow trends over the study period. (This includes flows generated from MPSMD.) It is estimated, accordingly and using linear regression to control for variances in the most recent yearend totals, the system will ultimately experience an overall decrease in annual wastewater flows of 0.896 billion gallons over the succeeding 10-year period finishing in 2024; a difference of (51.13%) or (5.11%) annually. This projection continues RVSD’s overall annual flows reduction incurred during the study period at a similar rate. It is also estimated – in using regression analysis relative to recent recording - the system’s peak-day flows will ultimately decrease over the succeeding 10-year period by 8.4 million gallons or (23.5%) and resulting in a peaking factor of 6.2. The following table summarizes these and related projections through 2024.

The Commission independently estimates RVSD’s annual wastewater demands will continue to decrease over the succeeding 10-year period at an average rate of 10.8 based on regression analysis performed on recorded rates during the study period.

RVSD: Projected Wastewater Flows						
Table 4.61 Source: Marin LAFCO						
Year	Annual Flows	Average-Day Flows	Dry-Weather Flows	Wet-Weather Flows	Peak-Day Flows	
2014	1,752 bg	4.8 mg	3.8 mg	5.8 mg	35.7 mg	
2015	1,645 bg	4.5 mg	4.0 mg	5.0 mg	40.1 mg	
2016	1,560 bg	4.3 mg	4.0 mg	4.5 mg	38.7 mg	
2017	1,474 bg	4.0 mg	4.1 mg	4.0 mg	37.3 mg	
2018	1,387 bg	3.8 mg	4.1 mg	3.5 mg	35.9 mg	
2019	1,301 bg	3.6 mg	4.2 mg	3.0 mg	34.5 mg	
2020	1,213 bg	3.3 mg	4.2 mg	2.4 mg	33.1 mg	
2021	1,125 bg	3.1 mg	4.3 mg	1.9 mg	31.7 mg	
2022	1,036 bg	2.8 mg	4.3 mg	1.4 mg	30.2 mg	
2023	0,946 bg	2.6 mg	4.4 mg	0.828 mg	28.7 mg	
2024	0,856 bg	2.3 mg	4.4 mg	0.285 mg	27.3 mg	
Average Trend	1.254 bg (51.13%)	3.4 mg (51.13%)	4.2 mg 15.95%	2.7 mg (95.08%)	33.8 mg (23.53%)	

*Incorporates flows and related data from the Murray Park Sewer Maintenance District
“bg” refers to billion gallons per day
“mg” refers to million gallons per day*

6.3 Wastewater Capacities

Constraints | Contractual Provisions

As referenced, RVSD contracts with CMSA to provide treatment and disposal services for all collected wastewater services generated within the District. This contract was established in 1979 with CMSA's treatment facility going online in 1984. The current contract does not establish any limitations or related constraints on total volume of wastewater conveyed to CMSA of its member agencies.

RVSD is under no contractual constraints with respect the volume of wastewater the District conveys to CMSA for treatment and disposal.

Constraints | Infrastructure and Facilities

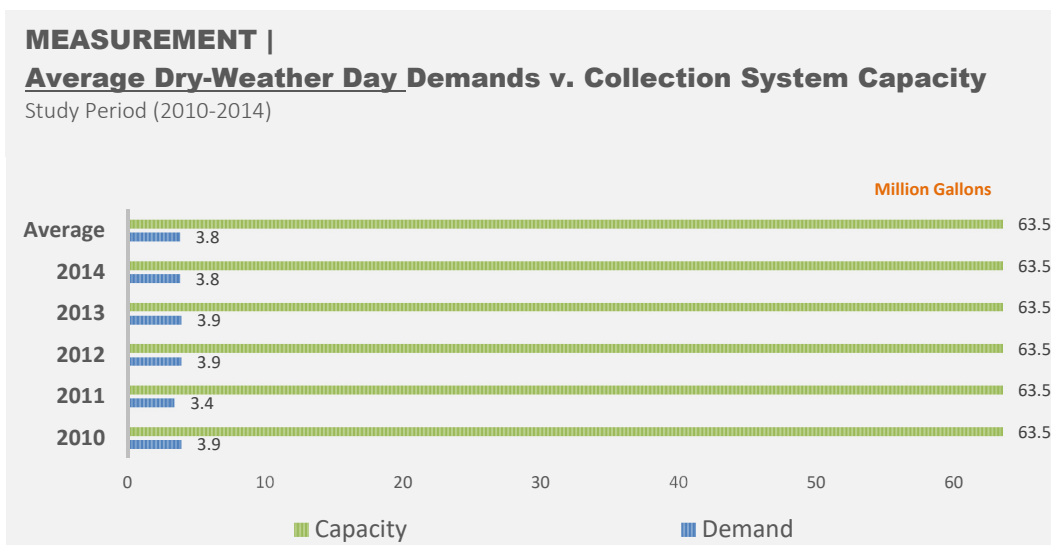
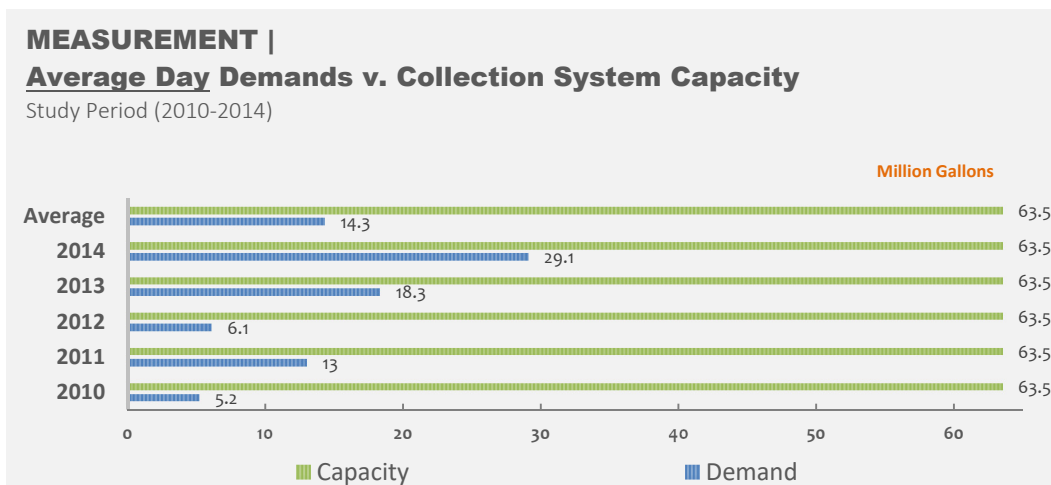
RVSD's collection system is approximately 202 miles in total length and divided between 194 and 8 miles of gravity and force lines, respectively. The percentage of gravity line to force mains is 4.3% and increased by 0.13% during the 60-month study period. The majority of the gravity lines are between 4 and 42 inches in diameter and supported by 19 strategically placed public pump stations that ultimately convey flows north to directly connect RVSD to CMSA. RVSD's largest pump serving the central trunk line connecting District flows to CMSA can reportedly handle up to 63.2 million gallons per day. For purposes of this review this reported amount – 63.2 million gallons – is deemed the maximum daily capacity of the RVSD collection system.³⁹

RVSD's collection system's daily capacity to convey flows to CMSA is estimated at 63.2 million gallons.

³⁹ As context RVSD's Sanitary Sewer Hydraulic Evaluation and Capacity Assurance Plan of 2006 evaluated the capacity of the collection system with respect to a design storm event given that the District's increase in peak flows were mainly attributed to infiltration and inflow (I/I) of storm water runoff and groundwater into the system. The model determined the system would have high peak demands under an intense wet weather event possibly resulting in overflows. The model also examined that all of RVSD's pump stations have sufficient capacity to handle the predicted 5-year design storm peak demand event during normal pump operation, but faced the potential for SSOs during large storm events.

6.4 Demand to Capacity Relationships

Study period flows averages show RVSD has sufficient available capacities within its collection system to accommodate current and projected demands over the succeeding 10-year period. Average annual demands over the study period equal 22.5% of the collection system capacity. Average dry-weather demands during the same period tally 6.0% of the collection system capacity. Average peak-day demands represent the biggest tax on the collection system and account over the study period to equal 57.3% of the collection system capacity.⁴⁰ None of the capacity ratios are expected to significantly and adversely change over the succeeding 10-year period with the exception that average day demands are projected to rise to 69.6% of capacity by 2024.



⁴⁰ Amount based on the average peak-day demand collected between 2010, 2011, 2012, and 2014.

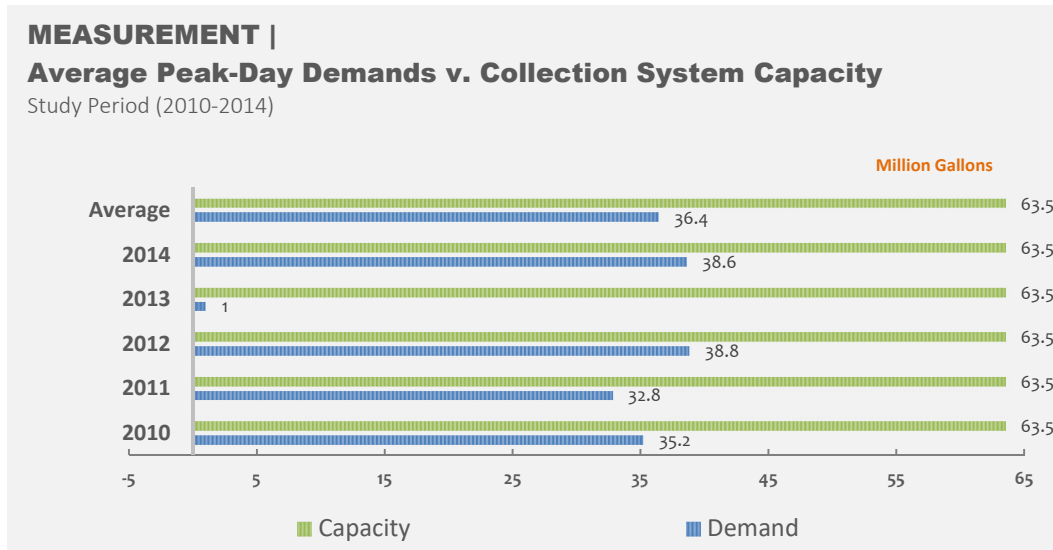


Figure 4.14

6.5 Performance

Measurement | Sanitary Sewer Overflows

The State Water Resources Control Board (SWRCB) requires all public agencies that own or operate sanitary collection systems that are one mile or more in length and convey to a public owned treatment facility comply with the reporting requirements codified in Order No. 2006-0003. This order mandates all subject agencies to develop and implement a system-specific sewer system management plan that includes a spill response plan as well as requiring immediately reporting to the SWRCB of all sanitary sewer overflows, or SSOs. The ultimate purpose of the SSO reporting process is to provide a uniform means to evaluate system reliability, source control, and operation and maintenance of wastewater systems in California. SSOs are defined as any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, and include any of the following occurrences:

- a) Overflows or releases of untreated or partially treated wastewater that reaches waters of the United States;
- b) Overflows or releases of untreated or partially treated wastewater that do not reach water of the United States; and

- c) Wastewater backups into buildings and on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

The total number of SSOs recorded by RVSD during the study period was 172 with an overall spillage volume of 3.35 million gallons. The most recent year experienced 29 SSOs. The majority of the SSOs, a total of 108, were classified by the SWRCB as a Category 3, a spill of less than 1,000 gallons to not reach the surface water. RVSD

RVSD experienced 172 total SSOs during the five-year study period, and involved the unauthorized overflow of 3.35 million gallons.

experienced 54 SSOs classified as a Category 1 in which wastewater reached the surface water threatening public safety and environmental health. The average response time for SSOs during the study period was 45 minutes with the longest response time noted at 1 hour in 2011. A review of each accompanying report incident suggests the main factors resulting in discharges were structural, indicating system repairs and planned maintenance are needed in the future to prevent spillage and maintain system flows. The majority of SSOs that were repeat occurrences could be attributed to roots, debris and structural issues, signifying more system maintenance is needed.⁴¹

RVSD: Sanitary Sewer Overflows								
Table 4.62 Source: SWRQB								
Year	Category 1		Category 2		Category 3		Total	
	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons
2010	6	0.002	1	0.001	27	0.004	34	0.008
2011	20	2.986	3	0.008	34	0.003	57	2.998
2012	4	0.010	2	0.002	17	0.003	23	0.015
2013	13	0.179	2	0.017	14	0.001	29	0.198
2014	11	0.123	2	0.003	16	0.004	29	0.130
	54	3.302	10	0.032	108	0.017	172	3.351

“gallons” are listed in millions

⁴¹ As related context RVSD’s Sewer System Management Plan of 2014 has established the following process in order for the District to be notified of the occurrence of an SSO; (1) observation by the public (2) receipt of an alarm and (3) Observation by District staff during the normal course of their work. Once notification of an SSO is received, calls are routed to either Senior Supervisor during business hours or to a standby service in which employees will be alerted by phone or employee pager. If needed, a dispatch collections crew is called and is instructed to follow protocols as well as outline how to respond and communicate with the customer. In the event of pump failure, an alarm will sound and either wastewater will be pumped into a vacuum truck for disposal in a nearby manhole or pumped into the wastewater system to prevent overflows.

Measurement | System Maintenance

System maintenance for purposes of this study includes both corrective and preventative maintenance. Corrective maintenance, is performed when signals indicate a fault, so an asset can be restored to its operational condition. Preventative maintenance, conversely, is initiated according to a predetermined schedule rather than in response to failure. A summary of both measurements follow.

Corrective Maintenance

RVSD’s corrective maintenance is reflected in the number of service calls received to resolve, correct, or assist a particular situation. During the 60-month study period this number totaled 335, in which the majority being attributed to a public SSO. The number of service calls spiked 523% during the last year of the study period, indicating either more volumes in service issues or a better notification system.

RVSD: Number of District Service Calls					
Table 4.63 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
General	n/a	n/a	n/a	n/a	44
Public SSO	34	57	28	29	29
Private SSO	n/a	n/a	n/a	n/a	72
Odor Complaints	n/a	n/a	n/a	n/a	18
Noise Complaints	n/a	n/a	n/a	n/a	7
Pump Station Alarms	n/a	n/a	n/a	n/a	24
Non-District Incidents	n/a	n/a	n/a	n/a	18
	34	57	23	29	212

Preventive Maintenance

RVSD’s preventative maintenance was reported in its planned cleaning activities during the 60-month study period, which averaged to 100% of all planned work orders completed. According to RVSD, maintenance is prioritized by the cleaning of high frequency sewer issues such as blockages or SSOs. The District cleans the entire sewer system approximately every 12 to 18th months and cleans specific portion with known problems on a more frequent basis. RVSD uses staff to clean out the system. RVSD schedules to clean on a preventative maintenance timetable in 6 to 12 month

intervals, depending on the history of the individual line segment. During the 60-month study period, Marin LAFCO is unable to determine the number of blocked sewer pipes per 100 miles RVSD encountered. During the same period, RVSD did experience 1 pump station failure in 2011.

RVSD uses a database to keep records of service calls and generates automatic work orders for regular and 6-month maintenance schedules. RVSD’s mainline sewer condition assessment program includes closed-circuit televising (CCTV) inspection of main line pipes to determine cleaning issues. RVSD notes, if an SSO resulted from a structural deficiency, repairs or replacements are made within one month of the reported SSO to prevent future overflows. The District has initiated during the study period a trunk line cleaning program and quality assurance and quality control (QA/QC) protocol to measure the effectiveness of cleaning operations.

RVSD is currently working on developing a rehabilitation and replacement plan to identify and prioritize rehabilitation efforts to address system deficiencies. RVSD has based the priority of rehabilitation projects on the number and nature of pipeline defects and if they are expected to be replaced by segments, lining, or full pipe replacement. At the end of the study year, RVSD identified rehabilitation projects that account for over 20 miles of main line sewer pipelines and are estimated a total costs of \$24.8 million. During the study period, RVSD’s entire collection system was CCTV inspected. The level of infrastructure reinvestment the District achieved during the entire study period came in at 52% byway completing 47,357 feet of the planned 90,234 feet of line replacement.

PLANNED <u>CLEANING</u> ACTIVITIES COMPLETED			PLANNED <u>LINE REPLACEMENT</u> COMPLETED		
Year	Planned Feet	Actual Feet	Year	Planned Feet	Actual Feet
2010	n/a	774,581	2010	3,600	156
2011	n/a	824,738	2011	19,000	16,089
2012	1,000,000	1,243,453	2012	22,300	7,305
2013	1,295,463	1,301,197	2013	13,900	0
2014	1,485,220	1,485,220	2014	17,424	17,645
TOTAL	3,780,683	5,629,189	TOTAL	90,324	47,357
Planned Work Orders Completed		100%	Planned Work Orders Completed		52%

Figure 4.15

6.6 User Charges and Fees

RVSD bills one fee to its customers in recovering the District’s wastewater service costs. This fee is in the form of an annual service charge and is billed to landowners and collected on the property tax roll and recovers both collection and contracted treatment/disposal expenses. The service charge

Most single-family customers in RVSD currently pay \$797 a year for wastewater services. Customers in Larkspur pay one-third more due to a zone adjustment at \$1,067 a year.

is also filtered through two billing zones to account for different revenue outlays: a) Larkspur and b) Ross Valley; with the latter comprising more than nine-tenths of all District customers. Single-family residential customers currently pay \$797 in Ross Valley and \$1,067 in Larkspur per unit. Multi-family customers pay slightly less than single-family users in both zones with Ross Valley billed at \$714 and Larkspur billed at \$955.⁴² There are no voter-approved special assessments.⁴³

7.0 AGENCY FINANCES

7.1 Financial Statements

RVSD contracts with an outside accounting firm (Moss, Levy and Hartzheim) to prepare an annual report for each fiscal year to review the District’s financial statements in accordance with established governmental accounting standards. This includes vetting RVSD’s statements with respect to verifying overall assets, liabilities, and equity. These audited statements provide the Commission with quantitative measurements in assessing RVSD’s short and long-term fiscal health.

⁴² Commercial users in Ross Valley and Larkspur are annually billed \$797 and \$1,067, respectively for each equivalent dwelling unit as determined by RVSD.

⁴³ A dual connection fee is also collected by RVSD in step with initiating new services. The connection fee presently totals \$10,798 for each connection. The total service operating and capital costs are divided between 81% to cover the buy-in costs to the collection system and 19% to cover the capital costs therein.

RVSD’s most recent financial statements for the study period were issued for 2013-2014 and shows the District experienced a moderate and positive change over the prior fiscal year as its overall equity or fund balance increased by 4.84% from \$62.192 to \$65.204

End of Study Term Financial Statements	
Assets	\$85.566 m
Liabilities	\$20.362 m
Equity	\$65.204 m

million. Underlying this most recent change in equity standing is the result of a sizeable rise in current assets and aided by a sharp increase in connection and inspection fees in 2013-2014. A summary of year-end totals and trends over the study period follows.

Agency Assets

RVSD’s audited assets at the end of 2013-2014 totaled \$85.566 million; more than 15% higher than the five-year average sum generated over the course of the study period. As of the study term assets classified as current with the expectation they could be liquidated within a year represented less than one-fifth of the total amount and tied to cash and investments and have drawn down by (36.52%) over the 60 month period. Assets classified as non-current make up the remaining four-fifths of the asset total as of the study term, and predominately comprise of capital infrastructure with 65% of depreciation tied to sewer lines, which has increased by 52.93% over the preceding 60 months.

RVSD Assets Study Period							
Table 4.64 Source: RVSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	20.571	10.865	6.9000	7.278	13.059	(36.52%)	11.735
Non-Current	47.412	59.657	67.002	65.634	72.506	52.93%	62.442
	67.983	70.522	73.902	72.912	72.912	25.86%	74.177

amounts in millions

Agency Liabilities

RVSD’s audited liabilities at the end of 2013-2014 totaled \$20.362 million; close to 30% higher than the five-year average sum generated over the course of the study period. As of the study term liabilities classified as current representing obligations owed in the near-term represented slightly more than one-tenth and tied to accounts payable and have overall decreased by (62.20%) over the preceding 60 months. Liabilities classified as non-current make up the remaining and approximate four-fifths of the sum and predominately attributed to the sale of 30-year revenue bonds in 2013 totaling \$17.780 million to fund sewer line replacements and underlie the 79.36% increase over the 60 month period.

RVSD Liabilities Study Period							
Table 4.65 Source: RVSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	6.548	4.564	5.325	1.893	2.475	(62.20%)	4.161
Non-Current	9.972	11.140	9.932	8.826	17.886	79.36%	11.551
	16.520	15.704	15.258	10.720	20.362	23.25%	15.713

amounts in millions

Agency Equity / Net Assets

RVSD’s audited equity / net assets at the end of 2013-2014 totaled \$65.204 million and represent the difference between the District’s total assets and total liabilities. This amount has increased by 26.70% over the study period and primarily attributed to capital investments. The unrestricted portion of the net assets as of the study term totals \$10.610 million and translates to a per capita reserve ratio of \$260 based on a corresponding and projected resident total of 40,809.

RVSD’s net assets have increased by 26.70% over the study period and largely driven by capital investments. The unrestricted fund balance as of the study term total of \$10.610 million equates to a per capita reserve ratio of \$260.

RVSD Net Assets Study Period							
Table 4.66 Source: RVSD							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Unrestricted	12.543	5.475	1.202	5.664	10.610	(15.41%)	7.099
Restricted	38.919	49.341	57.483	56.527	54.593	40.27%	51.373
	51.463	54.817	58.685	62.192	65.204	26.70%	58.472

amounts in millions

7.2 Measurements | Liquidity, Capital, Margin, and Structure

A review of the audited financial statement issuances by RVSD covering the study period and specifically fiscal years 2009-2010 through 2013-2014 shows the District finished the term with relatively good liquidity. This includes noting RVSD’s current ratio finished the term with a ratio of over 5 to 1 as well as over ten months – or 315 days – of cash on hand to cover operating expenses. RVSD also finished the study term with relatively good and stable levels of available capital with less than one-fifth of its net assets being tied to long-term debt financing. RVSD also generated positive total margins in all five subject years with an average net income of 16.25%. However, and in contrast, operating margins finished each year in a deficit with a study period average of (4.76%) along with trending higher and reflect the dependency on non-service related revenues to fund the wastewater system. This latter statement is reflected in RVSD’s earned income ratio average – i.e., the percent of direct service fees relative to annual revenues – of 73.46% for the study period. A summary of year-end liquidity, capital, margin, and structure ratios are show in the following table.

RVSD: Financial Measurements Study Period						
Table 4.67 Source: RVSD Financials and Marin LAFCO						
Fiscal Years	Current Ratio	Days' Cash	Debt Ratio	Total Margin	Operating Margin	Earned Income Ratio
2009-2010	3.14	480.73	14.67%	16.22%	(11.28%)	73.56%
2010-2011	2.38	253.88	15.80%	16.17%	(9.28%)	74.46%
2011-2012	1.29	153.39	13.44%	17.51%	(5.96%)	75.34%
2012-2013	3.84	184.95	12.11%	17.24%	(8.35%)	73.59%
2013-2014	5.27	315.19	20.90%	14.13%	(14.04%)	70.36%
Average	3.187	277.62	15.38%	16.25%	(9.78%)	73.46%
Trend	67.93%	(34.44%)	42.50	(12.89%)	24.52%	(4.34%)

Liquidity

Capital

Margin

Structure

Notes

Current Ratio (liquidity) relates to the ability of the agency to pay short-term obligations (current liabilities) relative to the amount of available cash and cash equivalents (current assets). Higher is better.

Days' Cash (liquidity) measures the number of days' worth of average operating expenses the agency can meet with cash on hand. Higher is better.

Debt Ratio (capital) measures the portion of agency's total assets that are directly tied to debt financing. Lower is better.

Total Margin (profit) represents the year-end profit level of the agency and includes all revenues and expenses. Higher is better.

Operating Margin (profit) represents the year-end profit level of the agency specific to its normal and reoccurring revenues and expenses tied to service provision. Higher is better.

Earned Income (structure) measures the portion of annual revenues that are directly tied from fees for services. Higher is better for enterprise agencies.

7.3 Pension Obligations

RVSD provides a defined benefit plan to its employees through an investment risk-pool contract with the California Public Employees Retirement Systems (CalPERS). This pension contract provides



employees with specified retirement benefits and includes disability benefits, annual cost-of-living adjustments, and death benefits to members and their beneficiaries. Actual pension benefits are based on the date of hire. Employees hired before January 1, 2013 are termed “Category One” while employees hired afterwards are termed “Category Two.” Additional details of the pension program based on actuarial valuations issued by CalPERS follows.

Participants | Pension Formulas

As of the study period’s term (2014) there are a total of 74 participants within RVSD’s pension program. This total amount – which represents an overall increase of 6% in participants since 2012 – is further divided between enrollee type (i.e., active, separated, transferred, retired) and

Most RVSD employees receive one of two types of defined pensions based on either a 2.7 @ 55 or 2.0 @ 55 formula. Employees hired after January 1, 2013 receive a 2.0 @ 62 pension formula.

marked by a worker-to-retiree ratio of 1.8 to 1 as of the study term. Category One participants represent 93% – or 69 – of the total program enrollees and are eligible to receive one of two types of retirement payments. The first and predominate tier within Category One is based on a 2.7 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 54% of their highest three years of salary beginning at age 55 and continuing each year thereafter. The second tier is based on a 2.0 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 40% of their highest three years of average salary beginning at age 55 and continuing each year thereafter. Category Two participants account for the remaining 7% – or 5 – of the total program enrollee amount as of the study period’s term and are subject to a flat 2.0% at 62 pension formula. This tier provides eligible retirees with 20 years of total service credit 40% of their highest three years of average salary beginning at age 62 and continuing annually thereafter.

RVSD's Pension Enrollee Information					
Table 4.68 Source: CalPERS and Marin LAFCO					
Type	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Active	n/a	n/a	34	36	35
Transferred	n/a	n/a	7	8	8
Separated	n/a	n/a	11	9	12
Retired	n/a	n/a	18	19	19
Total Enrollees	n/a	n/a	70	72	74
Worker-to-Retiree Ratio	n/a	n/a	1.8 to 1	1.9 to 1	1.8 to 1

Annual Contributions

RVSD's total annual pension contributions as of the study period's term tallied \$0.796 million. This amount represents an overall increase over the five-year study period of 78% and is more seven-fold greater than the corresponding inflation rate calculated for the San Francisco Bay Region.⁴⁴ The most recent annual pension contribution by RVSD for the study period marked 24% of the District's total annual payroll for the corresponding fiscal year (2013-2014).⁴⁵

RVSD's pension contributions have increased by 78% over the five-year study period, and as of 2013-2014 account for 24% of total payroll.

RVSD's Pension Contributions				
Table 4.69 Source: CalPERS and Marin LAFCO				
2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
\$448,391	\$547,918	\$702,054	\$778,004	\$796,725
Average Trend				\$654,618 77.68%

Funded Status

RVSD's unfunded liability – tally of pension monies owed and not covered by assets – ended the study period at \$3.990 million and as such represented 37.6% of the District's unrestricted fund balance as of June 30, 2014. This former amount produces a funded ratio of 78% based on market value. It also reflects an

RVSD's unfunded pension liability has increased over the last four years of the study period by 7% and ended the term at \$3.990 million; the equivalent of a 77.5% funded ratio.

⁴⁴ According to the United States Department of Labor the overall inflation rate in the San Francisco Bay Area region between 2010 and 2014 tallied 10.77%.

⁴⁵ RVSD's covered annual payroll in 2013-2014 totaled \$3.287million.

overall improvement of 7% over the preceding four-year period.⁴⁶

RVSD's Pension Trends			
Table 4.70 Source: CalPERS and Marin LAFCO			
	Unfunded Liability		Funded Ratio
2009-2010		n/a	n/a
2010-2011		\$3,895,131	72.3%
2011-2012		\$4,672,282	68.5%
2012-2013		\$4,308,867	73.0%
2013-2014		\$3,990,836	77.5%
	Average	\$4,216,779	72.8%
	Trend	2.45%	7.1%

Amounts above are show in market form and reflects the immediate and short term values of the pension with respect to assets and liabilities (i.e., here and now).

7.4 Revenue to Expense Trends

A review of RVSD's overall actual revenues and expenses during the study period as shown in the audited financial statements and specific to fiscal years 2009-2010 to 2013-2014 shows revenue surpluses in each year. Overall actual revenues averaged \$21.018 million over the study period compared to \$17.602 million in actual expenses; a difference of nearly one-fifth or 19.4%. The referenced gap, however, has been decreasing with the growth rate of expenses at 6.2% nearly doubling the growth rate of revenues at 3.6% over the 60-month period.

RVSD's overall revenues have outgained overall expenses – including booked depreciation – in all five years of the study period with an average monetary separation of \$3.415 million – or 19.4%. This separation is narrowing, however, with recent expenses outpacing revenues by nearly double. Removing depreciation as a booked expense produces a larger positive revenue over expense average over the 60-months at 30.9%

RVSD's revenue ledger consists of six distinct categories with sewer service charges accounting on average for 73.2% of the total. Another 25.2% of the revenue average is drawn from property taxes. The remaining average revenue collection – specifically 1.5% - is derived from investment earnings, connection fees, and other miscellaneous sources. Comparatively RVSD's expense ledger consists of eight

Top Revenue Categories:
1) Sewer Charges @ 73.2%
2) Property Taxes @ 25.2%

Top Expense Categories
1) Operations @ 27.9%
2) CMSA Contract @ 25.0%

⁴⁶ Pension information for 2009-2010 is not available.

distinct categories with operation and maintenance costs accounting for the single largest resource demand and on average tallying 27.9% of the total. Contract costs with CMSA for treatment and disposal services represents on average RVSD’s second largest expense, and on average, consumed another 25.0% of the outlay total. The remaining average expenses – specifically 47.1% – is derived in magnitude from administrative, debt service, depreciation, interest expense, and miscellaneous.

RVSD Actual Revenue Trends Study Period								
Table 4.71 Source: RVSD Financials and Marin LAFCO								
Category	2009	2010	2011	2012	2013	Trend	Average	% of Average
	2010	2011	2012	2013	2014			
Sewer Charges	15.116	15.418	16.615	14.926	14.884	(1.54%)	15.392	73.23
Inspection Fees	0.025	0.032	0.031	0.039	0.118	374.17%	0.049	0.24
Other	0.038	0.008	0.140	0.008	0.008	(78.32%)	0.040	0.19
Property Taxes	5.221	5.139	2.174	2.236	5.771	10.54%	5.303	25.23
Investments	0.157	0.130	0.121	0.103	0.085	(45.99%)	0.119	0.57
Connection Fees	0.024	0.020	0.040	0.023	0.453	>1000%	0.112	0.53
Totals	20.584	20.749	22.097	20.338	21.321	3.58%	21.018	100.00

amounts in millions

RVSD Actual Expense Trends Study Period								
Table 4.72 Source: RVSD Financials and Marin LAFCO								
Category	2009	2010	2011	2012	2013	Trend	Average	% of Average
	2010	2011	2012	2013	2014			
CMSA	4.749	4.854	4.270	4.180	3.951	(16.79%)	4.401	25.00
Debt Service	3.139	3.137	2.897	2.511	2.504	(20.21%)	2.838	16.12
O/M	3.119	5.144	5.020	5.255	6.000	92.39%	4.908	27.88
Administration	4.612	2.483	4.229	2.416	2.666	(42.18%)	3.281	18.64
Depreciation *	1.272	1.272	1.369	1.860	1.995	56.79%	1.554	8.83
Disposal of Capital	0	0	0	0.180	0.004	-	0.037	0.21
Bond Issue Costs	0	0	0	0	.350	-	.070	0.40
Interest Expenses	0.354	0.502	0.440	0.426	0.835	135.82%	0.511	2.91
Totals	17.246	17.395	18.228	16.831	18.309	6.17%	17.602	100.00
.. Less Depreciation	15.974	16.123	16.859	14.971	16.314	2.13%	16.048	100.00

amounts in millions

Net with Depreciation					
Year Ending	\$3.338	\$3.354	\$3.868	\$3.506	\$3.011

Net without Depreciation					
Year Ending	\$4.610	\$4.626	\$5.238	\$5.367	\$5.007

* Please note depreciation is shown as an operating expense in the financial statements in step with generally accepted government accounting standards, and as such impacts – and often negatively – gross profit or total margin. Depreciation takes into account the wear and tear on physical infrastructure, such as sewer lines, pumps, and other capital equipment. Government accounting standards direct agencies to spread out the costs of replacing these assets over the long term, which generates the term depreciation or amortization. The “charge” for using these assets during the period is a fraction of the original cost of the assets based on the expected life of the assets and presumably is rolled into the agencies’ fund balance at the end of the fiscal year and as part of the restricted reserve.

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D. COUNTY SANITARY DISTRICT NO. 2

1.0 OVERVIEW

County Sanitary District No. 2 (CSD No. 2) was formed in 1901 and encompasses an approximate 3.8 square mile jurisdictional boundary in east-central Marin County. Governance is provided dependently by the Town of Corte Madera's Town Council whose members are elected at-large to staggered four year-terms. This governance



relationship was established in 1969 when CSD No. 2 was officially reorganized into a subsidiary agency of the Town of Corte Madera as allowed under State law given – and among other qualifications – the Town included 70% of both the District's jurisdictional boundary and registered voters. Four local land use authorities overlap CSD No. 2's jurisdictional boundary and headlined by Corte Madera, which presently accounts for three-fifths – or 56% – of the subject lands. The rest of CSD No. 2's jurisdictional boundary is divided between the County of Marin's unincorporated area – and marked by Greenbrae – at 23%, Town of Tiburon at 19% and City of Larkspur at 2%.

CSD No. 2 is currently organized as a single-purpose agency with municipal operations limited to wastewater collection though it is empowered – subject to LAFCO approval – to provide solid waste, recycled water, and storm drainage services. Service activities directly performed by CSD No. 2 and byway of Corte Madera's Public Works Department focus on engineering aspects of the District's approximate 49-mile collection system along with cost-recovery through the setting and collection of charges and fees. Public Works also provides routine and emergency cleaning and maintenance of the collection system, and design and construction of capital improvements to the gravity and force mains and pump stations. CSD No. 2 – and as a signatory – contracts with the Central Marin Sanitation Agency (CMSA) for wastewater treatment and disposal services; a secondary contract with CSMA also provides maintenance for CSD No. 2's pump stations

located throughout the District’s jurisdictional boundary. CSD No. 2’s adopted operating budget at the term of the study period was \$7.102 million and with funding dedicated for the equivalent of three fulltime employees. The unrestricted fund balance was \$3.235 million with an associated days-cash ratio totaling 524; i.e., the amount of cash on hand the District can cover operating expenses based on 2013-2014 actuals.

The Commission independently estimates the resident service population within CSD No. 2 is 9,874 as of the term of this study period (2014). It is also projected CSD No. 2’s population growth rate over the five-year study period has averaged 0.175% annually and primarily tied to an increase in occupancy levels; the substantive result being the net addition of 86 persons. Overall it is also estimated by the Commission nearly four-fifths of the jurisdictional boundary has already been developed and or improved – though not necessarily at the highest density. This means one-fifth of the boundary area remains entirely undeveloped, and this includes 138 existing unbuilt and privately owned parcels that are zoned for some type of urban use.⁴⁷

County Sanitary District No. 2	
Formation Date:	1901
Principal Act:	Health and Safety Sections 6400-6982
Service Categories:	Wastewater Collection
Service Population	9,874
Governance Type:	Dependent

2.0 OVERVIEW

2.1 Community Development

It appears CSD No. 2’s present day service area began its development in 1834 with the land grant of Rancho Corte Madera del Presidio to early California European settler, John Reed, by Mexican Governor Jose Figueroa, totaling 7,845 acres or 12.2 square miles. Reed proceeded with renaming the area Corte Madera, meaning in Spanish “to chop wood,” and constructed a sawmill to produce lumber out of redwood trees supplying the ongoing construction of San Francisco and by way of transporting through Corte Madera Creek. Cattle grazing and orchard farming followed as the area took an agrarian form

⁴⁷ Additional analysis is needed to assess actual development potential of the 138 unbuilt parcels within CSD No. 2.

towards mid-century. Once California joined the Union in 1850 a nominal number of settlers were recorded living in Corte Madera by the time of the first census. Ten years later in 1860 and in step with the State’s second official census only a few dozen residents were reportedly residing in the area.⁴⁸



Figure 4.16

Seminal to Corte Madera’s present day development was the completion of the North Pacific Coast Railroad in 1875 and its allowance

for San Franciscans to reach Sausalito by ferries and continue their travels north and throughout Marin County by rail. This included the placement of a railroad along current-day Montecito Drive with the construction of a train station near the intersection of Tamalpais Drive by 1885. A commercial area, accordingly, began to develop around the train station – later termed “Old Downtown” – with the construction of nearby residences to house shopkeepers as well as an emerging group of day-laborers who would travel into San Francisco.

⁴⁸ Census data reports Marin County’s entire population in 1860 at 3,334; the second lowest total among the nine Bay Area counties and only higher than San Mateo at 3,214.

Corte Madera's development accelerated in the 1890s when Emma Catherine Pixley - widowed sister-in-law of New England lawyer Frank Pixley and later publisher of the magazine the *Argonaut* - received a 136-acre parcel from her late husband's family estate. Ms. Pixley and her sons, notably, began subdividing and selling small undeveloped tracts of lots from her 136-acre parcel of land and marketed in local newspapers as summer residences for San Franciscans given the area's warmer climate. The lots were located on the northern slope of the Corte Madera Ridge near the railroad station and subsequently known as Christmas Tree Hill with starting prices at \$50; the adjusted equivalent of \$1,200 in 2016. Sales proved successful and by the end of the century Corte Madera began its steadfast transition from agrarian to residential with a population reaching a reported 300 by 1900.

2.2 Formation Proceedings

CSD No. 2's formation was petitioned by area landowners to manage and coordinate the collection and disposal of raw sewage flows from Old Downtown and the Christmas Tree Hill development. Proceedings were influenced by the establishment two years earlier of neighboring County Sanitary District No. 1 - also known as the Ross Valley Sanitary District - and led to a successful election and formation therein of CSD No. 2 in 1901 as an independent governmental agency with its own directly elected five-person board.

2.3 Post Formation Activities

A summary of notable activities undertaken by CSD No. 2 and/or affecting the District's service area following formation in 1901 is provided below.

- The City of Larkspur was incorporated in March 1908.
- The Town of Corte Madera was incorporated in June 1916.
- In 1969 CSD No. 2 was reorganized into a dependent subsidiary district of the Town of Corte Madera with LAFCO approval as a means to formalize the Town's existing - albeit informal - management of the District.

- CSD No. 2 became an original signatory in the creation of CMSA in 1979; a joint powers authority created for the purposes of planning, constructing, and operating wastewater treatment and disposal services for its member-agencies with the latter achieved through a deep-water outfall to the San Francisco Bay.
- CSMA completed construction and initiated operation of a wastewater treatment facility on the north side of Point San Quentin Point in 1985.
- CSD No. 2 prepared its first formal Sewer System Master Plan in 2008. This document was most recently updated in 2013.

3.0 BOUNDARIES

3.1 Jurisdictional Boundary

CSD No. 2's jurisdictional boundary spans approximately 3.8 square miles in size and covers 2,435 total acres (parcels and right-of-ways). There are four land use authorities overlapping the jurisdictional boundary. Corte Madera is the single largest land use authority in terms of acreage with an estimated 56% of all CSD No. 2's assessor lands lying in the Town.

CSD No. 2's jurisdictional boundary spans 3.8 square miles and overlaps four land use authorities with Corte Madera being the largest with the Town covering 56% of all District lands.

Another 23% and 19% of jurisdictional lands fall under the land use authorities of the County – and most notably portions of Kentfield – and Tiburon respectively. The remaining portion of CSD No. 2 lands – which total 2% of the District total – are located within Larkspur and specifically in and around the Cost Plus Plaza.

The total assessed value (land and structure) within CSD No. 2 is currently calculated at \$3.6 billion and translates to a per acre value of \$1.4 million. This former amount – \$3.6 billion – further represents a per capita value of \$0.365

Assessed land values in CSD No. 2 totals \$3.6 billion, and based on receiving 1.47% of the 1% annual property tax the District's allocated share of the total less deductions and other exchanges is \$0.528 million.

million based on an estimated service population of 9,874. CSD No. 2’s set allocation of property tax proceeds – i.e., its share of the 1% taxed on property owners – is 1.468%.

CSD No. 2 Boundary Breakdown: Land Use Authorities				
Table 4.73 Source: Marin LAFCO				
Agency	Assessor Parcel Acres	Assessor Parcel Acres % of Total	Total Assessor Parcels	Total Residential Units
Corte Madera	896.9	56.1	3,390	3,910
County of Marin	372.6	23.3	398	125
Tiburon	298.9	18.7	442	435
Larkspur	31.0	1.9	104	94
	1,599.4	100	4,334	4,564

As provided in the preceding table there are 4,334 overall assessor parcels currently within CSD No. 2 and collectively add up to 1,599 acres as of June 2016.⁴⁹ Almost four-fifths – or 79% – of the current assessor parcel acreage have already been developed/improved to date, albeit not necessarily at the highest zoning density.⁵⁰ This existing development is highlighted by the standing construction of 4,564 residential units and divided between single-family and multi-family on an 82% to 18% split. The remainder – or 21% – of the current assessor parcel acreage in CSD No. 2 is undeveloped/unimproved. This includes 131 un-built and privately owned assessor parcels that combine to total 68 acres. The remaining undeveloped/unimproved assessor acreage in CSD No. 2 – or 268 acres – is publicly owned and generally dedicated to municipal or open space uses.

Almost four-fifths of CSD No. 2’s jurisdictional boundary has already been developed/improved – though not necessarily at the highest allowable density. This means one-fifth of the boundary remains entirely undeveloped. This includes 138 un-built and privately owned parcels zoned for some type of urban use.

CSD No. 2 Boundary Breakdown: Land Use Features				
Table 4.74 Source: Marin LAFCO				
% Parcel Acres Already Developed	Residential Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
79.0	4,564	81.5	131	68

⁴⁹ The remaining 836 jurisdictional acreage within CSD No. 2 are tied to public right-of-ways and waterways.

⁵⁰ This portion of developed acreage includes parcels dedicated as common areas.

3.2 Sphere of Influence

CSD No. 2’s sphere of influence was initially established by the Commission in 1983 and last reviewed and updated in 2006. The sphere spans approximately 2,471 acres or 3.8 square miles in size. The sphere is close to matching – or 98% – equal to CSD No. 2’s jurisdictional boundary net size although with several notable deviations therein. This includes excluding approximately 44 acres – or 2% – of CSD No. 2 jurisdictional lands and highlighted by the omission of District territory

CSD No. 2’s sphere of influence nearly matches its jurisdictional boundary with two notable exceptions. First, the sphere excludes approximately 44 acres of the jurisdictional boundary in south Larkspur and north Tiburon. Second, the sphere includes 80 acres on non-jurisdictional lands with the majority located in the unincorporated community of Paradise Cay.

in north Tiburon and south Larkspur. Non-jurisdictional lands included in the sphere total approximately 80 acres (parcels and right-of-ways) and as such are immediately eligible for annexation or outside service extension subject to Commission approval. This includes 37 assessor parcels with 90% – or 33 – being privately owned and zoned for some type of urban use with the majority lying within unincorporated Paradise Cay.

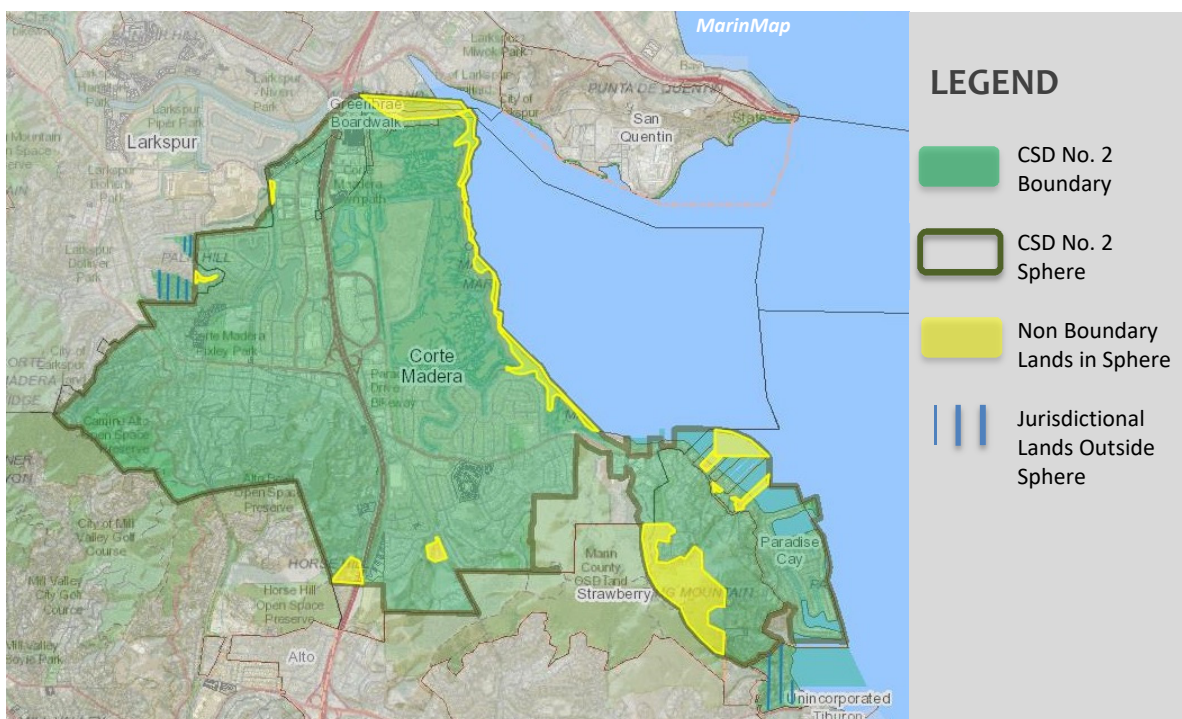


Figure 4.17

4.0 DEMOGRAPHICS

4.1 Population Estimates

CSD No. 2's resident population within its jurisdictional boundary is independently estimated by the Commission at 9,874 as of the term of the study. This projection – which is anchored on a calculation of housing units, occupancy rates, and household sizes within the jurisdictional boundary and detailed in the accompanying footnote – represents 3.8% of the estimated countywide population.⁵¹ It is also

LAFCO estimates there are 9,874 total residents within CSD No. 2 that are explicitly served by the District's wastewater collection system as of the term of the study. It is further estimated CSD No. 2 has experienced an overall population increase of 86 over the preceding five-year period, resulting in an annual growth rate of 0.175%.

projected CSD No. 2 has experienced an overall population growth rate of 0.88% over the preceding five-year period or 0.175% annually. The net effect of the population change in CSD No. 2 over the study period is the addition of an estimated 86 persons. This projected increase in population has been generated by the addition of an estimated 87 new and occupied housing units within the jurisdictional boundary while also taking into account a deintensification of household sizes over the span of the five-year period starting at 2.25 in 2010 and ending at 2.20 in 2014; the latter being a net intensity decrease of (11.1%). Overall projected growth within CSD No. 2 falls more than three times below the concurrent annual change estimated for the entire county – 0.62% –.⁵²

CSD No. 2 Resident Population: Past and Current Estimates

Table 4.75 | Source: Marin LAFCO

Factor	2010	2011	2012	2013	2014
a) Total Housing Units	4,466	4,482	4,499	4,545	4,531
b) Local Occupancy Rate	97.63	96.47	97.52	97.52	98.16
g) Occupied Housing Units	1,360	4,324	4,387	4,403	4,448
h) Projected Household Size	2.245	2.239	2.232	2.226	2.220
Estimated Population	9,788	9,678	9,794	9,802	9,874

* rounded for reporting purposes

⁵¹ Marin LAFCO's resident service population for CSD No. 2 is independently calculated and premised on occupied housing driving resident estimates based on data collected within the four affected census tracts in the District. Four distinct calculations help produce the population estimates within each of the five subject years in the study period and involve identifying: a) total housing units; b) local occupancy rates; c) occupied housing units; and c) household sizes. Key calculations specific to CSD No. 2 over the study period include a weighted annual housing unit change of 0.361% and a weighted annual household size change of (0.279%). The annual weighted population change is 0.175%.

⁵² Marin County's estimated population as of January 1, 2014 totaled 260,750 based on information published by the United States Census and marks a 3.01% increase over the preceding five-year period.

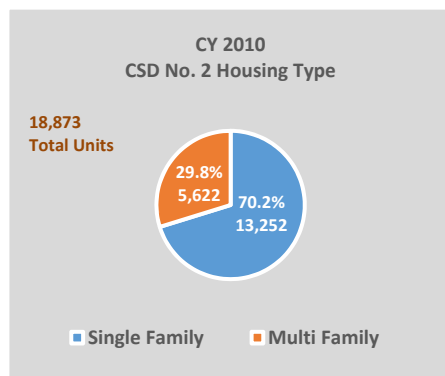
With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate with CSD No. 2 will generally match the preceding five-year period with an overall yearly population change of 0.175%. The substantive result of this assumption would be an overall increase in CSD No. 2’s resident population of 174 and produce a total of 10,048 by 2024. This growth rate would similarly presume to generate the addition of 53 new and occupied housing units within CSD No. 2 through 2024 assuming the preceding five-year average ratio of 2.232 persons for every one occupied housing unit holds. These collective projections going forward are summarized below.

CSD No. 2 Resident Population: Future Estimates						
Table 4.76 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	9,874	9,909	9,943	9,978	10,013	10,048
Occupied Housing Units	4,448	4,439	4,454	4,470	4,485	4,501
- residents to housing units	2.220	2.232	2.232	2.232	2.232	2.232

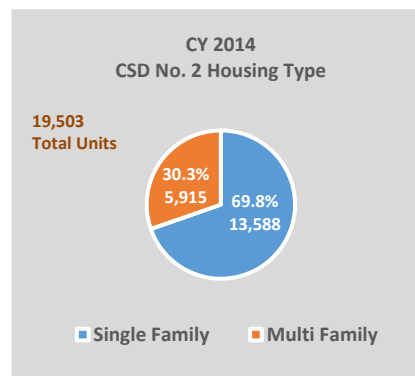
Baseline

4.2 Residency Type

The Commission projects CSD No. 2’s residential unit total (occupied and unoccupied) of 4,531 as of the study term is divided between single family and multi-family uses at 74.43% (3,373) and 25.57% (1,159), respectively. These totals produce an estimated ratio of 2.91 to 1 with respect to single-family to multi-family units. The overall stock of housing type has experienced a subtle change with single-family unit totals decreasing by (0.43%) while multi-family unit totals increasing by 1.28% over the corresponding 60 month period. The substantive change in the residency type ratio (i.e., single-family to multi-family units) has been (1.69%) from 2.96 to 1 in 2010.



**Single Family to Multi Family:
2.96 to 1**



**Single Family to Multi Family:
2.91 to 1**

Figure 4.18

4.3 Social and Economic Indicators

A review of recent demographic information covering the CSD No. 2 jurisdictional boundary for the study period shows fulltime residents are relatively in better economic positions compared to countywide averages and marked by high incomes and low unemployment and poverty rates. This information is drawn from census data collected between 2010 and 2014 and shows

CSD No. 2's fulltime residents are generally more affluent than most of the county populace and highlighted by a median household income average over the study period of \$108,934. Also there has been sizeable amount of transition with only 13% of household owners having resided in their homes before Proposition 13 in 1979.

area residents' average median household income is close to one-fifth above the countywide amount of \$91,529 at \$108,934. Area resident averages – and similar to RVSD – also fall measurably below countywide amounts with respect to unemployment and poverty rates, albeit both measurements have significantly increased compared to the preceding five-year average data collection. Notable social indicators show CSD No. 2 residents have significantly higher levels of formal education with 65.7% possessing a bachelor's degree and is more than double the countywide rate. Also notably – and compared to its immediate neighbor to the east with similar economic factors in RVSD – CSD No. 2 is far more ethnically diverse with non-native speakers equally 21.3% and close to the countywide amount.

CSD No. 2: Resident Trends in Social and Economic Indicators				
Table 4.77 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$100,121	\$108,934	8.80%	\$91,529
Median Age	44.78	44.98	0.46%	45.10
Prime Working Age (25-64)	58.07%	52.93%	(8.84%)	55.28%
Unemployment Rate (Labor Force)	2.44%	3.66%	50.20%	4.70%
Persons Living Below Poverty Rate	2.49%	4.80%	92.60%	8.80%
Mean Travel to Work	27.78 min	30.40 min	8.12%	29.4 min
Working at Home (Labor Force)	6.40%	9.40%	47.91%	2.50%
Adults with Bachelor Degrees or Higher	62.45%	65.70%	5.21%	30.80%
Non English Speaking	23.28%	21.13%	(9.23%)	23.50%
Householder Pre Proposition 13 (1979)	16.82%	12.90%	(8.84%)	12.80%

* Amounts represent the result of a weighted calculation by estimated population performed by Marin LAFCO taking into proportional account of all four census tracts underlying CSD No. 2.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

CSD No. 2’s governance authority is established under the Sanitary District Act of 1923 (“principal act”) and codified under Public Health and Safety Code Sections 6400-6982. This principal act was originally enacted in 1891 and empowers CSD No. 2 to provide a moderate range of municipal services upon approval by LAFCO. As of date, CSD No. 2 is authorized to provide only one municipal service: (a) wastewater. All other latent powers enumerated under the principal act would need to be formally activated by LAFCO before CSD No. 2 would be allowed to initiate. Similarly, should it ever seek to divest itself of directly providing wastewater services, CSD No. 2 would also need to seek LAFCO approval. A list of active and latent powers under the principal act follows

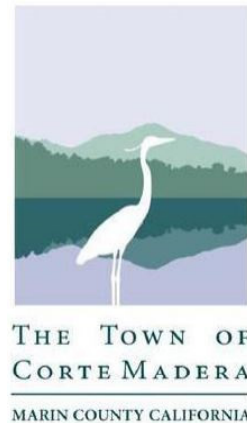
Active Service Powers

Wastewater

Latent Service Powers

Solid Waste; Including Collection
Recycled Water
Storm Drainage

CSD No. 2 was initially formed as an independent sanitary district in 1901 with its own directly elected five-member board of directors among registered voters residing with the District. CSD No. 2 was governed accordingly in this manner until 1969 when the Town of Corte Madera successfully proposed reorganization of the District as a subsidiary to the Town.⁵³ As a result of the reorganization, the Corte Madera Town Council acts as *ex officio* of the CSD No. 2 Board and incorporates the District’s business as part of the Town’s regular meeting schedule. The Town Council’s members are elected at large to staggered four-year terms with a rotating mayor appointment process – hold regular meetings every first and third Tuesdays of each month at 7:30 P.M. at Town Hall, 300 Tamalpais Drive, Corte Madera. A current listing of CSD No. 2 Board of Directors along with respective backgrounds and years served on the District follows.



⁵³ As added context the reorganization was allowed under State law given Corte Madera represented no less than 70% of both the District’s total boundary and registered voters at the time of the proceedings.

Current CSD No. 2 Board Roster			
Table 4.78 Source: CSD No. 2			
Member	Position	Background	Years on Board
Sloan Baily	President	Attorney	n/a
Diane Furst	Vice President	Accounting/Finance	n/a
James Andrews	Director	Financial Analyst	n/a
Carla Condon	Director	Government	n/a
Michael Lappert	Director	Business Owner	n/a

5.2 Administration

Under Town Ordinance Corte Madera’s Town Manager serves as General Manager for CSD No. 2 and as such oversees all District activities with primary delegation to the Public Works Director. The current General Manager – Todd Cusimano – assumed administrative oversight of CSD No. 2 in September 2016. Service activities directly performed by CSD No. 2 and byway of Public Works staff focuses on engineering aspects of the District’s approximate 49 mile collection system along with cost-recovery through the setting and collection of charges and fees.⁵⁴ Legal services for CSD No. 2 are provided by contract with the Renne Sloan Holtzman Sakai Law Group (San Francisco).

CSD No. 2 Administrative Offices

300 Tamalpais Drive
Corte Madera, California 94925



Courtesy / Town of Corte Madera

6.0 WASTEWATER SERVICES

6.1 System Structure

CSD No. 2 directly provides wastewater collection services through its own infrastructure headlined by an approximate 49 mile collection system and 19 public pump stations. The current infrastructure dates back as early as 1923 with the collection system divided between 44 and 5 miles of gravity and force lines, respectively. CSD No. 2 reports close

⁵⁴ Public Works also provides routine and emergency cleaning and maintenance of the collection system with a budgeted allocation of three fulltime equivalent employees to perform on behalf of CSD No. 2 for the study term. All other services – including maintaining CSD’s No. 2’s pump stations as well as treatment and disposal services – are provided to the District byway of CMSA through a standing joint-powers agreement initially established in 1979.

to 60% of the collection system is less than 50 years in service.

As of the study term CSD No. 2's equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – is 12 years and represents a 14% negative change over the corresponding 60 month period.⁵⁵ Other key aspects of wastewater service – and specifically treatment and disposal – are provided by contract to CSD No. 2 by CMSA and separately reviewed as part of this study.

CSD No. 2's equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – as of the study term is 12 years.

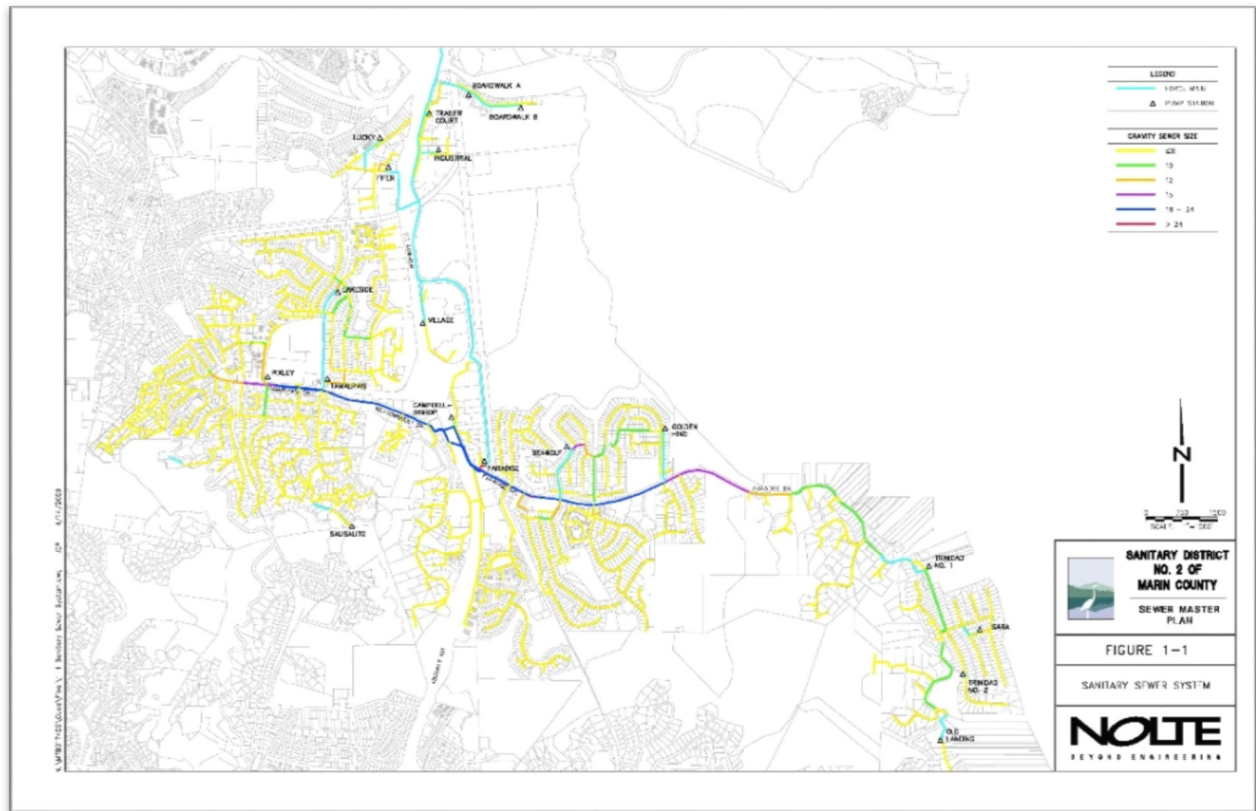


Figure 4.19

⁵⁵ The equipment replacement ratio has been calculated by LAFCO and drawn from CSD No. 2's 2013-2014 audit.

6.2 Wastewater Demands

Generators | Service Connections and Resident Population

CSD No. 2 reports service to 3,934 active wastewater service connections as of the term of the study period. This connection total is divided into three broad billing categories: (a) residential at 95.6%; (b) commercial at 3.61%; and (c) other at 0.76% (e.g. industrial, public, etc.). The connection totals have experienced small fluctuations within the five-year study period and attributed to residential billing updates that have resulted in the removal of discontinued/merged accounts. This activity helps to explain the overall 0.58% decrease in service connections over the past five year period; a net loss of (23). Nevertheless, residential connections have consistently comprised no less than 96% of the total in any year as shown below.

Service connection totals within CSD No. 2 have remained relatively stagnant over the study period and total 3,934 at the term. Residential users on average have accounted for 95.76% of all active connections.

CSD No. 2: Service Connection Type Breakdown				
Table 4.79 Source: CSD No. 2				
Category	Residential	Commercial	Other	Net
2010	3,781	147	29	3,957
2011	3,798	144	15	3,957
2012	3,763	137	20	3,920
2013	3,758	140	31	3,929
2014	3,762	142	30	3,934
Overall Change	(0.50%)	3.40%	3.45%	(0.58%)

As detailed in the preceding section the Commission independently estimates CSD No. 2's total resident service population at 9,874. The substantive result when aligning the two demand generators – service connections and resident population – is an average ratio of 2.59 persons for every residential connection. The ratio at the study term tallied 2.62. A breakdown of service connection to resident population ratios over the study period follows.

CSD No. 2's current resident to residential connection ratio is 2.62 as of the term date of this study.

CSD No. 2: Resident to Connection Ratio Breakdown			
Table 4.80 Source: Marin LAFCO			
Year	Residential Connection	Estimated Resident Population	Resident to Connection Ratios
2010	3,781	9,788	2.56
2011	3,798	9,678	2.55
2012	3,763	9,794	2.60
2013	3,758	9,802	2.60
2014	3,762	9,874	2.62
Overall Change	(0.50%)	0.86%	2.34%

Recent Measurements | Wastewater Collection System Flows

CSD No. 2’s average annual wastewater collection demand generated over the study period as reported by the District and for ultimate treatment and disposal by CMSA has been approximately 426.3 million gallons. This average amount – which serves as a macro overview of system demands – represents a daily average flow of 1.17 million gallons. It also translates to an estimated 119.3 gallons per day for each resident or 266.4 gallons per day for each occupied housing unit projected within CSD No. 2, and 260.1 gallons for each service connection.

Average daily wastewater flows generated within CSD No. 2 during the study period totaled 1.17 million gallons and translates to use ratio of 119 and 266 daily gallons for every person and occupied housing unit, respectively, within the District.

With respect to trends, annual flows within the five-year study period have remained relatively consistent each year and ultimately produced a (0.80%) decrease over the span of the affected 60 months. The high demand point for the collection system during the study period occurred in 2010 with annual flow equaling 456.3 million gallons. This high demand year translates to an estimated 127.7 gallons per day for each resident or 286.7 gallons per day for each occupied housing unit; it also translates to 315.9 gallons per day for each service connection. A breakdown of annual and daily wastewater flows follows.

Annual wastewater flows within CSD No. 2 have decreased by less than (5%) over the study period’s 60 month point-to-point index; a difference of 23.1 million gallons.

CSD No. 2: Annual and Average Daily Flows Breakdown

Table 4.81 | Source: Marin LAFCO and CSD No. 2

	2010	2011	2012	2013	2014	Average	Trend
Annual Flow	456.3 mg	407.0 mg	449.0 mg	366.8 mg	452.6 mg	426.3 mg	(0.80%)
Daily Average	1.3 mg	1.1 mg	1.2 mg	1.0 mg	1.2 mg	1.2 mg	(0.80%)
- Daily Per Resident	127.7	115.2	125.6	102.5	125.6	119.3	(1.66%)
- Daily Per Housing Unit	286.7	257.9	280.4	228.3	278.8	266.4	(2.72%)
- Service Connection	315.9	281.8	132.0	256.0	315.2	260.1	(0.22%)

“mg” refers to million gallons

Per resident as estimated by the Commission

Per housing unit refers to occupied status as estimated by the Commission

Along with average annual wastewater flow three other more micro measurements are tracked with respect to CSD No. 2’s collection system and provide additional context to assessing demand. These measurements are (a) dry weather flow, (b) wet-weather flow, and (c) peak-day flow and summarized below.

Dry-Weather Day Flows

Average dry-weather day wastewater flows over the study period have totaled 0.94 million gallons. This flow is recorded between May 1st and October 31st and most recently tallied 0.93 million gallons as of the study term. The overall average dry-weather day tally translates to 96 gallons for every resident and 214 gallons for every occupied housing unit during the affected 60 months. This measurement has increased overall during the study period by 6.90%. A breakdown of dry-weather flows during the study period follows.

CSD No. 2: Dry Weather Day Flows

Table 4.82 | Source: Marin LAFCO and CSD No. 2

Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit
2010	0.87 mg	88.9	199.5
2011	0.93 mg	96.1	215.1
2012	0.98 mg	100.1	223.4
2013	0.99 mg	101.0	224.8
2014	0.93 mg	94.2	209.1
Average	0.94 mg	96.0	214.4
Trend	6.90%	5.96%	4.81%

“mg” refers to million gallons

Wet-Weather Day Flows

Average wet-weather day wastewater flows over the study period have totaled 1.39 million gallons. This flow is recorded between November 1st and April 30th and most recently tallied 1.55 million gallons as of the study term. The overall average wet-weather day tally translates to 143 gallons for every resident and 4,664 gallons for every occupied housing unit during the affected 60 months. This measurement has decreased overall during the study period by (4.91%). A breakdown of wet-weather flows during the study period follows.

CSD No. 2: Wet Weather Day Flows				
Table 4.83 Source: Marin LAFCO and CSD No. 2				
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	
2010	1.63 mg	166.5		199.5
2011	1.30 mg	134.3		215.1
2012	1.48 mg	151.1		337.3
2013	1.02 mg	104.1		300.6
2014	1.55 mg	156.9		373.8
Average Trend	1.39 mg (4.91%)	142.6 (5.16%)		318.4 87.37%

“mg” refers to million gallons

Peak-Day Flows

Average peak-day wastewater flows over the study period have totaled 5.192 million gallons producing a peak-factor relative to average day totals of 5.6. The average peak-day flow – which represents the highest volume during a 24-hour period for the affected year and typically is recorded during storm events – most recently tallied 8.85 million gallons as of the study term. The overall average peak-weather day tally translates to 530 gallons for every resident and 1,182 gallons for every occupied housing unit during the affected 60 months. This measurement has increased overall during the study period by 64.80%. A full breakdown of peak-day flows follows.

CSD No. 2: Peak Day Flows				
Table 4.84 Source: Marin LAFCO and CSD No. 2				
Year	Peak Day System Total	Gallon Per Resident	Gallon Per Housing Unit	Peaking Factor
2010	5.37 mg	548.6	1,231.6	6.2
2011	4.41 mg	455.6	1,019.9	4.7
2012	5.53 mg	564.6	1,260.5	5.6
2013	1.80 mg	183.6	408.8	1.8
2014	8.85 mg	896.3	1,989.8	9.5
Average Trend	5.19 mg 64.80%	529.8 63.43%	1,182.1 61.56%	5.6 54.17%

“mg” refers to million gallons

Projected Measurements | Wastewater Collection System Flows

Going forward – and specifically for purposes of this study – it appears reasonable to assume CSD No. 2’s wastewater flows will follow trends over the study period. It is estimated, accordingly and using linear regression to control for variances in the most recent yearend totals, the system will ultimately experience an overall increase in annual wastewater flows of 21.0 million gallons over the succeeding 10-year period finishing in 2024; a difference of 4.64% or 0.46% annually.

The Commission independently estimates CSD No. 2’s annual wastewater demands will reserve course and increase over the succeeding 10-year period at an average rate of 0.46%. This will result in the average day demand equaling 1.3 million gallons in 2024.

This projection differs from CSD No. 2’s overall annual flows decrease incurred during the study period. It is also estimated – in using regression analysis - the system’s peak-day flows will ultimately increase over the succeeding 10-year period by 1.04 million gallons or 11.79% and resulting in a peaking factor of 7.6; the latter representing a rise in peak day flows relative to average day amounts by one-fourth. The following table summarizes these and related projection flows through 2024.

CSD No. 2: Projected Wastewater Flows						
Table 4.85 Source: Marin LAFCO and CSD No. 2						
Year	Average Annual Flows	Average-Day Flows	Dry-Weather Flows	Wet-Weather Flows	Peak-Day Flows	
2014	452.6 mg	1.25 mg	0.93 mg	1.55 mg	8.9 mg	
2015	445.6 mg	1.22 mg	0.95 mg	1.50 mg	7.1 mg	
2016	448.7 mg	1.23 mg	0.95 mg	1.51 mg	7.4 mg	
2017	451.8 mg	1.24 mg	0.95 mg	1.53 mg	7.7 mg	
2018	454.9 mg	1.25 mg	0.95 mg	1.55 mg	8.0 mg	
2019	458.0 mg	1.25 mg	0.95 mg	1.56 mg	8.3 mg	
2020	461.1 mg	1.26 mg	0.95 mg	1.58 mg	8.6 mg	
2021	464.2 mg	1.27 mg	0.95 mg	1.60 mg	8.9 mg	
2022	467.3 mg	1.28 mg	0.95 mg	1.61 mg	9.3 mg	
2023	470.5 mg	1.29 mg	0.95 mg	1.63 mg	9.6 mg	
2024	473.6 mg	1.30 mg	0.96 mg	1.65 mg	9.9 mg	
Average Trend	459.6 mg 4.64%	1.26 mg 4.64%	0.95 mg 2.75%	1.57 mg 6.33%	8.5 mg 11.79%	

6.3 Wastewater Capacity

Constraints | Contractual Provisions

As referenced, CSD No. 2 contracts with CMSA to provide treatment and disposal services for all collected wastewater services generated within the District. This contract was established in 1979 with CMSA’s treatment facility going online in 1984. The current contract does not establish any limitations or related constraints on total volume of wastewater conveyed to CMSA by CSD No. 2 or any of the other members.

CSD No. 2 is under no contractual constraints with respect to the volume of wastewater the District conveys to CMSA for treatment and disposal.

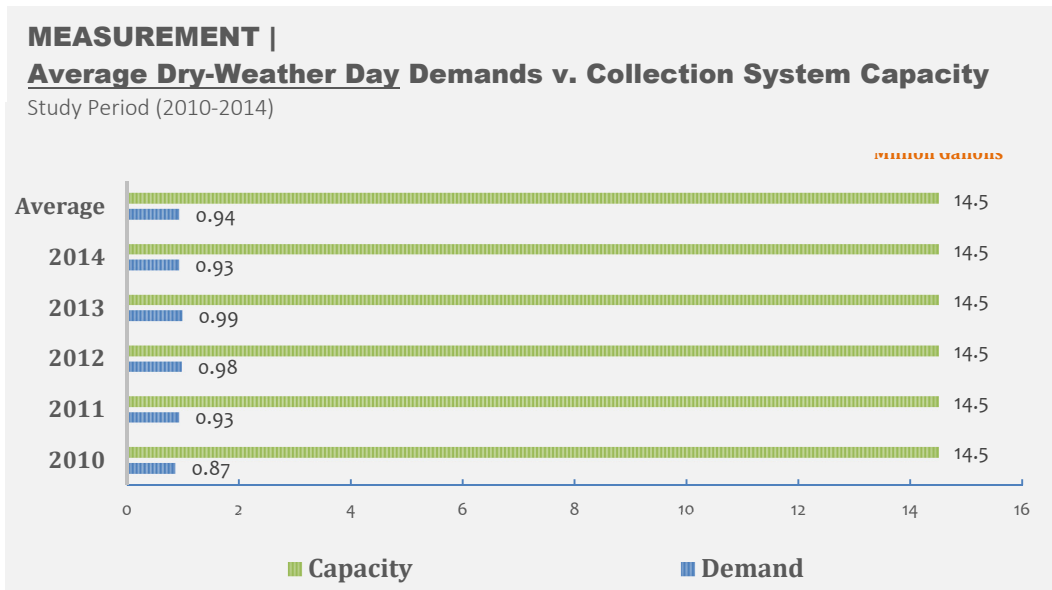
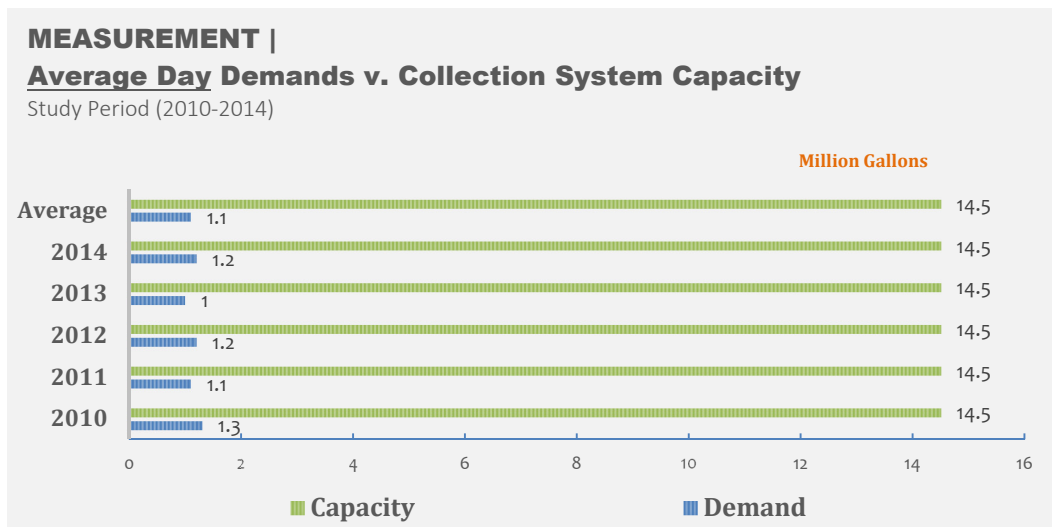
Constraints | Infrastructure and Facilities

Capacity within CSD No. 2 is premised on an approximate 49-mile collection system divided between 44 and 5 miles of gravity and force lines, respectively. The percentage of force mains to gravity flow pipelines for the most recent study period year was at 12%, and increased by 33.3% from the start of the period. CSD No. 2 has 14 lift stations and 5 force mains. The majority of the gravity lines are less than eight inches in size and supported by 19 strategically placed public pump stations that ultimately convey flows north to the Paradise Force Main, which is 22 inches in size and continues through to the 54-inch Ross Valley Interceptor for subsequent treatment and disposal services. This central force main is directly supported by its own pump station (Paradise) that is powered by five pumps with design capacities ranging from 1,500 (two pumps) to 4,250 (three pumps) gallons per minute. The operational capacity within the central force main is set at 14.5 million gallons per day and is estimated on the peak capacity of the Paradise Pump Station. For purposes of this review, this reported amount – 14.5 million gallons – is deemed the maximum daily capacity of the collection system.

CSD No. 2’s collection system’s daily capacity to convey flows to CMSA is estimated at 14.5 million gallons.

6.4 Demand to Capacity Relationships

Study period flows averages show CSD No. 2 has sufficient available capacities within its collection system to accommodate current and projected demands over the succeeding 10-year period. Average annual demands over the study period equal 7.6% of the collection system capacity. Average dry-weather demands during the same period tally 6.5% of the collection system capacity. Average peak-day demands represent the biggest tax on the collection system and account over the study period to equal 35.8% of the collection system capacity. None of the ratios are expected to significantly and adversely change over the succeeding 10-year period with the quasi exception of peak-day demands, which are projected to reach 58.6% capacity by 2024.



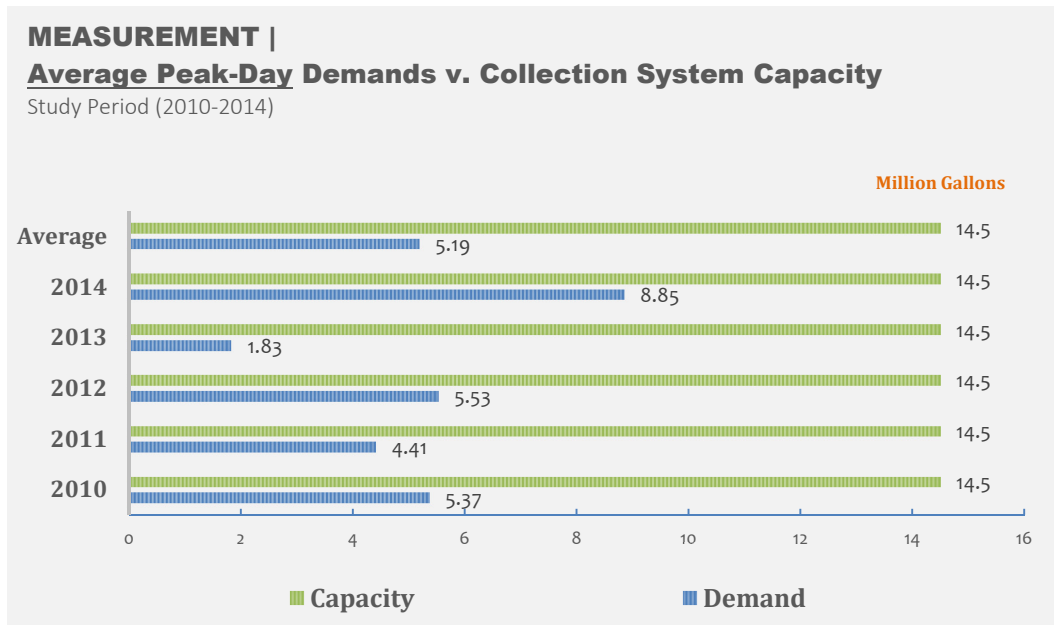


Figure 4.20

6.4 Performance

Measurement | Sanitary Sewer Overflows

The State Water Resources Control Board (SWRCB) requires all public agencies that own or operate sanitary collection systems that are one mile or more in length and convey to a public owned treatment facility comply with the reporting requirements codified in Order No. 2006-0003. This order mandates all subject agencies to develop and implement a system-specific sewer system management plan that includes a spill response plan as well as requiring immediately reporting to the SWRCB of all sanitary sewer overflows, or SSOs. The ultimate purpose of the SSO reporting process is to provide a uniform means to evaluate system reliability, source control, and operation and maintenance of wastewater systems in California. SSOs are defined as any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system, and include any of the following occurrences:

- a) Overflows or releases of untreated or partially treated wastewater that reaches waters of the United States;

- b) Overflows or releases of untreated or partially treated wastewater that do not reach water of the United States; and
- c) Wastewater backups into buildings and on private property caused by blockages or flow conditions within the publicly owned portion of a sanitary sewer system.

CSD No. 2 experience relatively few SSOs during the study period with the actual total tallying eight with an associated spill volume of 222 gallons. The majority of the SSOs during the study period were classified by the SWRCB as a Category 3, a spill of less than 1,000 gallons to not reach the surface water. CSD No. 2 experienced two SSOs classified as a Category 1 in which wastewater reached the surface water with the potential of threatening public safety and environmental health. The average response time for SSOs during the study period was less than 30 minutes and as fast as seven-minutes, providing adequate time for appropriate response actions, based on the District’s policies. A review of each accompanying report incident suggests the main factors resulting in discharges were from roots and debris, with 6.7% of SSOs caused by fats, oil and grease (FOG) and 13.3% due to structural issues. There were no repeat SSO occurrences.

CSD No. 2 experienced 8 total SSOs during the five-year study period, and involved the unauthorized overflow of 222 gallons.

CSD No. 2: Sanitary Sewer Overflows								
Table 4.86 Source: SWRQB								
Year	Category 1		Category 2		Category 3		Total	
	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons	Overflows	Gallons
FY 2009-10	0	0	0	0	5	170	5	170
FY 2010-11	0	0	0	0	1	15	1	15
FY 2011-12	0	0	0	0	1	5	1	5
FY 2012-13	2	22	0	0	0	0	2	22
FY 2013-14	0	0	0	0	0	0	0	0
	2	22	0	0	7	190	8	222

Measurement | System Maintenance

System maintenance for purposes of this study includes both corrective and preventative maintenance. Corrective maintenance, is performed when signals indicate a fault, so an asset can be restored to its operational condition. Preventative maintenance, conversely,

is initiated according to a predetermined schedule rather than in response to failure. A summary of both measurements follow.

Corrective Maintenance

CSD No. 2’s corrective maintenance is noted in the number of district service calls received to resolve, correct or assist a particular situation. During the entire 60-month study period this number was 9. The District reported no service calls for the last term (2014). According to CSD No. 2, all of the 9 calls reported were placed to notify the District of a public SSO.

CSD No. 2: Number of District Service Calls					
Table 4.87 Source: Marin LAFCO					
Factor	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014
General	0	0	0	0	0
Public SSO	5	1	1	2	0
Private SSO	0	0	0	0	0
Odor Complaints	0	0	0	0	0
Noise Complaints	0	0	0	0	0
Pump Station Alarms	0	0	0	0	0
Non-District Incidents	0	0	0	0	0
	5	1	1	2	0

Preventive Maintenance

CSD No. 2’s preventative maintenance was reported in its planned cleaning activities during the 60-month study period, which averaged 91% of all planned work orders completed. CSD No. 2 reports inspections are overseen by outside contractors and follow the protocols specified by the National Association of Sewer Service Companies Pipeline Assessment & Certification Program. The District attempts to clean the entire 44-mile gravity sewer system every 18-24 months, with specific portions of the system cleaned between 3 to 6 month intervals. CSD No. 2 reports all pump stations are checked daily and emergency or routine repairs are performed by staff or a contractor. No pump stations failed during the 60-month study period.

CSD No. 2 uses a database of recurrent grease buildups in which a three-month priority maintenance schedule is implemented for flushing or rodding the sewer lines. CSD No. 2 utilizes closed-circuit televising (CCTV) to verify causes of grease problems as part of its rehabilitation plan, and modifications are made once information on the causes are received to make repairs and minimize grease-related SSOs. CSD No. 2 provides public outreach in the form of flyers or newsletters to inform its service customers to keep FOGs out of the sewer system. Overall, the agency experienced a total of 30 blocked sewer pipes every 100 miles during the study period in which none were repeats. CSD No. 2 is currently working on developing a rehabilitation and replacement plan to identify and prioritize rehabilitation efforts to address system deficiencies, which would include TV inspections, conditional ranking of sewer lines, and rehabilitation scheduling that focuses on at risk or frequently blocked pipes. The level of infrastructure reinvestment the District achieved during the entire study period came in at 100% byway completing all of the 24,073 feet of the planned line replacement.

PLANNED <u>CLEANING</u> ACTIVITIES COMPLETED		
Year	Planned Feet	Actual Feet
FY 2009-2010	141,801	130,918
FY 2010-2011	125,311	121,635
FY 2011-2012	136,825	132,176
FY 2012-2013	133,595	130,060
FY 2013-2014	128,194	129,758
TOTAL	665,726	664,547
Planned Work Orders Completed		96%

PLANNED <u>LINE REPLACEMENT</u> COMPLETED		
Year	Planned Feet	Actual Feet
FY 2009-2010	14,000	14,000
FY 2010-2011	4,220	4,220
FY 2011-2012	1,210	1,210
FY 2012-2013	4,643	4,643
FY 2013-2014	0	0
TOTAL	24,073	24,073
Planned Work Orders Completed		100%

Figure 4.21

6.6 User Charges and Fees

CSD No. 2 bills one fee to its customers in recovering the District’s wastewater service costs. The fee is in the form of an annual service charge and is billed to landowners and collected on the property tax roll and recovers both collection and contracted treatment and disposal expenses. All residential customers are billed \$500 for each unit.⁵⁶

Most single-family customers in CSD No. 2 currently pay \$500 a year for wastewater services. An additional \$500 charge applies for every additional unit.

Non-residential users are charged a user fee based on an estimated flow usage. The user fee was last updated in 2015. There are no voter approved special assessments.⁵⁷

7.0 AGENCY FINANCES

7.1 Financial Statements

CSD No. 2 contracts with an outside accounting firm (Cropper Accountancy Corporation) to prepare an annual report for each fiscal year to review the District’s financial statements in accordance with established governmental accounting standards. This includes vetting CSD No. 2’s statements with respect to verifying overall assets, liabilities, and equity as stated in a balance sheet. These audited statements provide the Commission with provide quantitative measurements in assessing CSD No. 2’s short and long-term fiscal health.

CSD No. 2’s most recent financial statements for the study period were issued for 2013-2014 and shows the District experienced a moderate and downturn change over the prior fiscal year as its overall equity or fund balance decreased by (8.04)% from \$21.137 to \$19.438 million. Underlying this most recent change is the result of CSD No. 2 booking a legal

End of Study Term Financial Statements	
Assets	\$21.785 m
Liabilities	\$2.346 m
Equity	\$19.438 m

⁵⁶ This includes a \$2.00 processing fee.

⁵⁷ A dual connection fee is also collected in step with initiating new services. The connection fee presently totals \$7,966 for each residential connection and divided between 26% (\$2,103) going to cover the buy-in costs to the collection system and 74% (\$5,863) to cover the buy-in costs to the treatment/disposal facilities operated by CMSA. The connection fee for non-residential users may also include additional charges tallying up to \$1,224 per connection.

settlement with a private property owner over a sewer spill. A summary of year-end totals and trends therein over the study period less 2009-2010 follows.

Agency Assets

CSD No. 2’s audited assets at the end of 2013-2014 totaled \$21.785 million; an amount more than 4% higher than the average sum generated over the course of the study period’s prior four years (2009-2010 was not reviewed). Assets classified as current with the expectation they could be liquidated within a year represented nearly one-fourth of the total amount with the majority tied to cash and investments, and have increased by 26.41% over the corresponding 48 months. Assets classified as non-current represented the remaining three-fourths with the largest portion associated with utility infrastructure and have decreased by (1.21%).

CSD No. 2 Assets Study Period							
Table 4.88 Source: CSD No. 2							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	n/a	4.207	4.526	5.109	5.317	26.41%	4.790
Non-Current	n/a	16.669	16.141	16.292	16.467	(1.21%)	16.392
	n/a	20.876	20.668	21.401	21.785	4.35%	21.183

amounts in millions

Agency Liabilities

CSD No. 2’s audited liabilities at the end of 2013-2014 totaled \$2.346 million; an amount that represents a collective increase of more than four-fold – or 482.98% – over the study period’s 48 month period. Current liabilities representing obligations owed in the near-term account for the entire amount and generally tied as of the study term to a legal settlement payment with the remainder involving accounts payable. CSD No. 2 booked no long-term liabilities throughout the 48 month period.

CSD No. 2 Liabilities Study Period							
Table 4.89 Source: CSD No. 2							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	n/a	0.402	0.471	0.264	2.346	482.98%	0.871
Non-Current	n/a	0.0	0.0	0.0	0.0	0.0	0.0
		0.402	0.471	0.264	2.346	482.98%	0.871

amounts in millions

Agency Equity | Net Assets

CSD No. 2's audited equity / net assets at the end of 2013-2014 totaled \$19.438 million and represent the difference between the District's total assets and total liabilities. This referenced amount has decreased by (5.06%) over the 48 month period and primarily attributed to margin losses and highlighted therein in the most recent term year. The ending equity amount includes \$3.235 million in unrestricted funds and translates to a per capita reserve ratio of \$328 based on an estimated resident population of 9,874.

CSD No. 2's net assets have decreased by (5.06%) over the study period. The unrestricted fund balance as of the study term total of \$3.235 million equates to a per capita reserve ratio of \$328.

CSD No. 2 Equity | Study Period

Table 4.90 | Source: CSD No. 2

Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Unrestricted	n/a	3.843	4.093	4.883	3.235	(15.82%)	4.013
Restricted (Capital)	n/a	16.630	16.103	16.254	16.202	(2.57%)	16.297
Total:	n/a	20.473	20.196	21.137	19.438	(5.06%)	20.311

7.2 Measurements | Liquidity, Capital, Margin, and Structure

A review of the audited financial statement issuances by CSD No. 2 covering four of the five years comprising the study period and specifically fiscal years 2010-11 through 2013-2014 shows the District finished each year in relatively good health with respect to liquidity and capital. This includes CSD No. 2 finishing the study period with an estimated current ratio of over 2 to 1 and the net effect of having more than double the amount of available cash resources to cover near-term debt. Similarly CSD No. 2 finished the study period with over 17 months – or 524 days – of cash on hand to cover daily operating expenses. CSD No. 2 also finished the study term with high and stable levels of available capital and did not incur any long-term debt over the 48-month period. Conversely margin measurements show CSD No. 2 have generally fallen short with respect to achieving profit. Total margin – i.e., all revenues and expenses – experienced an average loss of (2.34%) over the study period while operating margin – i.e., only operational revenues and expenses – averaged a larger loss of (65.36%). Last, and with respect to structure, CSD No. 2's earned income ratio averaged a relatively low 54.80%,

and as such shows almost half of the District’s annual revenue is tied to things other than direct service fees. A summary of year-end liquidity, capital, margin, and structure ratios are show in the following table.

CSD No. 2: Financial Measurements Study Period						
Table 4.91 Source: CSD No. 2 Financials and Marin LAFCO						
Fiscal Years	Current Ratio	Days' Cash	Debt Ratio	Total Margin	Operating Margin	Earned Income Ratio
2009-2010	n/a	n/a	n/a	n/a	n/a	n/a
2010-2011	10.45 to 1	422.96	0.0%	10.20%	(58.58%)	56.45%
2011-2012	9.60 to 1	378.05	0.0%	(5.20%)	(85.96%)	56.23%
2012-2013	19.35 to 1	550.50	0.0%	16.29%	(51.97%)	52.73%
2013-2014	2.27 to 1	523.80	0.0%	(30.65%)	(64.93%)	53.81%
Average	10.41 to 1	468.83	0.0%	(2.34%)	(65.36%)	54.80%
Trend	(78.32%)	23.84%	0.0%	(400.35%)	10.83%	(4.67%)

Liquidity
Capital
Margin
Structure

Notes

Current Ratio (liquidity) relates to the ability of the agency to pay short-term obligations (current liabilities) relative to the amount of available cash and cash equivalents (current assets). Higher is better.

Days' Cash (liquidity) measures the number of days' worth of average operating expenses the agency can meet with cash on hand. Higher is better.

Debt Ratio (capital) measures the portion of agency's total assets that are directly tied to debt financing. Lower is better.

Total Margin (profit) represents the year-end profit level of the agency and includes all revenues and expenses. Higher is better.

Operating Margin (profit) represents the year-end profit level of the agency specific to its normal and reoccurring revenues and expenses tied to service provision. Higher is better.

Earned Income (structure) measures the portion of annual revenues that are directly tied from user fees for services. Higher is better for enterprise agencies.

7.3 Pension Obligations

CSD No. 2 through the Town of Corte Madera provides a defined benefit plan to its employees through an investment risk-pool contract with the California Public Employees Retirement Systems (CalPERS). This pension contract provides employees with specified retirement benefits and includes disability benefits, annual cost-of-living adjustments, and death benefits to members and their beneficiaries. Actual pension benefits are based on the date of hire. Employees hired before January 1, 2013 are termed “Category One” while employees hired afterwards are termed “Category Two.” Additional details of the pension program based on actuarial valuations issued by CalPERS follows.



Participants | Pension Formulas

As of the study period’s term (2014) there are a total of 149 participants within Corte Madera’s miscellaneous (non-public safety) pension program. This total amount – which represents an overall decrease of (1%) in participants since 2012 – is further divided between enrollee type (i.e., active, separated, transferred, retired) and marked by a worker-to-retiree ratio of 0.4 to 1 as of the study term. Category One participants represent 99% – or 148 – of the total program enrollees and are eligible to receive one of two types of retirement payments. Category One is based on a 2.5 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 50% of their highest one year of salary beginning at age 55 and continuing each year thereafter.

Most Corte Madera employees receive one of two types of defined pensions based on either a 2.5 @ 55 or 2.0 @ 55 formula. Employees hired after January 1, 2013 receive a 2.0 @ 62 pension formula.

Corte Madera’s Pension Enrollee Information Miscellaneous					
Table 4.92 Source: CalPERS and Marin LAFCO					
Type	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Active	n/a	n/a	33	30	31
Transferred	n/a	n/a	23	18	17
Separated	n/a	n/a	16	18	16
Retired	n/a	n/a	79	83	85
Total Enrollees	n/a	n/a	151	149	149
Worker-to-Retiree Ratio	n/a	n/a	0.42 to 1	0.36 to 1	0.36 to 1

Annual Contributions

Corte Madera’s total annual pension contributions as of the study period’s term tallied \$1.591 million. This amount represents an overall increase over the five-year study period of 1% and is significantly less than the corresponding inflation rate calculated for the San Francisco Bay Region.⁵⁸ The most recent annual pension contribution by Corte Madera for the study period marked 64% of the Town’s total annual payroll for the corresponding fiscal year (2013-2014).⁵⁹

Corte Madera’s pension contributions have increased by 1% over the five-year study period, and as of 2013-2014 account for 64% of total payroll.

⁵⁸ According to the United States Department of Labor the overall inflation rate in the San Francisco Bay Area region between 2010 and 2014 tallied 10.77%.

⁵⁹ Corte Madera’s covered annual payroll in 2013-2014 totaled \$2.488 million.

Corte Madera’s Pension Contributions				
Table 4.93 Source: CalPERS and Marin LAFCO				
2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
\$1,577,757	\$1,502,381	\$1,734,141	\$1,420,037	\$1,591,599
Five-Year Average				\$1,565,183
Five-Year Trend				0.88%

Funded Status

Corte Madera’s unfunded liability – tally of pension monies owed and not covered by assets – ended the study period at \$6.083 million and as such represented 188% of the Town’s unrestricted fund balance as of June 30, 2014. This former amount produces a funded ratio of 76% based on market value. It also reflects an overall improvement of 7% over the preceding four-year period.⁶⁰

Corte Madera’s unfunded pension liability has decreased over the last four years of the study period by (2%) and ended the term at \$6.083 million; the equivalent of a 76.44% funded ratio.

Corte Madera’s Pension Trends		
Table 4.94 Source: CalPERS and Marin LAFCO		
	Unfunded Liability	Funded Ratio
2009-2010	n/a	n/a
2010-2011	\$6,191,083	71.52%
2011-2012	\$7,233,572	67.72%
2012-2013	\$6,495,434	72.24%
2013-2014	\$6,083,058	76.44%
Four-Year Average	\$6,500,786	71.98%
Four-Year Trend	(1.74%)	6.88%

Amounts above are show in market form and reflects the immediate and short term values of the pension with respect to assets and liabilities (i.e., here and now).

⁶⁰ Pension information for 2009-2010 is not available.

7.4 Revenue to Expense Trends

A review of CSD No. 2's actual revenues and expenses during the study period as shown in the audited financial statements and specific to fiscal years 2010-11 to 2013-2014 shows a fluctuating budget structure in which significant surpluses and deficits were generated each year. Overall actual expenses outpaced actual revenues over the 48 month period by (2.2%) with the former averaging \$5.608 million compared to the latter averaging \$5.484 million. The referenced budget gap has also been widening with the growth rate of actual expenses increasing 10 to 1 over the growth rate of actual revenues with maintenance costs leading the overall rise.

On average CSD No. 2's annual revenue totals have fallen short of annual expense totals – including booked depreciation – by (2.2%) over the last four years of the study period. This gap is also increasing relative to the last 48 months on a 10 to 1 ratio. However, removing depreciation as a booked expense produces a positive revenue over expense average for CSD No. 2 over the 48-months at 25.0%

CSD No. 2's annual budget reflects six distinct categories within both its revenue and expense ledgers. With respect to revenue categories sewer service charges and property taxes collectively average nearly all CSD No. 2 income totals for the 48 month period at 54.8% and 42.5%, respectively. The remaining amount is generally tied to collection fees and interest earned on investments. Comparatively – and with respect to expenses – payment to CMSA for treatment and disposal services and CSD No. 2's own costs to maintain the collection system make up more than one-half of all expenditures with period averages at 28.6% and 25.9%, respectively. The remainder have been drawn from depreciation (accounting expense), administration, and pump station costs.

Top Revenue Categories:
1) Sewer Charges @ 54.8%
2) Property Taxes @ 42.5%

Top Expense Categories
1) CMSA Contract @ 28.6%
2) Collection System @ 25.9%

CSD No. 2 Actual Revenue Trends | Study Period

Table 4.95 | Source: CSD No. 2 Financials and Marin LAFCO

Category	2009	2010	2011	2012	2013	Trend	Average	% of
	2010	2011	2012	2013	2014			Average
Sewer Charges	n/a	2.983	2.998	3.044	2.983	0.01%	3.002	54.75%
Property Taxes	n/a	2.260	2.282	2.307	2.469	9.25%	2.329	42.48%
Connection Fees	n/a	0.002	8.412	0.361	0.042	>1000%	0.103	1.89%
Interest Earnings	n/a	0.014	0.009	0.021	0.009	(33.24%)	0.013	0.25%
Other	n/a	0.024	0.033	0.038	0.039	62.50%	0.033	0.63%
Totals	n/a	5.285	5.332	5.773	5.544	4.91%	5.484	100%

amounts in millions

CSD No. 2 Actual Expense Trends | Study Period

Table 4.96 | Source: CSD No. 2 Financials and Marin LAFCO

Category	2009	2010	2011	2012	2013	Trend	Average	% of
	2010	2011	2012	2013	2014			Average
CMSA	n/a	1.617	1.696	1.568	1.531	(5.29%)	1.603	28.60%
Collection System	n/a	1.293	1.924	1.106	1.473	13.90%	1.449	25.85%
Depreciation *	n/a	1.113	1.238	1.275	1.256	12.89%	1.221	21.77%
Administration	n/a	0.404	0.452	0.567	0.421	4.10%	0.461	8.23%
Pump Stations	n/a	0.314	0.296	0.314	0.279	(11.34%)	0.301	5.37%
Other	n/a	0.002	0.001	0.0	2.281	>1000%	0.571	10.18%
Totals	n/a	4.745	5.609	4.833	7.243	52.63%	5.608	100%
... Less Depreciation	n/a	3.632	4.371	3.558	5.987	64.84%	4.387	100%

amounts in millions

Net with Depreciation

Year Ending	n/a	\$0.539	(\$0.277)	\$0.940	(\$1.699)
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Net without Depreciation

Year Ending	n/a	\$1.652	\$0.961	\$2.215	(\$0.443)
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* Please note depreciation is included as an operating expense in the financial statements in step with generally accepted government accounting standards, and as such impacts – and often negatively – gross profit or total margin. Depreciation takes into account the wear and tear on physical infrastructure, such as sewer lines, pumps, and other capital equipment. Government accounting standards direct agencies to spread out the costs of replacing these assets over the long term, which generates the term depreciation or amortization. The “charge” for using these assets during the period is a fraction of the original cost of the assets based on the expected life of the assets and presumably is rolled into the agencies’ fund balance at the end of the fiscal year and as part of the restricted reserve.

E. MURRAY PARK SEWER MAINTENANCE DISTRICT

1.0 OVERVIEW

The Murray Park Sewer Maintenance District (MPSMD) was formed in 1949 and encompasses an approximate 0.1 square mile jurisdictional boundary within east-central Marin County. Governance is dependently provided by the County of Marin and through its five-member Board of Supervisors. MPSMD is entirely located within an unincorporated area and part of the Kentfield community. MPSMD is also part on the Ross Valley Watershed.

Murray Lane | Murray Park



Courtesy / Google Maps

MPSMD is organized as a limited-purpose agency with municipal operations statutorily limited to wastewater services; no other service powers are permissible under the principal act. Beginning in 1975, MPSMD has contracted collection and routine maintenance of the District’s

Murray Park Sewer Maintenance District

Formation Date:	1949
Principal Act:	Health and Safety Sections 4860-4927
Service Categories:	Wastewater
Service Population	191
Governance Type	Dependent

approximate 5,500 foot collection system to outside agencies; first with the City of Larkspur and more recently County Sanitary District No. 1 (“Ross Valley Sanitary”). MPSMD retains responsibility to fund capital improvements as well as setting service charges and authorizing new connections. MPSMD’s adopted operating budget at the term of the study period was \$0.096 million; all of which was dedicated to services and supplies. The unrestricted fund balance was \$0.018 million with an associated days-cash ratio totaling 129; i.e., the amount of cash on hand the District can cover operating expenses based on 2013-2014 actuals.

The Commission independently estimates the resident service population within MPSMD totals 191 as of the term of this study period (2014). It is also projected MPSMD's population growth rate over the five-year study period totaled 9.0% or 1.8% annually with the underlying change primarily attributed to the addition of one new occupied housing unit coupled with an intensification of household sizes. The substantive result of these estimates is the projected addition of 16 residents in MPSMD between 2010 and 2014. Overall it is also estimated 68% of the jurisdictional boundary has already been developed and or improved – though not necessarily at the highest density. This means 32% of the jurisdictional boundary remains entirely undeveloped, and this includes 15 existing unbuilt and privately owned parcels that are zoned for some type of urban use under the County General Plan.

2.0 BACKGROUND

2.1 Community Development

Records show MPSMD's current development began in the late 1910s with the construction of several small residences along Fern Road and to the immediate west of the City of Larkspur. This initial development – which incrementally tallied up to one dozen lots by 1940 – transitioned towards more planned growth by the mid-1940s as the County of Marin began approving a series of one-quarter lot subdivisions along Murray Lane and Briar Road. This latter development led to the construction of nearly 30 residential lots by the end of the 1940s with an estimated population of 75.



Figure 4.22

2.2 Formation Proceedings

MPSMD’s formation was approved by the County of Marin’s Board of Supervisors in 1949 and as a means for landowners to self-tax themselves for purposes of constructing and operating a community wastewater collection system. Records show an initial collection system for MPSMD was constructed by early 1951 with the County Public Works Department overseeing all operational and maintenance activities therein.

2.3 Post Formation Activities

A summary of notable activities undertaken by MPSMD and/or affecting the District’s service area following formation in 1949 is provided below.

- MPSMD entered into a service agreement with the City of Larkspur in March 1975. This service agreement transferred operational management of MPSMD’s collection system and wastewater flows therein to Larkspur and in exchange for an annual service fee based on the number of dwelling units within the District. The agreement was subsequently amended in 1978 and 1980.
- RVSD became successor to the City of Larkspur’s agreement to provide operational management of MPSMD’s collection system and wastewater flows therein in August 1993. This transfer was the result of RVSD annexing and assuming management of Larkspur’s collection system earlier that same year.

3.0 BOUNDARIES

3.1 Jurisdictional Boundary

MPSMD’s jurisdictional boundary spans approximately 0.1 square miles in size and covers 59 total acres (parcels and right-of-ways). The jurisdictional boundary is entirely in the land use authority of the County of Marin and part of the unincorporated community of Kentfield.

MPSMD’s jurisdictional boundary spans 0.1 square miles and is entirely overlapped by the County of Marin’s land use authority.

Total assessed value (land and structure) within MPSMD is calculated at \$79.7 million and translates to a per acre value ratio of \$1.350 million. This former amount – \$79.7 million – further represents a per capita value of \$0.417 million based on the estimated service population of 191. MPSMD’s set allocation of property tax proceeds – i.e., its share of the 1% collected on all assessor parcels by-way of Proposition 13 – is 0.615%.

Assessed land values in MPSMWD totals \$79.7 million, and based on receiving 0.6% of the 1% annual property tax the District’s allocated share of the total less deductions and other exchanges is \$0.004 million.

MPSMD Boundary Breakdown: Land Use Authorities					
Table 4.97 Source: Marin LAFCO					
Agency	Assessor Parcel Acres	Assessor Parcel Acres	Assessor % of Total	Total Assessor Parcels	Total Residential Units
County of Marin	35		100%	107	92
	34		100%	107	92

As provided in the preceding table there are overall 107 assessor parcels currently within MPSMD and collectively add up to 35 acres as of June 2016.⁶¹ Close to three-fourths – or 71% – of the current assessor parcel acreage have already been developed/improved to date, albeit not necessarily at the highest zoning density.⁶² This existing development is highlighted by the standing construction of 92 residential units and divided between single-family and multi-family on a 96% to 4% split. The remainder – or 29% – of the current assessor parcel acreage within MPSMD is undeveloped/unimproved. This includes 15 un-built and privately owned assessor parcels designated for an urban-type use.⁶³ Additional analysis would be needed to more fully assess actual development potential among these unbuilt assessor parcels.

Almost three-fourths of MPSMD’s jurisdictional boundary has already been developed/improved – though not necessarily at the highest allowable density. This means approximately one-fourth – or 10 acres – of the assessor acreage in the boundary remains entirely undeveloped, and this includes 15 un-built and privately owned parcels zoned for some type of urban use.

⁶¹ The remaining 24 jurisdictional acreage within MPSMD are tied to right-of-ways and related public dedications.

⁶² This portion of developed acreage includes parcels dedicated as common areas.

⁶³ All 15 unbuilt and privately owned assessor parcels are zoned for residential uses. Seven of the subject lots are at least 0.15 acres in size with one of these lots being 5.0 acres.

MPSMD Boundary Breakdown: Land Use Features

Table 4.98 | Source: Marin LAFCO

% Parcel Acres Already Developed	Residential Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
71.2	92	97.8	15	10.2

3.2 Sphere of Influence

The Commission has not established a sphere of influence designation for MPSMD. It appears – though not substantiated in any identified document – this is the result of an earlier determination that MPSMD falls outside the Commission’s authority. Commission staff has revisited this matter as part of this study and concludes MPSMD and more specifically sewer maintenance districts formed under Public Health and Safety Code Section 4860-4927 are subject to LAFCO, and as such a sphere designation is ultimately needed for the District.⁶⁴

MPSMD does not have an established sphere of influence from the Commission at this time.

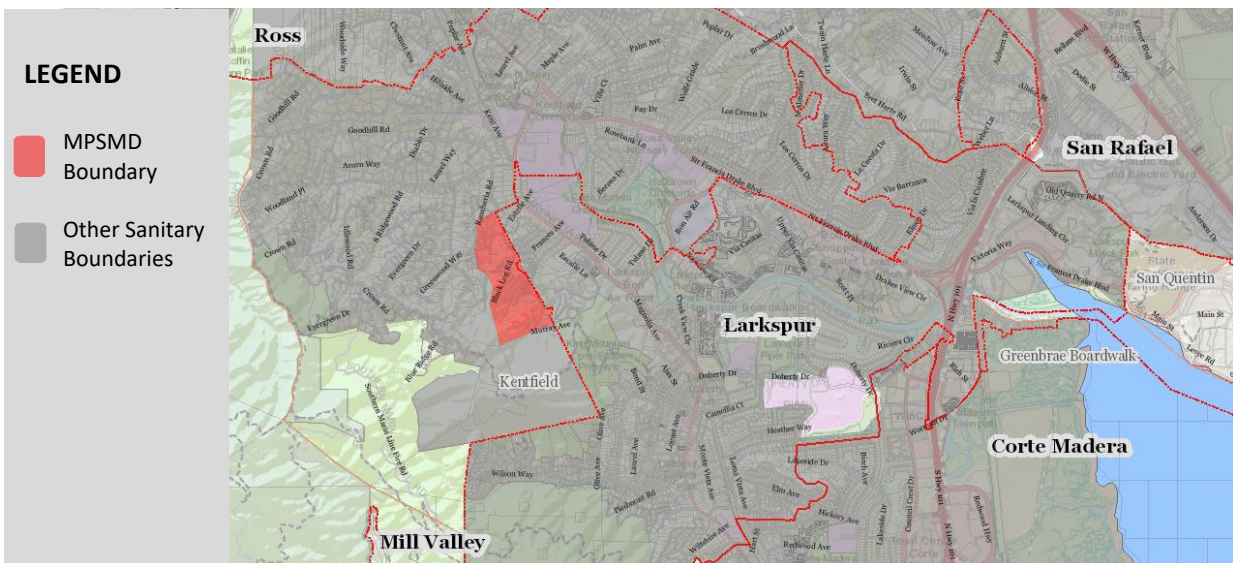


Figure 4.23

⁶⁴ Reference to State of California Attorney General Opinion 64-130.

4.0 DEMOGRAPHICS

4.1 Population and Housing

MPSMD’s resident population within its jurisdictional boundary is independently estimated by the Commission at 191 as of the term of the study. This projection – which is anchored on a calculation of housing units, occupancy rates, and household sizes within the jurisdictional boundary and detailed in the accompanying footnote – represents 0.07% of the estimated countywide population.⁶⁵ It is also projected MPSMD has experienced an overall growth rate of 9.03% over the preceding five-year period or 1.81% annually; all of which generated an estimated net add of 16 persons.

LAFCO estimates there are 191 total residents within MPSMD that are explicitly served by the District’s wastewater collection as of the term of the study. It is further estimated MPSMD has experienced an overall population increase of 16 over the preceding five-year period, resulting in an annual growth rate of 1.8%. Underlying this increase is a projected rise in persons per household – i.e., an intensity measurement – of 7.1%.

This projected increase has been generated by the addition of an estimated one new and occupied housing unit within the jurisdictional boundary paired – and most notably – with an intensification of household sizes over the span of the five-year period starting at 2.023 in 2010 and ending at 2.170 in 2014; the latter being a net intensity increase of 7.09%. Overall projected growth within MPSMD lies significantly above the concurrent annual change estimated for the entire county – 0.60%.⁶⁶

MPSMD Resident Population: Past and Current Estimates					
Table 4.99 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
c) Total Housing Units	90	91	91	91	92
b) Local Occupancy Rate	95.58	94.44	95.48	95.48	96.10
i) Occupied Housing Units	87	86	87	87	88
j) Projected Household Size	2.023	2.058	2.095	2.132	2.170
Estimated Population	175	176	182	186	191

Baseline
Year

⁶⁵ Marin LAFCO’s resident service population for MPSMD is independently calculated and premised on occupied housing driving resident estimates based on data collected within the single census tract in the District. Four distinct calculations help produce the population estimates within each of the five subject years in the study period and involve identifying: a) total housing units; b) local occupancy rates; c) occupied housing units; and d) household sizes. Key calculations specific to MPSMD – and again drawing from its associated census tract – over the study period include a weighted annual housing unit change of 0.268% and a weighted annual household size change of 1.74%. The annual weighted population change is 1.807%.

⁶⁶ Marin County’s estimated population as of January 1, 2014 totaled 260,294 based on information published by the State of California’s Department of Finance and marks a 3.12% increase over the preceding five-year period.

With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate with MPSMD will generally match the preceding five-year period with an overall yearly population change of 1.81%. The substantive result of this assumption would be an overall increase in MPSMD’s resident population of 37 and produce a total of 228 by 2024. This growth rate, similarly, would generate the addition of 21 new and occupied housing units within MPSMD through 2024 assuming the preceding five-year average ratio of 2.094 persons for every one occupied housing unit holds. These collective projections going forward are summarized below.

MPSMPD Resident Population: Future Estimates						
Table 4.100 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	191	198	205	212	220	228
Occupied Housing Units	88	94	98	101	105	109
- residents to housing units	2.170	2.094	2.094	2.094	2.094	2.094

Baseline
Year

4.2 Residency Type

The Commission projects MPSMD’s residential unit total of 92 as of the study term is divided between single family and multi-family use at 63.30% (58) and 36.70% (34), respectively. These totals produce an estimated ratio of 1.72 with respect to single-family to multi-family units within the jurisdictional boundary. The overall stock of housing type has experienced an inverse change with single-family unit totals decreasing by (4.13%) while multi-family unit totals increasing by 8.02% over the corresponding 60 month period. The substantive change in the residency type ratio (i.e., single-family to multi-family units) has been (11.24%) from 1.94 to 1 in 2010.

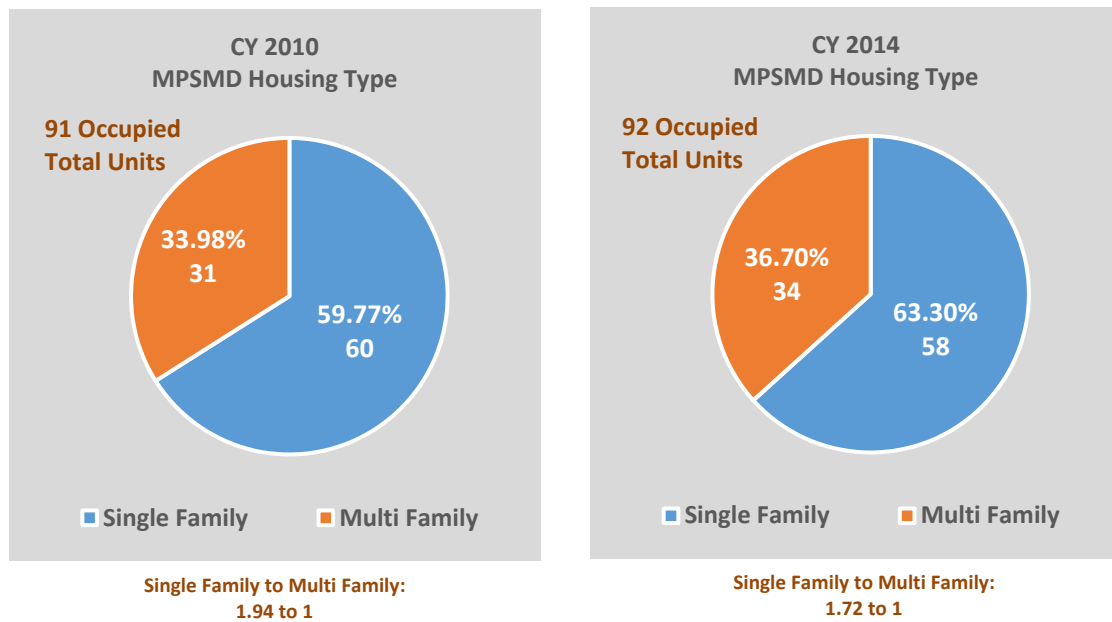


Figure 4.24

4.3 Social and Economic Indicators

A review of recent demographic information covering the MPSMD jurisdictional boundary for the study period shows fulltime residents are relatively in better economic positions compared to countywide averages. This information is drawn from census data collected between 2010 and 2014 and shows area residents' average median household income is close to one-tenth above the countywide amount of \$91,529 at \$100,441. Area resident averages also fall measurably below countywide amounts with respect to unemployment and poverty rates, albeit the former has almost doubled compared to the preceding five-year average data collection. Notable social indicators show MPSMD residents have significantly higher levels of formal education with 68.7% possessing a bachelor's degree and is more than double the countywide rate. MPSMD residents are also relative newcomers to the community with an average of only 8.20% of occupied households arriving before Proposition 13 in 1979. This amount contrasts with the countywide average of 12.80%.

MPSMD's fulltime residents are generally more affluent than most of the county populace and highlighted by a median household income average over the study period of \$100,441. Separately and relative to countywide conditions there has been a sizeable amount of turnover in the community in terms of household tenure with only 8% having been in place since the enactment of Proposition 13 in 1979; a ratio that is 56% lower than the countywide average.

MPSMD: Resident Trends in Social and Economic Indicators				
Table 4.101 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$90,605	\$100,441	10.86%	\$91,529
Median Age	46.5	48.4	4.09%	45.10
Prime Working Age (25-64)	60.05%	52.90%	(11.91%)	55.28%
Unemployment Rate (Labor Force)	2.70%	5.20%	92.59%	4.70%
Persons Living Below Poverty Rate	4.00%	3.00%	(25.00%)	8.80%
Mean Travel to Work	26.80 min	29.10 min	8.58%	29.4 min
Working at Home (Labor Force)	11.0%	11.60%	0.60%	2.50%
Adults with Bachelor Degrees or Higher	60.70%	68.70%	8.00%	30.80%
Non English Speaking	14.70%	18.50%	8.00%	23.50%
Householder Pre Proposition 13 (1979)	15.60%	8.20%	(11.91%)	12.80%

* Amounts represent the result of a weighted calculation by population performed by Marin LAFCO taking into proportional account of the single census tract (1200) underlying MPSMD.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

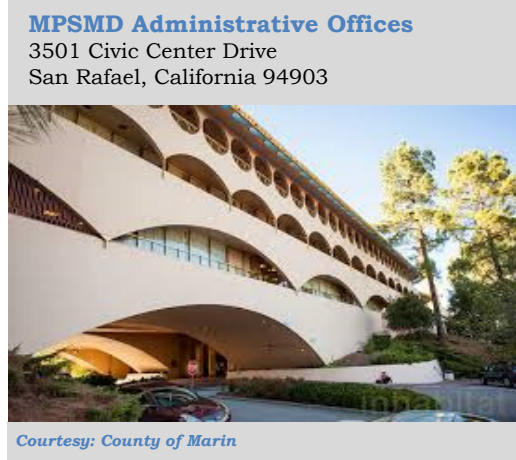
MPSMD’s governance authority is established under the Sewer Maintenance District Act of 1933 and codified under Public Health and Safety Code Sections 4860-4927. This principal act empowers MPSMD to provide only one wastewater services, and specifically as it relates to handling, gathering, and disposing of sewage. Governance is dependently provided by the County of Marin and through its five-member Board of Supervisors that are elected by supervisorial district to staggered four-year terms. MPSMD holds meetings as needed and as part of regular meetings held by Supervisors. A current listing of Board of Supervisors along with respective backgrounds follows.



Current MPSMD Board Roster			
Table 4.102 Source: County of Marin			
Member	Position	Background	Years on Board
Judy Arnold	President	Local/State Government	11
Damon Connolly	Member	Attorney	2
Katie Rice	Member	Local Government	6
Dennis J. Rodoni	Member	Contractor	1
Kathrin Sears	Member	Attorney	6
Average Years of Board Experience			5.2

5.2 Administration

The County Board of Supervisors assigns the Public Works Director to serve as the MPSMD District Engineer as provided under Public Health and Safety Code Section 4887. Key duties of Public Works performed on behalf of MPSMD includes proposing an annual budget, recommending changes to the fee schedule, and overseeing capital improvements. Day-to-day operation of MPSMD and its collection system is managed contractually by RVSD and highlighted by performing routine maintenance. Legal services are provided by County Counsel.



MPSMD Administration	
Table 4.103 Source: County of Marin	
District Engineer.....	Raul M. Rojas
Legal Counsel.....	Brian E. Washington

6.0 WASTEWATER SERVICES

6.1 System Structure

MPSMD provides wastewater collection services through its own infrastructure headlined by an approximate 5,550 foot collection system with lines ranging in size from four to eight inches. The current infrastructure dates back to the early 1950s and is entirely gravity fed; there are no public pump stations. Through its contract with RVSD all wastewater generated from the collection system is conveyed for treatment to the Central Marin Sanitation Agency (CMSA). As of the study term there are 89 service connections with all but one serving residential uses. There have been no changes in the number of service connections in MPSMD over the preceding 6-month review period.

MPSMD does not independently track wastewater flows generated within its jurisdictional boundary. Effluent generated within MPSMD is incorporated directly into RVSD's system totals with no available means to quantify at this time.

All wastewater flows generated within MPSMD are collected and conveyed by RVSD. No independent data specific to MPSMD is available.

6.2 User Charges and Fees

MPSMD bills one fee to its customers in recovering the District's wastewater service costs. This fee is in the form of an annual service charge and is billed to landowners and collected on the property tax roll and recovers both collection and contracted costs with RVSD for maintenance that includes treatment through CMSA. Residential customers currently pay \$472 each year for every dwelling unit. Non-residential customers pay a rate based on estimated flows. There are no voter-approved special assessments.

Most single-family customers in MPSMD currently pay \$472 a year for wastewater services.

7.0 AGENCY FINANCES

7.1 Financial Statements

7.2 Pension Obligations

7.3 Revenue to Expense Trends

An abbreviated review of MPSMD's actual revenues and expenses during the study period and specific to fiscal years 2010-11 to 2013-2014 shows a fluctuating budget structure in which budgeted expenses range from a low of \$0.095 million to a high of \$0.159 million. Actual expenses consistency fell moderately to significantly below budgeted amounts during the 48-month period. Specific expense and revenue details are not available as of the draft report date. Additional analysis pending.

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F. SAN QUENTIN VILLAGE SEWER MAINTENANCE DISTRICT

1.0 OVERVIEW

The San Quentin Village Sewer Maintenance District (SQVSMD) was formed in 1962 and encompasses an approximate 0.01 square mile jurisdictional boundary within east-central Marin County. Governance is dependently provided by the County of Marin and through its five-member Board of Supervisors. SQVSMD is entirely located within the unincorporated area and serves a small residential community located immediately adjacent to the San Quentin State Prison. SQVSMD is also part on the Ross Valley Watershed.



SQVSMD is organized as a limited-purpose agency with municipal operations statutorily limited to wastewater services; no other service powers are permissible under the principal act.⁶⁷ SQVSMD contracts with the State of California to direct wastewater generated within the community into San Quentin's adjacent sewer collection system, which in turn pumps directly to the nearby Central Marin Sanitation Agency (CMSA) for treatment and disposal. As part of this arraignment CSMSA also provides routine maintenance on the SQVSMD collection system. SQVSMD retains responsibility to fund capital improvements as well as setting service charges and authorizing new connections within the community. SQVSMD's adopted operating budget at the term of the study period was \$0.068 million; all of which was dedicated to services and supplies. The unrestricted fund balance at the term of the study period was \$0.029 million with an associated days-cash ratio of 156 days, i.e., the amount of cash on hand the District can cover operating expenses based on 2013-2014 actuals.

⁶⁷ SQVSMD is one of two sewer maintenance districts in Marin County; the other serving the Murray Park community.

The Commission independently estimates the resident service population within SQVSMD totals 89 as of the term of this study period (2014). It is also projected SQVSMD’s population growth rate over the five-year study period totaled (8.8%) or (1.8%) annually. This projected growth

San Quentin Sewer Maintenance District	
Formation Date:	1962
Principal Act:	Health and Safety Sections 4860-4927
Service Categories:	Wastewater
Service Population	89
Governance Type	Dependent

decrease has been generated by a net-zero addition in occupied housing units coupled with a de-intensification of household sizes over the span of the five-year period. The substantive result of these estimates is the projected loss of 6 residents in SQVSMD between 2010 and 2014. Overall it is also estimated 100% of the jurisdictional boundary in terms of existing assessor parcels has already been developed and or improved – though not necessarily at the highest density.

2.0 BACKGROUND

2.1 Community Development

Records show SQVSMD’s current development began in the 1870s with the construction of a small number of permanent residences located along Main Street. The construction of these residences supplemented and ultimately replaced temporary housing that had been previously established and in step with accommodating workers at the adjacent San Quentin State Prison.⁶⁸ The referenced transition from temporary to permanent housing incrementally continued thereafter and led to the construction of two dozen plus residences in the now-termed “San Quentin Village” by the end of the 1940s with an estimated fulltime population of 55.

⁶⁸ The San Quentin State Prison was opened in 1854.



Figure 4.25

2.2 Formation Proceedings

SQVSM’s formation was approved by the County of Marin’s Board of Supervisors in 1962 and as a means for landowners to self-tax themselves for purposes of constructing and operating a community wastewater collection system. Records show an initial collection system for SQVSM was constructed by 1965 with the County Public Works Department overseeing all operational and maintenance activities therein.

2.3 Post Formation Activities

A summary of notable activities undertaken by SQVSM and/or affecting the District’s service area following formation in 1962 is provided below.

- SQVSM entered into a contract with the State of California in 1964 to direct wastewater flows directly into the adjacent State Prison’s collection system for subsequent treatment and disposal.

- SQVSMD entered into an agreement with CMSA in May 2012 to directly oversee the day-to-day management of the District’s collection system.

3.0 BOUNDARIES

3.1 Jurisdictional Boundary

SQVSMD’s jurisdictional boundary spans approximately 0.01 square miles in size and covers eight total acres (parcels and right-of-ways). The jurisdictional boundary is entirely within the land use authority of the County of Marin and comprises the unincorporated community of San Quentin Village.

SQVSMD’s jurisdictional boundary spans 0.01 square miles and is entirely overlapped by the County of Marin’s land use authority.

Total assessed value (land and structure) within SQVSMD is calculated at \$15.7 million and translates to a per acre value ratio of \$1.962 million. This former amount – \$15.7 million – further represents a per capita value of \$0.176 million based on the estimated service population

Assessed land values in SQVSMD totals \$15.7 million, and based on receiving 0.3% of the 1% annual property tax the District’s allocated share of the total less deductions and other exchanges is \$424.

of 89. SQVSMD’s set allocation of property tax proceeds – i.e., its share of the 1% collected on all assessor parcels under Proposition 13 – is 0.27%.

SQVSMD Boundary Breakdown: Land Use Authorities					
Table 4.104 Source: Marin LAFCO					
Agency	Assessor Parcel Acres	Assessor Parcel Acres	% of Total	Total Assessor Parcels	Total Residential Units
County of Marin	4		100%	41	45
	4		100%	41	45

As provided in the preceding table there are overall 41 assessor parcels currently within SQVSMD and collectively add up to 4.1 acres as of June 2016.⁶⁹ The entirety – 100% – of the current assessor parcel acreage has already been developed/improved to date, albeit not necessarily at the highest zoning density. This existing development is highlighted by the standing construction of 45 residential units and divided between single-family and multi-family on a 71% to 29% split.

SQVSMD’s jurisdictional boundary with respect to existing assessor parcels is 100% built-out, albeit not necessarily at the highest zoning density. This includes the standing construction of 45 living units.

SQVSMD Boundary Breakdown: Land Use Features				
Table 4.105 Source: Marin LAFCO				
% Parcel Acres Already Developed	Residential Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
100.0	45	71.1	0	0

3.2 Sphere of Influence

The Commission has not established a sphere of influence designation for SQVSMD. It appears – though not substantiated in any identified document – this is the result of an earlier determination that SQVSMD falls outside the Commission’s authority. Commission staff has revisited this matter as part of this study and concludes SQVMSD and more specifically sewer maintenance districts formed under Public Health and Safety Code Section 4860-4927 are subject to LAFCO, and as such a sphere designation is ultimately needed.⁷⁰

SQVSMD does not have an established sphere of influence from the Commission at this time.

⁶⁹ The remaining 4 jurisdictional acreage within SQVSMD are tied to right-of-ways and related public dedications.

⁷⁰ Reference to State of California Attorney General Opinion 64-130.

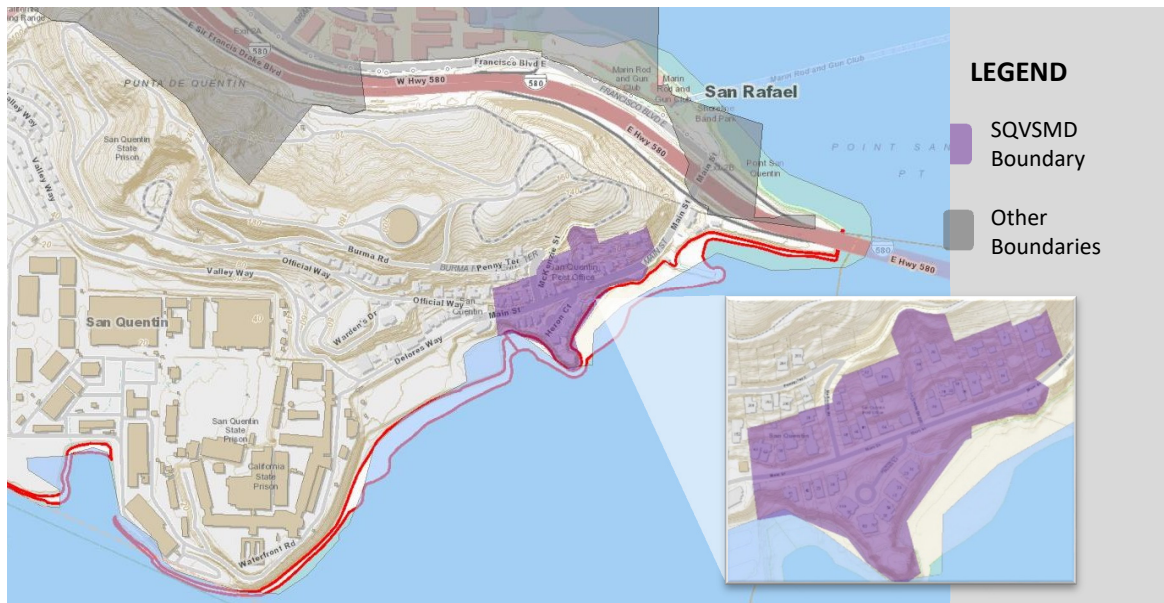


Figure 4.26

4.0 DEMOGRAPHICS

4.1 Population and Housing

SQVSMD’s resident population within its jurisdictional boundary is independently estimated by the Commission at 89 as of the term of the study. This projection – which is anchored on a calculation of housing units, occupancy rates, and household sizes within the jurisdictional boundary and detailed in the accompanying footnote – represents 0.03% of the estimated countywide population.⁷¹ It is also projected SQVSMD has experienced an

LAFCO estimates there are 89 total residents within SQVSMD that are explicitly served by the District’s wastewater collection as of the term of the study. It is further estimated SQVSMD has experienced an overall population decrease of six persons over the preceding five-year period, resulting in an annual growth rate of (1.8%).

overall growth rate of (8.84%) over the preceding five-year period or (1.77%) annually; all of which generated an estimated net loss of six persons. This projected decrease has been generated by a net-zero addition in occupied housing units coupled with a

⁷¹ Marin LAFCO’s resident service population for SQVSMD is independently calculated and premised on occupied housing driving resident estimates based on data collected within the single census tract in the District. Four distinct calculations help produce the population estimates within each of the five subject years in the study period and involve identifying: a) total housing units; b) local occupancy rates; c) occupied housing units; and c) household sizes. Key calculations specific to SQVSMD over the study period include a weighted annual housing unit change of (0.16%) and a weighted annual household size change of (2.32%). The annual weighted population change is (1.77%).

deintensification of household sizes over the span of the five-year period starting at 2.368 in 2010 and ending at 2.160 in 2014; the latter being a net intensity decrease of (8.78%). Overall projected growth within SQVSMD lies significantly below the concurrent annual change estimated for the entire county – 0.60.⁷²

SQVSMD Resident Population: Past and Current Estimates					
Table 4.106 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
d) Total Housing Units	45	45	45	45	45
b) Local Occupancy Rate	90.31	89.23	90.21	90.21	90.80
k) Occupied Housing Units	41	40	41	41	41
l) Projected Household Size	2.368	2.312	2.261	2.210	2.160
Estimated Population	97	94	92	90	89

With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate with SQVSMD will generally match the preceding five-year period with an overall yearly population change of (1.77%). The substantive result of this assumption would be an overall decrease in SQVSMD’s resident population of (14) and produce a total of 74 by 2024. This growth rate, similarly, would generate the loss of 33 occupied housing units within SQVSMD through 2024 assuming the preceding five-year average ratio of 2.260 persons for every one occupied housing unit holds.

SQVSMD Resident Population: Future Estimates						
Table 4.107 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	89	85	82	80	77	74
Occupied Housing Units	41	38	36	35	34	33
- residents to housing units	2.160	2.260	2.260	2.260	2.260	2.260

4.2 Residency Type

The Commission projects SQVSMD’s residential unit total (occupied and unoccupied) of 45 as of the study term is divided between single family and multi-family use at 63.20% (29) and 36.84% (17), respectively. These totals produce an estimated ratio of 1.72 with respect to single-family to multi-family units within the jurisdictional boundary. The overall stock of housing type in SQVSMD has aided this ratio with single-family unit

⁷² Marin County’s estimated population as of January 1, 2014 totaled 260,294 based on information published by the State of California’s Department of Finance and marks a 3.12% increase over the preceding five-year period.

totals increasing by 5.95% while multi-family unit totals increasing by (8.78%) over the corresponding 60 month period. The substantive result of this trend is a ratio increase (i.e., single-family to multi-family units) of 16.15% from 1.48 to 1 in 2010.

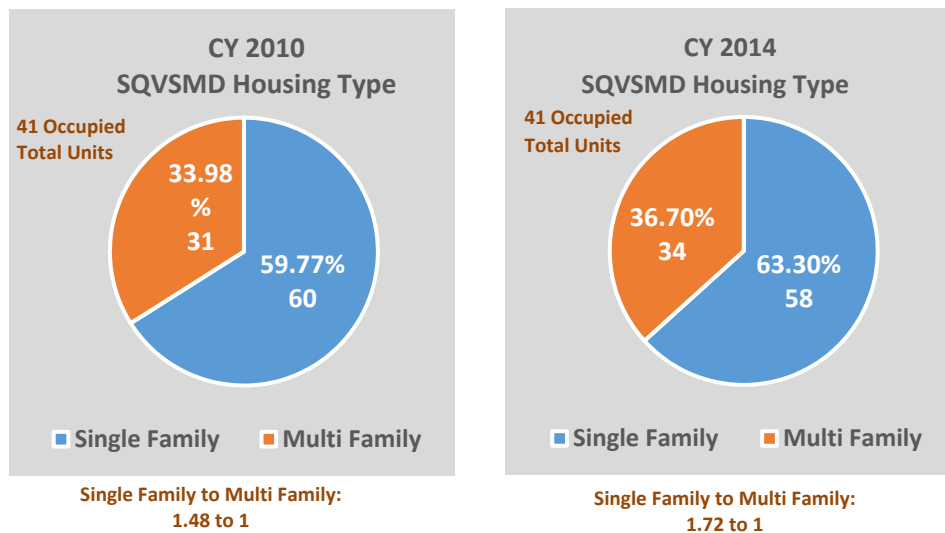


Figure 4.27

4.3 Social and Economic Indicators

A review of recent demographic information covering the SQVSMD jurisdictional boundary for the study period shows fulltime residents are relatively in less advantageous economic positions compared to countywide averages. This information is drawn from census data collected between 2010 and 2014 and shows area residents’ average median household income is close to one-tenth below the countywide amount of \$91,529 at \$84,065. SQVSMD residents also experienced a widening of this economic gap over the preceding five -year collection period with respect to both median household income – which decreased by 6.7% – and a two-fold rise in unemployment from 1.80% to

SQVSMD’s fulltime residents are generally less affluent than most of the county populace and highlighted by a median household income average over the study period of \$84,065; an amount that is nearly one-tenth lower than the county average. Separately there has been a sizeable and increasing rate of turnover in the community in terms of household tenure with only 8% having been in place since the enactment of Proposition 13 in 1979; a ratio that is 56% lower than the countywide average.

6.30%, which is over one-third higher than the countywide amount. Notable social indicators show SQVSMD residents are generally younger with more formal education

compared to countywide averages with the latter category being nearly double the county rate. SQVSMD residents are also relative newcomers to the community with an average of only 8.40% of occupied households arriving before Proposition 13 in 1979. This contrasts with the countywide average of 12.80%.

SQVSMD: Resident Trends in Social and Economic Indicators				
Table 4.108 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$90,053	\$84,065	(6.65%)	\$91,529
Median Age	42.40%	42.30%	(0.24%)	45.10
Prime Working Age (25-64)	63.40%	56.20%	(11.44%)	55.28%
Unemployment Rate (Labor Force)	1.80%	6.30%	250.00%	4.70%
Persons Living Below Poverty Rate	2.50%	5.80%	132.00%	8.80%
Mean Travel to Work	27.60 min	29.00 min	1.40%	29.4 min
Working at Home (Labor Force)	8.80%	5.10%	(3.7%)	2.50%
Adults with Bachelor Degrees or Higher	50.30%	60.40%	10.10%	30.80%
Non English Speaking	29.60%	24.80%	(4.80%)	23.50%
Householder Pre Proposition 13 (1979)	16.30%	8.40%	(48.47%)	12.80%

* Amounts represent the result of a weighted calculation by population performed by Marin LAFCO taking into proportional account of the single census tract (1212) underlying SQVSMD.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

SQVSMD’s governance authority is established under the Sewer Maintenance District Act of 1933 and codified under Public Health and Safety Code Sections 4860-4927. This principal act empowers SQVSMD to provide only one wastewater services, and specifically as it relates to handling, gathering, and disposing of sewage. Governance is dependently provided by the County of Marin and through its five-member Board of Supervisors that are elected by supervisorial district to staggered four-year terms. SQVSMD holds meetings as needed and as part of regular meetings held by the Board of Supervisors. A current listing of Board of Supervisors along with respective backgrounds follows.



SQVSMD Current Board Roster			
Table 4.109 Source: County of Marin			
Member	Position	Background	Years on Board
Judy Arnold	President	Local/State Government	11
Damon Connolly	Member	Attorney	2
Katie Rice	Member	Local Government	6
Dennis J. Rodoni	Member	Contractor	1
Kathrin Sears	Member	Attorney	6
Average Years of Board Experience			5.2

5.2 Administration

The County Board of Supervisors assigns the Public Works Director to serve as the SQVSMD District Engineer as provided under Public Health and Safety Code Section 4887. Key duties of Public Works performed on behalf of SQVSMD includes proposing an annual budget, recommending changes to the fee schedule, and overseeing capital improvements. Day-to-day operation of SQVSMD and its collection system is managed contractually by CMSA and highlighted



by performing routine maintenance. Legal services are provided by County Counsel.

SQVSMD Administration	
Table 4.110 Source: SQVSMD	
District Engineer.....	Raul M. Rojas
Legal Counsel.....	Brian E. Washington

6.0 WASTEWATER SERVICES

6.1 System Structure

SQVSMD provides wastewater collection services through its own infrastructure headlined by an approximate 1,500 foot collection system. The current infrastructure dates back to the mid-1960s and largely gravity fed with the exception of one pump station to convey flows to the State Prison. As of the study term there are 37 service connections that are divided between 32 residential and 5 non-residential. There have been no changes in the number of service connections in SQVSMD over the preceding 60-month review period.

SQVSMD does not independently track wastewater flows generated within its jurisdictional boundary. Wastewater generated within SQVSMD is incorporated directly into the State Prison's collection system before directed to CMSA for treatment and disposal.

All wastewater flows generated within SQVSMD are collected and conveyed with State Prison sewer by CMSA. No independent data specific to SQVSMD is available.

6.2 User Charges and Fees

SQVSMD bills one fee to its customers in recovering the District's wastewater service costs. This fee is in the form of an annual service charge and is billed to landowners and collected on the property tax roll and recovers both collection and contracted costs with CMSA. Residential customers currently pay \$472 each year for every dwelling unit. Non-residential customers pay a rate based on estimated flows. There are no voter-approved special assessments.

Most single-family customers in SQVSMD currently pay \$472 a year for wastewater services.

7.0 AGENCY FINANCES

7.1 Financial Statements

7.2 Pension Obligations

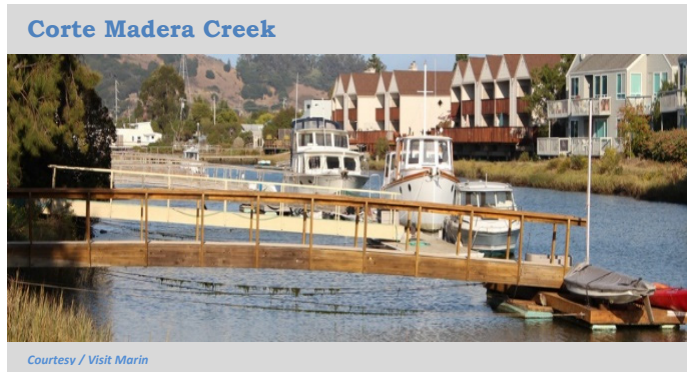
7.3 Revenue to Expense Trends

An abbreviated review of SQVSMD's actual revenues and expenses during the study period and specific to fiscal years 2010-11 to 2013-2014 shows a fluctuating budget structure in which budgeted expenses range from a low of \$0.057 million to a high of \$0.138 million. Actual expenses consistency fell moderately to significantly below budgeted amounts during the 48-month period. Specific expense and revenue details are not available as of the draft report date. Additional analysis pending.

G. CENTRAL MARIN SANITATION AGENCY

1.0 OVERVIEW

The Central Marin Sanitation Agency (CMSA) formed in 1979 to provide wastewater treatment and disposal services on behalf of its four-member agencies located in east-central Marin County. The four-member agencies are County Sanitation District No. 1, County Sanitation



District No. 2, San Rafael Sanitation District, and City of Larkspur. Governance is provided by a six-person commission whose members are appointed and serve at the discretion of the appointing member agency. CMSA's contracted service area – which is the sum of its four-member agencies' jurisdictional boundaries – spans approximately 36.3 square miles and overlaps nine land use authorities with the County of Marin's unincorporated area accounting for 40% of all acreage. The remainder of CSMA's contracted service area in terms of land use authorities is divided by the City of San Rafael at 19%, City of San Anselmo at 15%, Town of Fairfax at 12%, Town of Cortez Madera at 6%, Town of Ross at 4%, City of Larkspur at 3%, Town of Tiburon at 2%, and the City of Mill Valley at less than 1%.

CMSA is organized as a legally autonomous joint-powers authority (JPA) with the delegated powers from its four-member agencies to collect, treat, reclaim, and dispose of wastewater generated within the contracted service area. CSMA may provide additional municipal services so long as the subject services are authorized active powers of each of the member agencies and delegated therein limited by the Sanitary District Act of 1923. CMSA maintains its own employees with responsibilities headlined by managing a wastewater treatment and disposal facilities located in San Rafael along the North San Quentin Point. CMSA is also contracted by the State of California to treat and dispose wastewater received from nearby San Quentin State and therein also from the San

Quentin Village Sewer Maintenance District. CMSA’s adopted operating budget was \$10.082 million and with funding dedicated for the equivalent of 41 employees as of the study term (2014). The unrestricted fund balance was \$14.201 million with an associated days-cash ratio totaling 448; i.e., the amount of cash on hand to cover operating expenses based on 2013-2014 actuals.

The Commission independently estimates the resident service population within CMSA’s contracted service area is 95,428 as of the term of the study term.⁷³ It is also projected CMSA’s contracted service area population growth rate over the five-year study period has averaged 0.61% annually. Overall it is also estimated by the

Central Marin Sanitary Agency	
Formation Date:	1979
Principal Act:	Government Code Sections 6500 et seq.
Service Categories:	Wastewater Treatment and Disposal
Service Population	95,428 (all) 4,088 (direct customers)
Governance Type:	Dependent

Commission that nearly three-fourths of the contracted service boundary within the four member-agencies has been developed and or improved – though not necessarily at the highest density. This means the remaining one-fourth of the contracted service area remains entirely undeveloped with 1,596 existing unbuilt and privately owned parcels zoned for some type of urban use by one of the land use authorities.⁷⁴

2.0 BACKGROUND

2.1 Community Development

CMSA’s contracted service area began its collective transition from agrarian to urban development starting in the late 1800s and most intensely experienced in San Rafael. This transition was marked by the population within the affected communities nearly doubling from 6,274 in 1900 to 10,993 in 1920; a net change of 75% or 3.76% annually over the 20-year period. Increasing accessibility to the region as a result of transportation investments coupled with comparatively cheap land prices maintained

⁷³ The resident estimate includes the design housing capacity at San Quentin State Prison of 4,000.

⁷⁴ Additional analysis is needed to assess the actual development potential of the 1,596 unbuilt parcels.

and advanced the development of the affected communities heading towards mid-century with the estimated combined population reaching 20,968 by 1940; a net change of 92% or 4.59 annually over the preceding 20-year period.

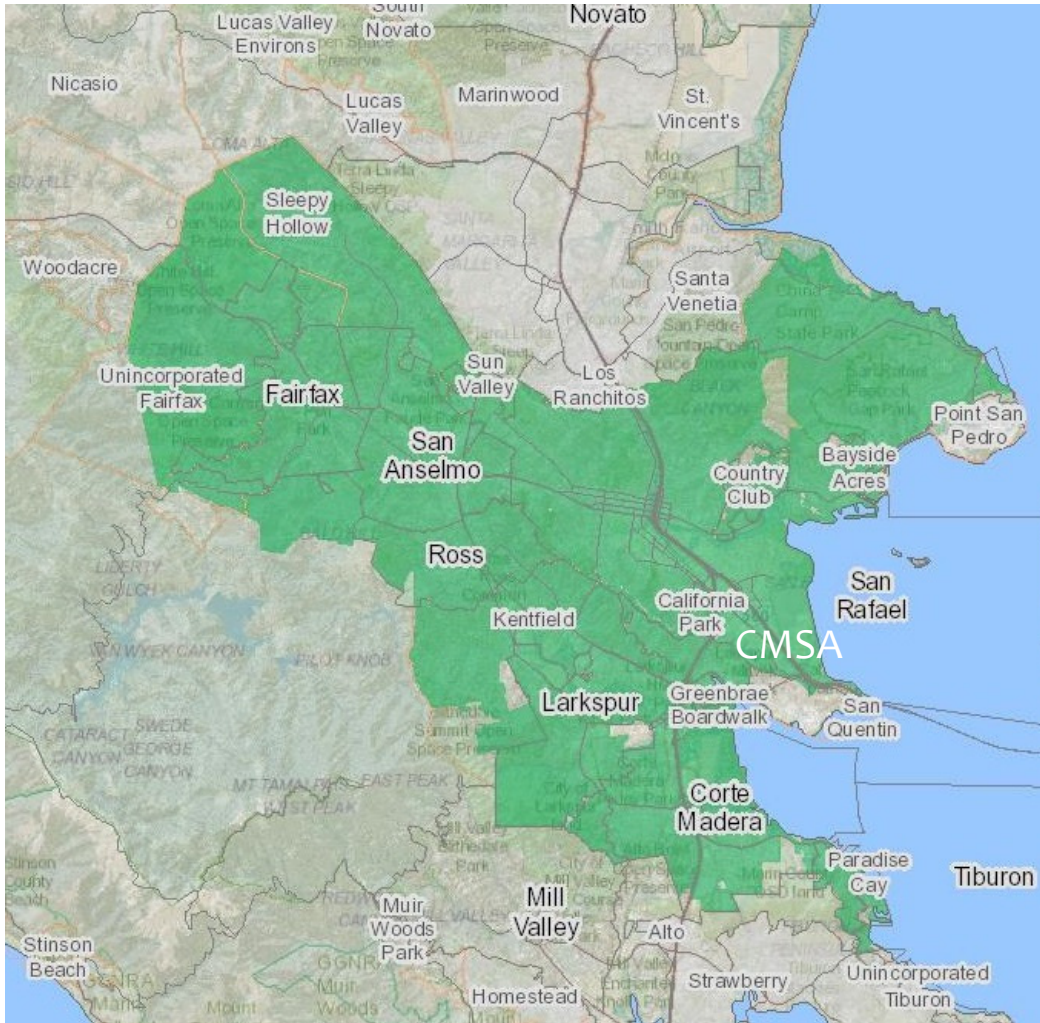


Figure 4.28

In step with the ongoing development of the east-central region heading into the 1950s four separate wastewater agencies had been formed to handle the collection and disposal of sanitary flows for the affected communities. These four agencies – County Sanitary District No. 1, County Sanitary District No. 2, San Rafael Sanitation District, and the City of Larkspur – were all operating their own collection systems. Two of these agencies – County Sanitary District No. 2 and City of Larkspur contracted with County Sanitary District No. 1 to provide treatment and disposal of wastewater at the latter agency’s

Larkspur Landing Facility. San Rafael Sanitation District owned and operated its own two treatment plants.

CSMA's future service area experienced a new level of growth and development following the transition into the second half of the 20th Century as the estimated population within the affected communities more than tripled between 1940 and 1970 with the latter amount tallying an estimated 81,362 and representing an average annual change of 9.60% over the preceding 30-year period. This surge in new growth coupled with increasing regulatory controls on wastewater discharges into open water bodies beginning in the late 1960s and into the early 1970s proved seminal in leading to the eventual creation of CSMA. Markedly, these new regulations included the Clean Water Act of 1972 and the resulting permit program known as the National Pollutant Discharge Elimination System (NPDES) aimed at regulating the treatment of wastewater discharges into surface waters. This legislation also – and in support of California's own legislative version – provided a funding mechanism for local agencies to receive monies to construct the necessary facilities in fulfilling the new regulations and highlighted by requiring all discharges meet enhanced secondary standards.

2.2 Formation Proceedings

The formation of CMSA was established in 1979 and upon the approving resolutions enacted by all four member agencies' boards/councils: County Sanitary District No. 1; County Sanitary District No. 2; San Rafael Sanitation District, and the City of Larkspur. The formation proceedings immediately preceded CSMA applying and receiving grant money that was reimbursed to construct and operate a new regional wastewater treatment facility on the north side of San Quentin Point along with its Central Marin Wastewater Improvements.

2.3 Post Formation Activities

A summary of notable activities undertaken by CSMA and/or affecting the agency's contracted service area following formation in 1979 is provided below.

- CSMA completes construction on a new regional wastewater treatment facility and begins receiving sanitary flows from its member agencies in January 1985. The facility was constructed at a cost of \$84 million with approximately 87.5% being funded by federal and state grant monies.
- CMSA completed a planned expansion of the treatment facility to expand the total daily capacity during wet-month periods from 90 to 125 million gallons in 2010.

3.0 BOUNDARIES

3.1 Boundary Type | Contracted Service Area

The Commission has not established a jurisdictional boundary or sphere of influence to CSMA given the agency’s formation as a JPA; only cities, towns, and special districts are directly overseen by LAFCOs under current State law. As such, CMSA’s service area is statutorily tied to matching its four-member agencies’ jurisdictional boundaries, and as such spans approximately 36.3 square miles in size and covers 23,246 total acres (parcels, right-of-ways, water bodies). Nine land use authorities overlap the service area. The County of Marin is the predominant land use authority and accounts for an estimated 40% of CMSA’s service area. Another 19% of the service area falls under the land use authority of the City of Rafael. The remainder of the service area is divided among the land use authorities of San Anselmo at 15%, Fairfax at 12%, Corte Madera at 6%, Ross at 4%, Larkspur at 3%, Tiburon at 2%, and Mill Valley at less than 1%.

CMSA’s contracted service area spans 36.3 square miles and overlaps nine land use authorities with the County of Marin being the largest with the unincorporated area covering 40%.

Total assessed value (land and structure) within CMSA is calculated at \$25.196 billion and translates to a per acre value ratio of \$1.083 million. This former amount – \$25.196 billion – further represents a per capita value of \$0.264 million based on the estimated service population of 95,428. CMSA does not receive any property tax proceeds.

Assessed land values in CMSA’s contracted service area totals \$25.196 billion, and equates to a per capita share of \$0.264 million based on a service population of 95,428.

CMSA Contracted Service Area Breakdown: Land Use Authorities
Table 4.111 | Source: Marin LAFCO

Agency	Assessor Parcel Acres	Assessor Parcel Acres % of Total	Total Assessor Parcels	Total Residential Units
County of Marin	6,491	39.5	7,103	5,999
San Rafael	3,188	19.4	10,672	15,454
San Anselmo	2,440	14.9	5,482	6,279
Fairfax	1,904	11.6	3,173	3,900
Corte Madera	897	5.5	3,390	3,910
Ross	676	4.1	847	883
Larkspur	542	3.3	2,522	3,580
Tiburon	299	1.8	442	435
Mill Valley	1	0.0	1	0
	16,441	100	33,632	40,440

As provided in the preceding table there are overall 16,441 assessor parcels currently within CMSA’s contracted service area and collectively add up to 33,632 acres as of June 2016. Close to three-fourths – or 72% – of the current assessor parcel acreage have already been developed/improved to date, albeit not necessarily at the highest zoning density. This existing development is highlighted by the standing construction of 40,400 residential units and divided between single-family and multi-family on a 68% to 32% split. The remaining one-fourth plus – or 28% – of the current assessor parcel acreage is undeveloped/unimproved. This includes 1,596 un-built and privately owned assessor parcels that are zoned for some type of urban use by the subject land use authority.

Almost three-fourths of CMSA’s contracted service area has already been developed or improved – though not necessarily at its maximum density. This means the remaining one-fourth of the service area remains entirely undeveloped. This includes 1,596 un-built and privately owned parcels zoned for some type of urban use by the subject land use authority.

CMSA Boundary Breakdown: Land Use Features

Table 4.112 | Source: Marin LAFCO

% Parcel Acres Already Developed	Residential Built Units	% of Units Built as SFR	Unbuilt Private Parcels	Unbuilt Private Parcel Acres
71.9	40,400	67.9	1,596	9,450

4.0 DEMOGRAPHICS

4.1 Population and Housing

CMSA’s resident population within its contracted service area is independently estimated by the Commission at 95,428 as of the term of the study. This projection – which is the sum of individual calculations performed for the member agencies along with taking into account San Quentin State Prison – represents 36.6% of the estimated countywide population. It is also projected CMSA has experienced an overall growth rate of 3.03%

LAFCO estimates there are 95,428 total residents within CMSA’s contracted service area that are explicitly served by the District’s wastewater treatment system as of the term of the study. It is further estimated CMSA has experienced an overall population increase of 2,805 over the preceding five-year period.

over the preceding five-year period or 0.61% annually; all of which generated an estimated net add of 2,805 persons. This projected increase has been generated by the addition of an estimated 934 new occupied housing units within the contracted service area as well as aided by an intensification of household sizes over the span of the five-year period starting at 2.39 in 2010 and ending at 2.41 in 2014; the latter being a net intensity increase of 0.89%.

CMSA Resident Population: Past and Current Estimates

Table 4.113 | Source: Marin LAFCO

Factor	2010	2011	2012	2013	2014
e) San Rafael Sanitation	39,381	39,191	39,906	40,192	40,744
b) County Sanitary District No. 1	39,454	39,261	39,974	40,259	40,809
c) County Sanitary District No. 2	9,788	9,680	9,794	9,802	9,874
d) San Quentin State Prison	4,000	4,000	4,000	4,000	4,000
Estimated Population	92,623	92,132	93,674	94,253	95,428

* rounded for reporting purposes

* County Sanitary District No. 1 and 2 collectively account for the City of Larkspur

With respect to going forward, and for purposes of this review, it is reasonable to assume the growth rate among CMSA’s member-agencies will generally match the preceding five-year period and produce an overall yearly population change of 0.61%. The substantive result of this assumption would be an overall increase in CMSA’s resident population of 5,977 and produce a total of 101,405 by 2024. This growth rate, similarly, would generate the addition of 2,569 new and occupied housing units within CMSA through 2024 assuming the preceding five-year average ratio of 2.41 persons for every one occupied housing unit holds. These collective projections are summarized below.

CMSA Resident Population: Future Estimates						
Table 4.114 Source: Marin LAFCO						
Factor	2014	2016	2018	2020	2022	2024
Estimated Population	95,428	96,592	97,771	98,966	100,178	101,405
Occupied Housing Units	38,256	38,900	39,311	39,810	40,313	40,825
- residents to housing units	2.39	2.38	2.39	2.39	2.39	2.39

* Estimated population totals include a flat 4,000 assignment each year for the San Quentin State Prison; this addition is excluded in calculating the residents to housing units’ ratio

4.2 Residency Type

The Commission projects CMSA’s residential unit total (occupied and unoccupied) of 40,440 as of the study term is divided between single family and multi-family use at 67.9% (27,439) and 32.1% (13,001), respectively. These totals produce an estimated ratio of 2.1 to 1 with respect to single-family to multi-family units.

4.3 Social and Economic Indicators

A review of recent demographic information covering the CMSA contracted service boundary for the study period shows fulltime residents' economic and social standing generally matches countywide averages with certain notable exceptions. These exceptions include higher levels of unemployment and poverty rates within CMSA with both measurements having increased over the study period by more than 50%. CMSA residents were also more than three times more likely to work at home compared to countywide averages during the 60-month period. Nonetheless, the median household income as of the study period totaled \$93,647 and slightly above the countywide amount of \$91,529. Median age, commute time, and household tenure relative to Proposition 13 (1979) within CMSA all finished within comparable countywide amounts.

CMSA's fulltime residents generally match countywide averages with respect most measured social and economic indicators, and highlighted by a similar median household income rate of \$93,647 generated during the study period. Nevertheless, certain distinctions exist and this includes CMSA experiencing increasingly higher rates of unemployment and poverty levels within its contracted service boundary with both referenced measurements increasing by more than one-half over the study period.

CMSA: Resident Trends in Social and Economic Indicators				
Table 4.115 Source: Marin LAFCO / American Community Survey				
Category	2005-09 Averages	2010-2014 Averages	Trend	Marin County 2010-2014 Avg.
Median Household Income	\$92,009	\$93,647.63	1.78%	\$91,529
Median Age	42.63	43.59	2.25%	45.10
Prime Working Age (25-64)	58.14%	57.75%	(0.66%)	55.28%
Unemployment Rate (Labor Force)	3.30%	5.25%	59.26%	4.70%
Persons Living Below Poverty Rate	7.34%	11.88%	61.84%	8.80%
Mean Travel to Work	27.21 min	29.03 min	6.71%	29.4 min
Working at Home (Labor Force)	8.59%	8.65%	0.71%	2.50%
Adults with Bachelor Degrees or Higher	54.38%	54.80%	0.77%	30.80%
Non English Speaking	26.66%	27.33%	2.51%	23.50%
Householder Pre Proposition 13 (1979)	15.28%	11.65%	(23.75%)	12.80%

* Amounts represent the result of a weighted calculation by estimated population performed by Marin LAFCO taking into proportional account of all census tracts underlying CMSA.

5.0 ORGANIZATIONAL STRUCTURE

5.1 Governance

CMSA’s governance authority is established under the Joint Exercise of Powers Act and codified under Government Code Section 6500 et seq. This legislation was functionally established in 1922 and authorizes two kinds of JPA arrangements: (a) two or more public agencies that jointly contract to exercise common service powers or (b) two or more public agencies that jointly contract to form a separate legal entity to provide common service powers.⁷⁵ CMSA has been formed under the latter category as a legally autonomous agency with the explicit delegation by its four-member agencies to construct and operate a new regional wastewater treatment facility on the north side of San Quentin Point. Further, and as provided under the enabling legislation, CMSA is authorized to do all of the following: make and enter contracts; employ agents and employees; acquire, construct, manage, maintain, or operate any buildings, works, or improvements; acquire, hold, or dispose of real properties; incur debts, liabilities, or obligations; and sue or be sued.

Governance of CMSA is provided by a six-member Commission whose members are appointed and serve at the discretion of the appointing member agency as provided under the JPA agreement. The



largest members – County Sanitary District No. 1 and San Rafael Sanitation District – appoint two members each. County Sanitary District No. 2 and Larkspur appoint one member each. The Commission holds regular meetings on the 2nd Tuesday of each month at 7:00 p.m. at the CMSA Administrative Office located at 1301 Anderson Drive in San Rafael. Commissioners currently receive a meeting stipend of \$100. A current listing of CMSA Commissioners along with appointing authority follows.

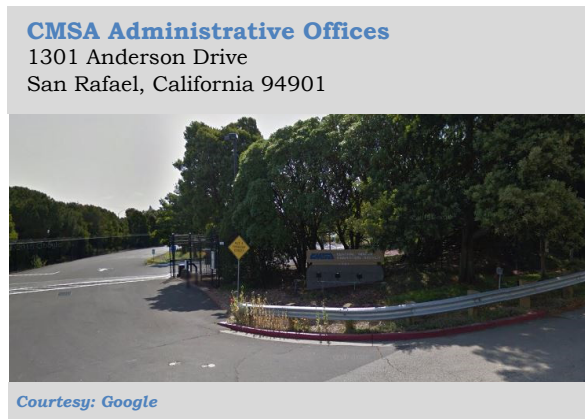
⁷⁵ The legislation defines “public agency” broadly to include all of the following: federal government and including any department or agency therein; State government or any department or agency therein; counties; county boards of education; county superintendents of schools; cities; public districts; public corporations; regional transportation commissions; federally recognized Indian tribes; private nonprofit hospitals; mutual water companies; and any joint-power authorities.

CMSA Current Commission Roster			
Table 4.116 Source: CMSA			
Member	Position	Appointing Authority	Years on Board
Kathy Hartzell	Chair	City of Larkspur	6
Diane Furst	Vice Chair	County Sanitary District No. 2	2
Michael Boorstein	Commissioner	County Sanitary District No. 1	1
Al Boro	Commissioner	San Rafael Sanitation District	26
Maribeth Bushy	Commissioner	San Rafael Sanitation District	2
Thomas Gaffney	Commissioner	County Sanitary District No. 1	1
Average Years of Commission Service			6.3

5.2 Administration

CMSA appoints an at-will General Manager to oversee all agency operations. The current General Manager – Jason Dow – was appointed by the Commission in 2002 and is fulltime. The General Manager presently oversees 43 other full-time employees and this includes three senior management support positions:

Administrative Services Manager; Technical Services Manager; and Treatment Plant Manager. CMSA contracts with the County for legal services through County Counsel.



6.0 WASTEWATER SERVICES

6.1 System Structure

CMSA provides treatment service for its four member agencies (RVSD, CSD No. 2, SRSD and City of Larkspur) as well as San Quentin State Prison and San Quentin Village. CMSA reports the average age of the treatment system is around 30 years and the expected lifespan of the current infrastructure is

CMSA's equipment replacement ratio – i.e., the number of years it would take the District to fully fund its depreciable capital asset inventory – as of the study term is 23.6 years.

approximately 25 years less subsequent improvements are made. The treatment facility was initially constructed in 1985 with most recent updates completed in 2014. Treated effluent is discharged into the San Francisco Bay through an approximate two-mile outfall pipeline. As of the study term CMSA's equipment replacement ratio – i.e., the

number of years it would take the Agency to fully fund its depreciable capital asset inventory – is 23.6 years and has risen by 4.2% over the corresponding 60-month period.

6.2 Wastewater Demands

Recent Measurements | Wastewater Treatment System Flows

CMSA’s average annual wastewater treatment demand generated over the study period as reported by the Agency has been approximately 4.321 billion gallons. This average amount, which serves as a macro overview of system demands, represents a daily average flow of 11.8 million gallons. It also translates to an estimated 126.2 gallons per day for each resident of its member agencies or 314.2 gallons per day for each occupied housing unit; it also represents 393.6 gallons per day for each service connection.

Average annual wastewater flows generated within CMSA during the study period have produced the daily equivalent of 11.8 million gallons; an amount that accounts for flows received from the JPA’s member agencies plus direct contract flows from the San Quentin area (State Prison and Village).

With respect to trends, annual demands within the five-year study period have shown an overall (15.83%) decrease in flows over the span of the affected 60-months. The high demand point for the treatment system during the study period occurred in 2010 with annual volume equaling 5.074 billion gallons. The high demand year translates to an estimated 149.6 gallons per day for each resident of its member agencies or 371.6 gallons per day for each occupied housing unit; and it also translates to 461.4 gallons per day for each service connection. A breakdown of annual and daily wastewater flows over the study period in relation to population and housing is shown below.

CMSA: Recent Annual and Average Daily Treatment Flows Breakdown

Table 4.117 | Source: Marin LAFCO and CMSA

	2010	2011	2012	2013	2014	Average	Trend
Annual Flow	5.074 bg	4.599 bg	3.778 bg	3.887 bg	4.271 bg	4.322 bg	(15.83%)
Daily Average	13.9 mg	12.6 mg	10.4 mg	10.7 mg	11.7 mg	11.8 mg	(15.83%)
- Daily Avg Per Resident	149.6	136.4	110.2	112.7	122.2	126.2	(18.30%)
- Daily Avg Per Housing Unit	371.6	339.2	274.3	280.9	305.1	314.2	(17.88%)
- Daily Avg Per Connection	461.4	420.4	345.9	352.6	387.8	393.6	(15.96%)

*“bg” refers to billions gallons per day
“mg” refers to millions gallons per day
Per resident as estimated by the Commission
Per housing unit refers to occupied status as estimated by the Commission*

Along with average annual wastewater flow three other more micro measurements are tracked with respect to CMSA’s treatment system and provide additional context to assessing demand. These measurements are (a) dry-weather flow, (b) wet-weather flow, and (c) peak-day flow and summarized below.

Dry-Weather Day Flows

Average dry-weather wastewater flows over the study period has been 8.84 million gallons. This flow is typically recorded between July and September and most recently tallied 8.5 million gallons as of the study term. The overall average dry-weather tally translates to 94.2 gallons for every resident or 234.5 gallons for every occupied housing unit and 293.9 gallons per service connection during the affected 60 months. This measurement has decreased overall during the study period by (7.61%). A breakdown of dry-weather flows during the study period follows.

CMSA: Recent Dry Weather Day Flows					
Table 4.118 Source: Marin LAFCO and CMSA					
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection	
2010	9.2 mg	99.0 gallons	245.9 gallons	305.4 gallons	
2011	9.3 mg	100.7 gallons	250.4 gallons	310.3 gallons	
2012	8.6 mg	91.5 gallons	227.9 gallons	287.4 gallons	
2013	8.6 mg	91.0 gallons	226.8 gallons	284.7 gallons	
2014	8.5 mg	88.8 gallons	221.7 gallons	281.7 gallons	
Average Trend	8.8 mg (7.61%)	94.2 gallons (10.32%)	234.6 gallons (9.86%)	293.9 gallons (7.76%)	

“mg” refers to million gallons

Wet-Weather Day Flows

Average wet-weather day wastewater flows over the study period has been 14.8 million gallons. This flow typically is recorded between October and January and most recently tallied at 14.9 million gallons during the study term. The overall average wet-weather day tally translates to 158.2 gallons for every resident or 393.9 gallons for every occupied housing unit and 493.3 gallons for every service connection during the affected 60 months. This measurement has decreased during the study period by

(19.9%). A breakdown of recent wet-weather flows follow.

CMSA: Recent Wet Weather Day Flows				
Table 4.119 Source: Marin LAFCO and CMSA				
Year	Daily Gallon System Average	Average Gallon Per Resident	Average Gallon Per Housing Unit	Average Gallon Per Connection
2010	18.6 mg	200.2 gallons	497.2 gallons	617.5 gallons
2011	15.9 mg	172.1 gallons	428.1 gallons	530.5 gallons
2012	12.1 mg	128.8 gallons	320.7 gallons	404.4 gallons
2013	12.7 mg	134.4 gallons	335.0 gallons	420.5 gallons
2014	14.9 mg	155.7 gallons	388.6 gallons	493.9 gallons
Average Trend	14.8 mg (19.9%)	158.2 gallons (22.3%)	393.9 gallons (21.9%)	493.9 gallons (20.0%)

Peak- Day Flows

Average peak-day wastewater flows over the study period has been 94.5 million gallons producing a peak-factor relative to average day totals of 10.7. The average peak-day flow – which represents the highest volume during a 24-hour period for the affected year and typically is recorded during storm events – most recently tallied 98.3 million gallons as of the study term. The average wet-weather peak day tally translates to 1,027.1 gallons for every resident or 2,563.6 gallons for every occupied housing unit; it also translates to 3,258.1 gallons for every service connection during the affected 60 months. This measurement has increased overall during the study period by 6.50%. A breakdown of peak-day flows during the study period follows.

CMSA: Recent Peak Day Flows					
Table 4.120 Source: Marin LAFCO and CMSA					
Year	Peak Day Total	Gallon Per Resident	Gallon Per Housing Unit	Gallon Per Connection	Peaking Factor
2010	92.3 mg	993.6	2,467.3	3,064.1	10.0
2011	86.9 mg	940.5	2,339.7	2,899.6	9.3
2012	85.1 mg	905.8	2,255.5	2,843.9	9.9
2013	109.8 mg	1,161.6	2,896.1	3,635.2	12.8
2014	98.3 mg	1,027.1	2,563.6	3,258.1	11.6
Average Trend	94.5 mg 6.5%	1,005.7 3.4%	2,504.4 3.9%	3,140.2 6.3%	10.7 15.3%

Projected Measurements | Wastewater Collection System Flows to Treatment Facility

Going forward – and specifically for purposes of this study – it appears reasonable to assume CMSA’s wastewater collection system flows will generally follow trends over the study period. It is estimated, accordingly and using linear regression to control for variances in the most recent yearend totals, the system will ultimately experience an overall decrease in annual wastewater flows of 356.6 million gallons over the succeeding 10-year period finishing in 2024; a difference of (8.60%) or (0.86%) annually. This projection continues CMSA’s overall annual flows decrease incurred during the study period, albeit at a deintensified rate relative to the study period over three-fold. It is also estimated – in using regression analysis - the system’s peak-day flows will ultimately increase over the succeeding 10-year period by 9.42 million gallons or 9.58% and resulting in a peaking factor of 9.9; the latter representing a rise in peak day flows relative to average day amounts by one-fifteenth. The following table summarizes these and related projection flows through 2024.

The Commission independently estimates CMSA’s annual wastewater demands will continue to decrease over the succeeding 10-year period at an average rate of (0.86%). This will result in the average day demand equaling 3.8 billion gallons in 2024; a net difference of 500.0 million gallons relative to the baseline year (2014).

CMSEA: Projected Wastewater Flows						
Table 4.121 Source: Marin LAFCO						
Year	Average Annual Flows	Average-Day Flows	Dry-Weather Flows	Wet-Weather Flows	Peak-Day Flows	
2014	4.271 bg	11.7 mg	8.5 mg	14.9 mg	98.3 mg	
2015	3.965 bg	11.0 mg	8.2 mg	13.7 mg	99.6 mg	
2016	3.943 bg	10.9 mg	8.0 mg	13.8 mg	101.8 mg	
2017	3.929 bg	10.9 mg	7.9 mg	13.9 mg	103.2 mg	
2018	3.907 bg	10.9 mg	7.7 mg	14.0 mg	105.4 mg	
2019	3.893 bg	10.8 mg	7.6 mg	14.1 mg	106.8 mg	
2020	3.870 bg	10.8 mg	7.4 mg	14.2 mg	109.1 mg	
2021	3.856 bg	10.8 mg	7.3 mg	14.2 mg	110.5 mg	
2022	3.833 bg	10.7 mg	7.1 mg	14.3 mg	112.8 mg	
2023	3.818 bg	10.7 mg	6.9 mg	14.4 mg	114.3 mg	
2024	3.826 bg	10.7 mg	7.0 mg	14.3 mg	113.5 mg	
Average Trend	3.884 bg (9.04%)	10.8 mg (7.49%)	7.50 mg (11.75%)	14.1 mg (5.41%)	107.7 mg 9.58%	

“bg” refers to billions gallons per day
“mg” refers to millions gallons per day

Constraints | Contractual Provisions

CMSA operates under the permit provisions of the California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) with respect to discharge allowances. This permit was most recently renewed on June 13, 2012 and extends through July 31, 2017.⁷⁶ It authorizes CMSA to discharge secondary treated wastewater into San Francisco Bay byway of the Agency’s submerged outfall pipeline with a multi-port diffuser year round and up to 10.0 million gallons a day during the driest three months of the year.⁷⁷ The permit allows influent above 30 million gallons per day to blend with secondary treatment for the portion of the flow above 30 million gallons and recombine the blended flows with secondary-treated flow to be disinfected and subsequently discharged into San Francisco Bay. The permit also stipulates CMSA shall not exceed 10.0 million gallons per day in average dry weather flow through the treatment facility.

CMSA is prohibited from discharging more than 10.0 million gallons a day into San Francisco Bay during driest three-month period.

6.3 Wastewater Capacities

CMSA’s treatment facility has a hydraulic capacity of 155 million gallons and a treatment capacity of 125 million gallons, and fully meets the referenced capacity of the Agency’s associated member agencies’ tributary collection systems. When flows exceed 30 million gallons per day of the treatment capacity for the Agency’s secondary system, CMSA blends partially-treated effluent during wet-weather events as allowed by its NPDES permit. CMSA also retains an effluent storage pond with the ability to hold 7.2 million gallons of disinfected wastewater due to maintenance or other emergency type conditions. CMSA has not had an NPDES permit exceedance in

CMSA treatment system’s daily capacity is 125 million gallons with the emergency ability to accommodate an additional 7.2 million gallons through storage facilities.

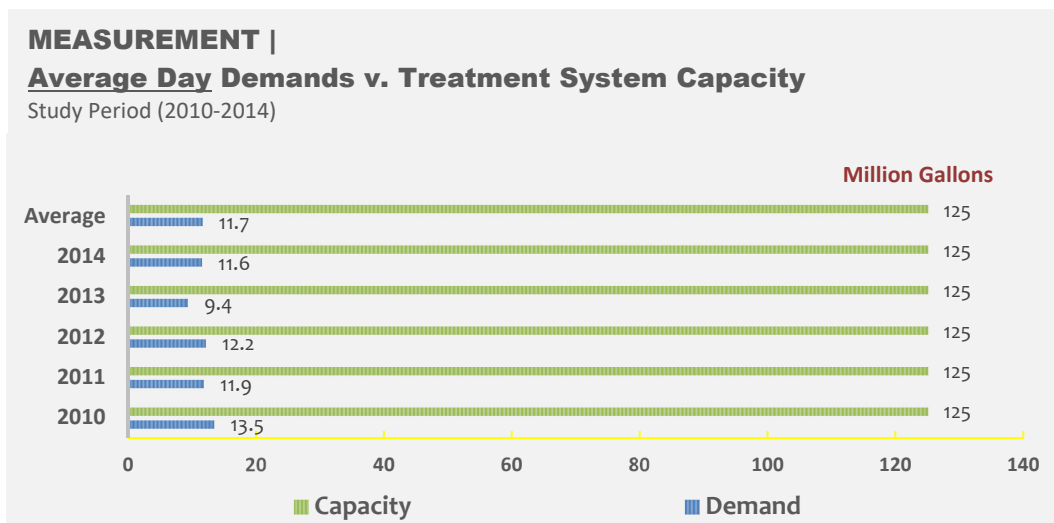
⁷⁶ Reference to RWQCB National Pollutant Discharge Elimination System Permit No. CA0038628.

⁷⁷ The permit does allow for limited blending of the referenced 10.0 million gallons limitation on discharge into Central San Francisco Bay to avoid overflows and upon advance notice/concurrence of RWQCB.

over 10 years.⁷⁸

6.4 Demand to Capacity Relationships

Study period flows averages show CMSA has sufficient available capacities within its treatment system to accommodate current and projected demands over the succeeding 10-year period with some qualifiers as detailed. Average annual demands over the study period equal 9.4% of the treatment system capacity with minimal changes expected over the succeeding 10-year period. Average dry-weather demands over the study period represent the biggest tax on the treatment facility given permit restrictions by RWQCB and tally 60.0% of the treatment system capacity and expected to reach 70% by 2024. Average peak-day demands over the study period equal 40.0% of capacity and expected to rise up to 90% by 2024.



⁷⁸ CMSA notes that as of 12/31/2016 the Agency has not had an NPDES permit exceedance in 12 years.

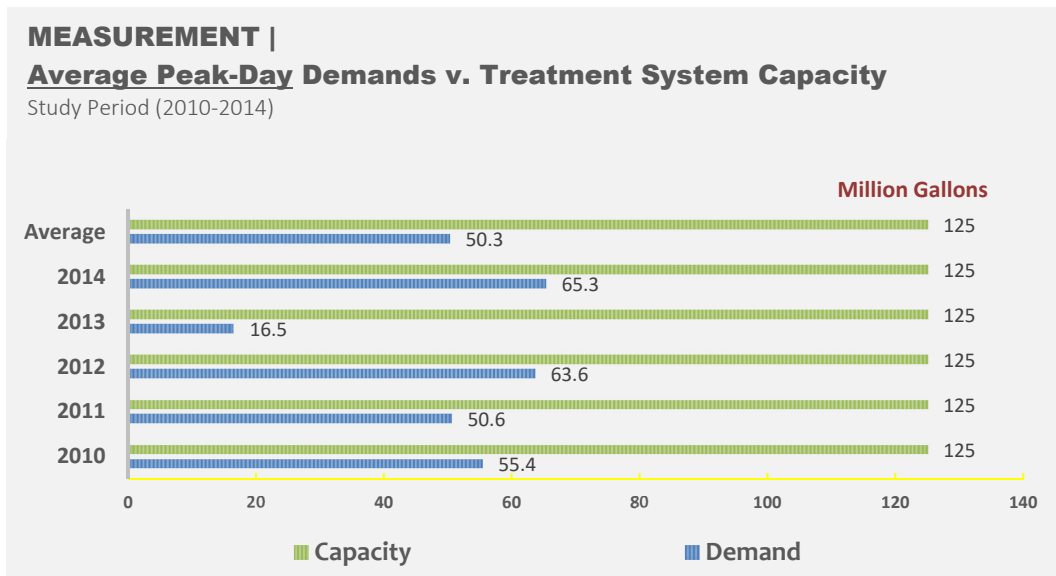
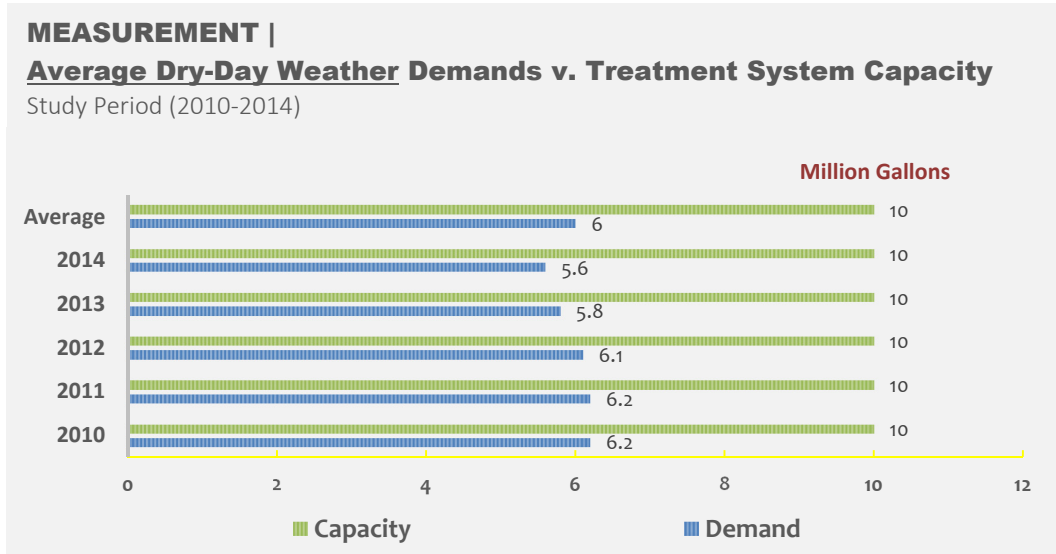


Figure 4.29

6.5 Performance

Measurement | Treatment Facility Overflows

CMSA did not experience overflows from its treatment facility during the study term. If an overflow occurs in CMSA's treatment facility it cannot generally be pumped back into the treatment plant.⁷⁹ The agency has established protocols required by the Regional Water Board in the event of a treatment overflow. CMSA must contact the Regional Water Board within 2 hours a spill has been identified and then notify the County Environmental Health Services, along with the Office of Emergency Services. If spillage has potentially reached the Bay, the Coast Guard must be included in the notification process. Final effluent exceedances of compounds specified in the agency's NPDES permit must be followed by a notification to RWQCB within 24 hours of discovery. Samples must also be collected to quantify any environmental and safety impacts. CMSA did not experience any exceedances of its NPDES permit during the study period.

Measurement | System Maintenance

System maintenance for purposes of this study includes both corrective and preventative maintenance. Corrective maintenance, is performed when signals indicate a fault, so an asset can be restored to its operational condition. Preventative maintenance, conversely, is initiated according to a predetermined schedule rather than in response to failure. A summary of both measurements follow.

Corrective Maintenance

CMSA's corrective maintenance is noted in the number of service calls received to resolve, correct or assist a particular situation. During the entire 60-month study period, CMSA received 19 service calls all attributed to odor complaints. CMSA does operate and maintain pump stations for CSD No. 2 and SQVSMD but had not received any calls during the study period attributed to overflows or potential environmental and health impacts. The following table shows all service calls by category type over

⁷⁹ CMSA reports under certain limited conditions SSOs can be pumped back under some conditions.

the study period.

CMSA: Number of District Service Calls					
Table 4.122 Source: Marin LAFCO					
Factor	2010	2011	2012	2013	2014
General	0	0	0	0	0
Public SSO	0	0	0	0	0
Private SSO	0	0	0	0	0
Odor Complaints	1	14	1	2	1
Noise Complaints	0	0	0	0	0
Pump Station Alarms	0	0	0	0	0
Non-District Incidents	0	0	0	0	0
Total	1	14	1	2	1

Preventative Maintenance

CMSA’s preventative maintenance is designed to protect and preserve its wastewater treatment plant in a cost effective manner. The agency uses several approaches to determine when assets need to be replaced, expanded, modified or new equipment to be purchased. Energy reduction, process optimization, GHG reduction, and operational efficiency evaluations can lead to procurement of new or modifications of existing systems and equipment. Changes in water quality regulations may result in construction of new facilities or modifications to current facilities or operational practices. CMSA’s completion in 2010 to expand treatment and storage facilities to accommodate intense wet weather events was a response to significant I/I during wet weather periods and increased system capacity at a cost of \$58 million. CMSA has also provided a blending reduction analysis and found the best alternative is to develop an on-site storage of primary effluent, a parallel pumping system and new flocculation units for additional secondary clarification capacity with an estimated cost at \$27 million. The agency has also additionally established a fat, oil, and grease (FOG) program to support member agencies in reducing these organic liquids in preventing blockages and SSOs in the tributary collection systems.

6.6 User Charges and Fees

CMSA bills its member agencies and San Quentin State Prison an annual sewer service charge, debt service charge, amounting to a total of \$8,671,932 for the most recent study year to contribute to CMSA’s operation and maintenance of its treatment system. Service charges are measured on wastewater flows and strength based on a three-year period of its member agencies. The service operating costs totaled to \$13.3 million, with service charges contributing 65.1% to operating and capital costs. The user fee was last updated in 2012 from \$169.74 per sewer service charge, \$106.08 per debt service charge and \$275.82 per annual service charge.

7.0 AGENCY FINANCES

7.1 Financial Statements

CMSA contracts with an outside accounting firm (Chavan and Associates) to prepare an annual report for each fiscal year to review the agency’s financial statements in accordance with established governmental accounting standards. This includes vetting CMSA’s statements with respect to verifying overall assets, liabilities, and equity as stated in a balance sheet. These audited statements provide the Commission with quantitative measurements in assessing CMSA’s short and long-term fiscal health.

CMSA’s most recent financial statements for the study period were issued for 2013-2014 and shows the District experienced a moderate and downturn change over the prior fiscal year as its overall equity or fund balance decreased by (2.7%)% from \$51.9 to \$50.5 million.

End of Study Term Financial Statements	
Assets	\$110.8 m
Liabilities	\$60.3 m
Equity	\$50.5 m

Underlying this most recent change in equity standing is the result of CMSA reducing restricted cash in making capital improvements. A summary of year-end totals and trends over the study period follows.

Agency Assets

CMSA’s audited assets at the end of 2013-2014 totaled \$110.881 million; an amount more than (5%) lower than the average sum generated over the course of the study period’s 60 months. Assets classified as current with the expectation they could be liquidated within a year represented slightly more than one-tenth of the total amount with the majority tied to cash and investments and have decreased by (50.5%) over the corresponding 60 months. Assets classified as non-current represented the remaining nine-tenth plus total with the largest portion associated with utility infrastructure and have increased over the 60 month period by 7.8%.

CMSA Assets Study Period							
Table 4.123 Source: CMSA							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	31.680	30.740	26.352	15.938	15.675	(50.5%)	24.077
Non-Current	88.418	87.230	90.520	99.565	95.206	7.7%	92.188
	120.098	117.971	116.873	115.504	110.881	(7.7%)	116.265

amounts in millions

Agency Liabilities

CMSA’s audited liabilities at the end of 2013-2014 totaled \$60.327 million; an amount that represents a collective decrease of more than one-tenth – or (12.5%) – over the study period’s 60 month period. Current liabilities representing obligations owed in the near-term account for less than one-tenth and generally tied as of the study term to owed debt payments with the remainder involving accrued employee benefits. The majority of liabilities representing more than nine-tenth of the total are booked as non-current and highlighted by outstanding debt tied to a 2006 Revenue Bond used to finance improvements to the wastewater treatment facility.

CMSA Liabilities Study Period							
Table 4.124 Source: CSMA							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Current	4.240	4.267	4.652	5.120	4.091	(3.5%)	4.474
Non-Current	64.681	62.766	60.553	58.453	56.235	(13.1%)	60.537
	68.921	67.033	65.206	63.573	60.327	(12.5%)	65.012

amounts in millions

Agency Equity / Net Assets

CMSA’s audited equity or net assets at the end of 2013-2014 totaled \$50.554 million and represent the difference between the agency’s total assets and total liabilities. This referenced amount has decreased by (1.2%) over the 60 month period and primarily attributed to drawing down cash equivalents in making capital improvements. The ending equity amount includes \$14.201 million in unrestricted funds and translates to a per capita reserve ratio of \$148 based on an estimated resident population of 95,428.

CMSA’s net assets have decreased by (1.2%) over the study period. The unrestricted fund balance as of the study term total of \$14.2 million equates to a per capita reserve ratio of \$148.

CMSA Equity Study Period							
Table 4.125 Source: CMSA							
Category	2009-10	2010-11	2011-12	2012-13	2013-14	Trends	Average
Unrestricted	10.264	11.513	12.651	13.337	14.201	38.7%	12.393
Restricted (Capital)	40.913	39.424	39.015	38.592	36.352	(11.2%)	38.859
	51.117	50.938	51.666	51.930	50.554	(1.2%)	51.253

amounts in millions

7.2 Measurements / Liquidity, Capital, Margin, and Structure

A review of the audited financial statement issuances by CMSA covering the five years comprising the study period and specifically fiscal years 2009-2010 through 2013-2014 shows the agency finished each year in relatively good health with respect to liquidity and – though to a less extent – capital. This includes CMSA finishing the study period with an estimated current ratio of over 3 to 1 and the net effect of having more than triple the amount of available cash resources to cover near-term debts. Similarly, CMSA finished the study period with over 14 months – or 448 days – of cash on hand to cover daily operating expenses. Separately CMSA finished the study period with a debt ratio of more than one-half at 50.7%; an amount that is somewhat on the higher end but has advantageously decreased over the 60 months by (5.8%). Conversely margin measurements show increasingly profit-challenges over the 60 month period. Total margin – i.e., all revenues and expenses – experienced a sizeable and escalating decrease over the study period at (244.4%). Operating margin – i.e., only operational revenues and expenses – also experienced an escalating decrease – albeit at a lower level – at

(88.1%). Last, and with respect to structure, CMSA’s earned income ratio averaged exceeding high at 98.9%, and as such shows nearly all of the agency’s annual revenues are tied to direct service fees. A summary of year-end liquidity, capital, margin, and structure ratios are show in the following table.

CMSA: Financial Measurements Study Period						
Table 4.126 Source: CMSA Financials and Marin LAFCO						
Fiscal Years	Current Ratio	Days' Cash	Debt Ratio	Total Margin	Operating Margin	Earned Income Ratio
2009-2010	7.47 to 1	890.49	53.86%	8.28%	24.99%	97.89
2010-2011	7.20 to 1	950.03	53.20%	(2.01%)	15.26%	99.22%
2011-2012	5.66 to 1	840.23	51.81%	(3.41%)	13.41%	98.94%
2012-2013	3.11 to 1	480.62	50.61%	(3.38%)	12.99%	99.05%
2013-2014	3.83 to 1	448.02	50.72%	(11.96%)	2.97%	99.46%
Average	5.46 to 1	721.88	52.04%	(2.50%)	13.92%	98.91%
Trend	(48.7%)	(49.69%)	(5.83%)	(244.36%)	(88.10%)	1.61%

Liquidity

Capital

Margin

Structure

Notes

Current Ratio (liquidity) relates to the ability of the agency to pay short-term obligations (current liabilities) relative to the amount of available cash and cash equivalents (current assets). Higher is better.

Days' Cash (liquidity) measures the number of days' worth of average operating expenses the agency can meet with cash on hand. Higher is better.

Debt Ratio (capital) measures the portion of agency’s total assets that are directly tied to debt financing. Lower is better.

Total Margin (profit) represents the year-end profit level of the agency and includes all revenues and expenses. Higher is better.

Operating Margin (profit) represents the year-end profit level of the agency specific to its normal and reoccurring revenues and expenses tied to service provision. Higher is better.

Earned Income (structure) measures the portion of annual revenues that are directly tied from user fees for services. Higher is better for enterprise agencies.

7.3 Pension Obligations

CMSA provides a defined benefit plan to its employees through an investment risk-pool contract with the California Public Employees Retirement Systems (CalPERS). This



pension contract provides employees with specified retirement benefits and includes disability benefits, annual cost-of-living adjustments, and death benefits to members and their beneficiaries. Actual pension benefits are based on the date of hire. Employees hired before January 1, 2013 are termed “Category One” while employees hired afterwards are termed “Category Two.” Additional details of the pension program

based on actuarial valuations issued by CalPERS follows.

Participants | Pension Formulas

As of the study period's term (2014) there are a total of 95 participants within CMSA's pension program. This total amount – which represents an overall increase of 3% in participants since 2012 – is further divided between enrollee type (i.e., active, separated, transferred, retired) and

Most CMSA employees receive defined pensions based on a 2.7 @ 55 formula. Employees hired before January 1, 2013 were also brought into the pension formula a 2.0 @ 60 pension formula.

marked by a worker-to-retiree ratio of 0.9 to 1 as of the study term. Category One participants represent 98% – or 93 – of the total program enrollees and are eligible to receive one of two types of retirement payments. The first and predominate tier within Category One is based on a 2.7 at 55 formula, and as such provides eligible retirees with 20 years of total service credit 54% of their highest one year of salary beginning at age 55 and continuing each year thereafter. Category Two participants account for the remaining 2% of the total program enrollee amount as of the study period's term and are subject to a flat 2.0% at 62 pension formula. This tier provides eligible retirees with 20 years of total service credit 40% of their highest three years of average salary beginning at age 60 and continuing annually thereafter.

CMSA's Pension Enrollee Information					
Table 4.127 Source: CalPERS and Marin LAFCO					
Type	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Active	n/a	n/a	40	41	38
Transferred	n/a	n/a	9	10	8
Separated	n/a	n/a	6	5	6
Retired	n/a	n/a	37	38	43
Total Enrollees	n/a	n/a	92	93	95
Worker-to-Retiree Ratio	n/a	n/a	1.1 to 1	1.1 to 1	0.9 to 1

Annual Contributions

CMSA’s total annual pension contributions as of the study period’s term tallied \$1.170 million. This amount represents an overall increase over the five-year study period of 9% and is slightly less than the corresponding inflation rate calculated for the San Francisco Bay Region.⁸⁰ The most recent annual pension contribution by CMSA for the study period marked 28% of the District’s total annual payroll for the corresponding fiscal year (2013-2014).⁸¹

CMSA’s pension contributions have increased by 9% over the five-year study period, and as of 2013-2014 account for 28% of total payroll.

CMSA’s Pension Contributions

Table 4.128 | Source: CalPERS and Marin LAFCO

2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
\$1,071,270	\$1,097,126	\$1,130,352	\$1,202,050	\$1,170,254
Five-Year Average				\$1,134,210
Five-Year Trend				9.24%

Funded Status

CMSA’s unfunded liability – tally of pension monies owed and not covered by assets – ended the study period at \$6.445 million and as such represented 45.4% of the District’s unrestricted fund balance as of June 30, 2014. This former amount produces a funded ratio of 82% based on market value. It also reflects an overall improvement of 15% over the preceding four-year period.⁸²

CMSA’s unfunded pension liability has decreased over the last four years of the study period by (21%) and ended the term at \$6.445 million; the equivalent of an 82.0% funded ratio.

CMSA’s Pension Trends

Table 4.129 | Source: CalPERS and Marin LAFCO

	Unfunded Liability	Funded Ratio
2009-2010	n/a	n/a
2010-2011	\$8,103,016	71.28%
2011-2012	\$9,660,173	67.97%
2012-2013	\$8,765,885	72.66%
2013-2014	\$6,445,664	81.98%
Four-Year Average	\$8,243,685	73.47%
Four-Year Trend	(20.5%)	10.70%

⁸⁰ According to the United States Department of Labor the overall inflation rate in the San Francisco Bay Area region between 2010 and 2014 tallied 10.77%.

⁸¹ CMSA’s covered annual payroll in 2013-2014 totaled \$4.173 million.

⁸² Pension information for 2009-2010 is not available.

Amounts above are show in market form and reflects the immediate and short term values of the pension with respect to assets and liabilities (i.e., here and now).

7.4 Revenue to Expense Trends

A review of CMSA’s actual revenues and expenses during the study period as shown in the audited financial statements and specific to fiscal years 2009-2010 to 2013-2014 shows the agency experiencing net losses in four of the five years. Overall actual expenses – which include outlays for depreciation – outpaced actual revenues over the 60 month period by (2.8%) with the former averaging \$15.707 million compared to the latter averaging \$16.115 million. Moreover, the referenced budget gap has been widening with the growth rate of actual expenses increasing more than 4 to 1 over the growth rate of actual revenues

On average CMSA’s annual revenue totals have fallen short of annual expense totals – which including booked depreciation – by (2.8%) over the study period. This gap has also increased during the 60 months on a 4 to 1 ratio. However, removing depreciation as a booked expense produces a positive revenue over expense average for CMSA over the 60-months at 22.9%.

CMSA’s annual budget reflects five distinct categories within its revenue ledger. Sewer treatment service charges to the member-agencies accounted on average for 92.5% of all revenues during the study period. The remaining revenues – which account for 7.5% of the average total – were largely drawn from maintenance contract fees and investment interest. CMSA books 10 distinct categories within its expense ledger. Over the study period salaries and benefits tallied the largest average expense for CMSA at 42.5% of the total. The next highest average expense tally was drawn from depreciation and accounted for 20.6%.

Top Average Revenues:

- 1) Treatment Charges @ 92.5%
- 2) Contract Maintenance @ 4.2%

Top Average Expenses:

- 1) CMSA Contract @ 28.6%
- 2) Collection System @ 25.9%

CMSA Actual Revenue Trends | Study Period

Table 4.130 | Source: CMSA Financials and Marin LAFCO

Category	2009	2010	2011	2012	2013	Trend	Average	Share of Average
	2010	2011	2012	2013	2014			
Sewer Treatment Charges	14.587	14.851	14.396	14.095	14.722	0.9%	14.530	92.5%
Contract Maintenance Fees	0.351	0.314	0.296	1.112	1.226	248.79%	0.660	4.20%
Other Operating	0.309	0.250	0.388	0.403	0.384	24.19%	0.347	2.21%
Investment Earnings	0.133	0.090	0.065	0.102	0.040	(69.49%)	0.086	0.55%
Other Non-Operating	0.195	0.030	0.95	0.46	0.047	(75.72%)	0.083	0.53%
Totals	15.578	15.537	15.242	15.760	16.421	5.42%	15.707	100%

amounts in millions

CMSA Actual Expense Trends | Study Period

Table 4.131 | Source: CMSA Financials and Marin LAFCO

Category	2009	2010	2011	2012	2013	Trend	Average	Share of Average
	2010	2011	2012	2013	2014			
Salaries and Benefits	6.107	6.520	6.340	6.722	8.585	40.59%	6.855	42.54%
Treatment Plant	1.268	1.195	1.317	1.300	1.340	5.65%	1.284	7.97%
Repairs and Maintenance	0.545	0.581	0.593	0.917	1.175	115.48%	0.762	4.73%
Permit Testing	0.089	0.087	0.090	0.107	0.110	23.08%	0.097	0.60%
Depreciation *	2.263	3.605	3.663	3.506	3.562	57.38%	3.314	20.57%
Insurance	0.090	0.084	0.096	0.098	0.097	7.80%	0.092	0.58%
Utilities	0.379	0.364	0.383	0.431	0.471	24.40%	0.406	2.52%
General Administration	0.694	0.624	0.604	0.498	0.504	(27.37%)	0.585	3.63%
Interest Expense	2.849	2.781	2.703	2.702	2.536	(10.97%)	2.714	16.84%
Other Non-Operating	0.000	0.004	0.000	0.007	0.001	335.82%	0.002	0.002%
Totals	14.287	15.850	15.762	16.292	18.386	28.69%	16.155	100%
... Less Depreciation	12.024	12.245	12.009	12.786	14.824	23.29%	12.778	100%

amounts in millions

Net with Depreciation

Year Ending \$1.290 (\$0.312) (\$0.520) (\$0.532) (\$1.964)

Net without Depreciation

Year Ending \$3.554 \$3.292 \$3.233 \$2.974 \$1.597

* Please note depreciation is shown as an operating expense in the financial statements in step with generally accepted government accounting standards, and as such impacts – and often negatively – gross profit or total margin. Depreciation takes into account the wear and tear on physical infrastructure, such as sewer lines, pumps, and other capital equipment. Government accounting standards direct agencies to spread out the costs of replacing these assets over the long term, which generates the term depreciation or amortization. The “charge” for using these assets during the period is a fraction of the original cost of the assets based on the expected life of the assets and presumably is rolled into the agencies’ fund balance at the end of the fiscal year and as part of the restricted reserve.

CENTRAL MARIN WASTEWATER STUDY | GLOSSARY OF COMMON TERMS AND ACRONYMS

“Agricultural lands” under LAFCO law means land currently used for the purpose of producing an agricultural commodity for commercial purposes, land left fallow under a crop rotational program, or land enrolled in an agricultural subsidy or set-aside program.

“Annexation” means the inclusion, attachment, or addition of territory to a city/town or special district.

“Annual Flow” is the average flow for an individual year.

“Average Day Flow” is the amount of wastewater used every day within a specific period of time.

“Assessor acreage” is defined as the total acreage of a parcel for local property assessment and taxation purposes, less any part of the parcel subject to a “public way.”

“Assessor parcel” is a number assigned to parcels of property by the tax assessor of a particular jurisdiction for purposes of identification and record-keeping.

“Association of Bay Area Governments” or **“ABAG”** is the designated council of government agency for the nine county Bay Area region and tasked with regional land use planning and research.

“Buildout” refers to a designated area’s – individual community, region, or county – ultimate development and population based on adopted plans or policies. Buildout estimates generally adjust – and typically upwards – as adopted plans and policies are revisited and amended.

“California Coastal Commission” is a subdivision of the State of California tasked with overseeing development, uses, and access along the state’s coast.

“California Environmental Quality Act” or **“CEQA”** prescribes standards for State and local agencies to identify, disclose, and mitigate potential project impacts on the environment.

“California Public Employees’ Retirement System” or **“CalPERS”** is an agency of the State of California that manages retiree pension and health benefits for the State and contracting local agencies.

“California Regional Water Quality Control Board” or **“RWQCB”** is comprised of nine regional boards based on watersheds and water quality requirements that makes critical water quality decisions for its region, including setting standards, issuing permits (waste discharge requirements), determining compliance with those requirements and taking appropriate enforcement action.

“Central Marin Sanitation Agency” or **“CMSA”** is a Joint Powers of Authority (JPA) formed in 1979 to provide wastewater treatment and disposal services on behalf of its four-member agencies (RVSD, CSD No. 2, SRSD, City of Larkspur) to an estimated service population of 95,428 as of the term of this study period within Central Marin.

“Certificate of completion” is the document issued by LAFCO that confirms a change of organization or reorganization has been approved and ordered.

“Change of organization” means any of the following:

- city/town incorporation
- special district formation
- annexation to a city/town or special district
- detachment from a city/town or special district
- disincorporation of a city/town
- dissolution of a special district
- consolidation of cities/towns
- consolidation of special districts
- merger of a special district into a city/town
- establishment of a subsidiary special district
- exercising new services or divesting existing services for a special district

“Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000” or **“CKH”** refers to the statute governing LAFCOs’ authority, powers, and duties.

“Coastal plan” is a local plan prepared by cities and counties lying within the coastal zone. Until the local coastal plans are certified, the California Coastal Commission issues coastal development permits.

“Commissioner” means an appointed member on LAFCO.

“Community plan” is a focused planning policy document that is part of a city/town or county general plan. The community plan addresses a particular region within the overall planning area of an agency and is adopted in the same manner as a general plan. Also called area plan.

“Consolidation” means the uniting or joining of two or more cities/towns located in the same county into a single new successor city/town or two or more special districts into a single new successor special district.

“Corrective maintenance” is a maintenance task performed when signals indicate a fault so that an asset can be restored to its operational condition.

“County Sanitary District No. 1” or **“RVSD”** is a wastewater collection system agency formed in 1899 to provide services to an estimated service population of 40,809 as of the term of this study period within Central Marin.

“County Sanitary District No. 2” or **“CSD No. 2”** is a wastewater collection system agency formed in 1901 to provide services to an estimated service population of 9,874 as of the term of this study period within Central Marin.

“Current ratio” is a financial measurement of an organization’s liquidity in meeting short-term obligations, such as payroll. A ratio of 1.00 or higher is desirable.

“Debt to net assets” is a financial measurement of an organization’s capital in terms of existing long-term debt load. The lower the percentage the better.

“Dependent special district” under LAFCO law means a special district whose board of directors are directly appointed by another legislative body, such as a city/town council or board of supervisors.

“Detachment” means the exclusion, deletion, or removal from a city/town or special district of any portion of the territory of that city/town or special district.

“Disadvantaged Unincorporated Community” or **“DUC”** is defined as an area of inhabited territory located within an unincorporated area of a County in which the annual median household income is less than 80 percent of the statewide median household income.

“Diseconomies of scale” is an economic concept when increase in output results in production of goods and services at increased per-unit-costs.

“Disincorporation” means the dissolution, extinguishment, or termination of the existence of a city/town and the cessation of its corporate powers, except for the purpose of drawing down the affairs of the city/town.

“Dissolution” means the disincorporation, extinguishment, or termination of the existence of a special district and the cessation of all its corporate powers, except as LAFCO may otherwise provide for the purpose of drawing down the affairs of the special district.

“Dry-weather flow” means the flows in a wastewater system during periods of dry weather in which the system is under minimum influence of inflow and infiltration.

“Earned Income” means the income derived from active participation in relation to a trade or business including service revenue, wages, salary, commissions and bonuses.

“Executive Officer” means the person appointed by LAFCO to oversee the day-to-day business of the commission.

“Equipment Replacement Ratio” means the number of years it would take an agency to fully fund its depreciable capital asset inventory.

“Fats, oils and grease” or **“FOG”** is any substance such as vegetable or animal product that is used in, or is a byproduct of, the cooking or food preparation process, and that turns or may turn viscous or solidifies with a change in temperature or other conditions and often times the cause of blockages for wastewater collection and treatment systems.

“Formation” means the creation of a special district.

“Fund Balance” is the difference between assets and liabilities in a governmental fund.

“Greywater” refers to wastewater from clothes washing machines, showers, bathtubs, hand washing, lavatories and sinks.

“Groundwater” is water stored underground in rock crevices.

“Housing element” by law is every city and county in California must adopt a Housing Element as part of its General Plan.

“Incorporation” means the creation or establishment of a city/town.

“Independent special district” under LAFCO law means any special district having a legislative body all of whose members are elected by registered voters or landowners within the district.

“Inflow and Infiltration” or **“I/I”** means storm and or groundwater that enters wastewater systems through cracked pipes, leaky manholes or improperly connected storm drains. Most inflow comes from storm water and most infiltration comes from groundwater.

“Inhabited territory” under LAFCO law means territory where there reside 12 or more registered voters.

“Island” under LAFCO law is unincorporated territory entirely or substantially surrounded by a city, or territory surrounded by a city on one or more sides and the Pacific Ocean on the remaining sides.

“Joint Powers Authority” or **“JPA”** is an entity permitted under the laws of some U.S. states, whereby two or more public authorities (e.g. local governments, or utility or transport districts), not necessarily located in the same state, may jointly exercise any power common to all of them.

“Jurisdictional Boundary” is a geographic area in which an agency may provide its service(s).

“Las Gallinas Valley Sanitary District” or **“LGVSD”** is a wastewater collection system agency formed in 1954 to provide services to an estimated service population of 28,475 as of the term of this study period within Central Marin.

“Local agency formation commission” or **“LAFCO”** is a subdivision of the State of California tasked with overseeing the establishment, expansion, and organization of cities/towns and special districts in all 58 counties.

“Latent service” means those services, facilities, functions, or powers authorized by the principal act under which the special district is formed, but that are not being exercised as determined by LAFCO.

“Marin Municipal Water District” or **“MMWD”** is an independent special district that provides potable water service to an estimated service population of 186,048 as of the term of this study period within the central and southern urban corridor in East Marin.

“Merger” means the termination of the existence of a special district when the responsibility for the functions, services, assets, and liabilities of that district are assumed by a city/town.

“Million gallons per day” or **“MGD”** is the rate of flow of wastewater equal to 3.1 acre-feet per day.

“Municipal service review” or **“MSR”** refers to a LAFCO study that evaluates the availability, performance, and need of governmental services within a designated geographic area of one or more counties and culminates with making a series of mandated determinations. These studies are required to be prepared by all LAFCOs every five years as of January 1, 2008.

“Murry Park Sewer Maintenance District” or **“MPSMD”** is a wastewater collection system agency formed in 1949 to provide services to an estimated service population of 191 as of the term of this study period within Central Marin.

“North Marin Water District” or **“NMWD”** is an independent special district that provides potable water service to the northern urban corridor in East Marin with an estimated service population of 62,891 as of the study period term. NMWD also operates a potable water system in the Point Reyes Station area in West Marin with an estimated service population of 1,954.

“Operating margin” is a financial measurement of an organization’s profitability with respect to net income.

“Organic matter” refers to plant and animal residues made by living organisms and commonly present in untreated water.

“Outside service extension” means the delivery of new or extended municipal service by contract or agreement between a city/town or special district with a landowner beyond the agency’s jurisdictional boundary as approved by LAFCO.

“Peak-day flow” refers to the single highest production tally or total for a wastewater system during a 24-hour period.

“Per capita flow” refers to the average amount of wastewater used per person during a standard time period, generally per day, month, or year.

“Potable water” refers to water that can be directly consumed by humans.

“Rezoning” is a city/town’s primary instrument for implementing the general plan. Rezoning divides a community into districts or zones that specify the permitted/prohibited land uses for territory outside a city/town's corporate limits. Rezoning has no regulatory effect until the property is annexed.

“Prime agricultural land” under LAFCO law generally means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and meets certain criteria under statute.

“Preventative maintenance” is a maintenance task performed according to a predetermined schedule rather than in response to a system failure.

“Principal act” refers to the section of State law under which a special district’s authority, governance, powers, and duties are codified.

“Proposition 13” passed by nearly two-thirds of California voters in 1978 that declared property taxes were to be assessed by their 1975 value and restricted annual increases of the tax to an inflation factor, not to exceed 2% per year. A reassessment of the property tax can only be made a) when the property ownership changes or b) there is construction done.

“Proposition 218” is a constitutional amendment passed by voters in 1996 that protects taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent.

“Recycled water” refers to treated wastewater used for non-potable uses, such as irrigation and industrial plumbing.

“Reorganization” means two or more changes of organization, such as a concurrent annexation and detachment, contained in a single proposal.

“Reservoir” is a pond, lake, or basin, either natural or artificial, for the storage, regulation, and control of water.

“San Quentin Village Sewer Maintenance District” or **“SQVSMD”** is a wastewater collection system agency formed in 1962 to provide services to an estimated service population of 89 as of the term of this study period within Central Marin.

“San Rafael Sanitation Agency” or **“SRSD”** is a wastewater collection system agency formed in 1947 to provide services to an estimated service population of 40,744 as of the term of this study period within Central Marin.

“Sanitary Sewer Overflow” or **“SSO”** is a condition in which untreated sewage is discharged from a sanitary sewer into the environment prior to reaching sewage treatment facilities.

“Senate Bill 244” requires cities and counties to address the infrastructure needs of unincorporated disadvantaged communities in city and county general plans and LAFCO Municipal Service Reviews (MSRs) and annexation decisions.

“Senate Bill 375” directs the California Air Resources Board to set regional targets for reducing greenhouse gas emissions.

“Sewer System Management Plan” or **“SSMP”** is a document that describes the activities your agency uses to manage your wastewater collection system effectively.

“Sphere of influence” or **“SOI”** means a plan for the probable physical boundaries and service areas of a city/town or district as determined by LAFCO. All boundary changes, such as annexations, must be consistent the agencies’ SOI within limited exceptions.

“State Water Resources Control Board” or **“SWRCB”** was created by the State Legislature in 1967 and protects water quality by setting statewide policy, coordinating and supporting the Regional Water Board efforts, and reviewing petitions that contest Regional Board actions. Together with the Regional Boards, the State Board is authorized to implement the federal Clean Water Act in California. The State Board also is solely responsible for allocating surface water rights.

“Study period” in this study refers to the five-year period between 2010 and 2014 in which data was collected and analyzed.

“Subsidiary district” means a special district in which a city/town council is designated as, and empowered to act as, the ex officio board of directors of that district.

“Total assessed value” is the value of a residence for tax purposes and takes comparable home sales and inspections into consideration. It is the price placed on a home by the corresponding government municipality to calculate property taxes.

“Total margin” is a ratio to determine the fiscal health of an organization by dividing net income by total revenues to analyze its total profitability.

“Uninhabited territory” under LAFCO law means territory where there reside less than 12 registered voters.

“Unrestricted fund balance” is a part of the governmental fund that are free from any external restrictions and available for general use.

“Urban limit line” is a planning boundary established by a city/town or county that shows the limits of urban development as defined by the agency. Also referred to as urban development area, urban development boundary, etc.

“Watershed” refers to the land area that drains water to a particular stream, creek, river, or lake.

“Wet-weather flow” is a wastewater flow during wet-weather seasons with substantial concentrations of inflow/infiltration into the wastewater system.

“Zoning” is the primary instrument for cities/towns and counties to implement a general plan. Zoning divides a community into districts or zones that specify the permitted/prohibited land uses.



SUPPLMENTAL REPORT

July 24, 2017

TO: Marin Commissioners

FROM: Rachel Jones, Administrative Analyst

**SUBJECT: Central Marin Wastewater Study |
Comments on Draft Report and Staff Reponses**

The Commission will review written comments received on the draft report prepared as part of the Central Marin Wastewater Study. Staff responses to the written comments are also provided for Commission review.

The Marin Local Agency Formation Commission (LAFCO) received seven written comment submittals on the draft report prepared as part of the Central Marin Wastewater Study during the 75-day review period initiated after the April 13th meeting. These submittals were received in order of date from the following persons or agencies:

1. Judy Schriebman
2. County Sanitary District No. 2 (Ross Valley)
3. County Sanitary District No. 2 (Corte Madera)
4. San Rafael Sanitation District
5. Murray Park and San Quentin Village Sewer Maintenance Districts (joint)
6. Pamela Meigs
7. Central Marin Sanitation Agency

Copies of the comment letters follow and are accompanied by staff responses that note – and among other items – when corresponding changes are reflected in the final report.

Attachments: as stated

May 26, 2017

Marin LAFCO
1401 Los Gamos Drive, Suite 220
San Rafael, CA 94903

Attn: Keene Simmons

RE: Comments on LAFCO Waste Water Study draft report:

Dear LAFCO Board:

I want to make clear at the outset that the following comments are my personal comments as a private citizen, member of the community and taxpayer and do not reflect the official response of the Board of Directors of the Las Gallinas Valley Sanitary District. However, my position as a Director on the LGVSD board has certainly informed some of these opinions.

I appreciate the amount of work done by LAFCO staff in a subject that is not part of their everyday duties and may be somewhat opaque to them in their capacity primarily as planners. It is a massive document into which staff has attempted to concisely put a great deal of information. As such, staff is to be congratulated for undertaking such a project with so few people to do the work.

There are a number of errors of fact that should be corrected that are simple fixes. However, there are also some more serious errors ~~which that~~ should also be corrected.

The Executive Summary for example is extremely problematic. While this is clearly a LAFCO document, for LAFCO purposes, these reports need to be understandable and clear to the average citizen reader in order to be useful in a broader capacity. In my comments, I have tried to point out where unclear or bureaucratic language interferes with clarity and understanding.

1-1 More troubling, however, is the heavy planning bias shown in some of the conclusions. This is demonstrated through the use of planning terminology (language usage bias; unclear language or bureaucratese vs clear English) and unfamiliarity with the work of the sewage agencies, real world site constraints and daily operations.

The Conclusions section is also troubling. Forced generalities and a misunderstanding of how wastewater utilities operate form the core of my complaints. The report seems to be guided to highlight problems while ignoring the contributions, collaborations and work of our agency, for one, in meeting Climate change goals, adapting to Sea Level Rise, work on Recycled water, waste to energy work, and collaborative partnerships with NBWA, NBWRA, and our support via CASA, WERF, WaterReuse, and other state groups. This unfairly portrays our District, and perhaps other Districts, by lumping together very different agencies to attempt some generalizations.

Specific comments on the Executive Summary:

1.2 #2.4— “At buildout” is a moving target and not a fixed number. These projections and numbers change with each new GP/CWP update. I think this statement needs to be qualified or specifically range dated in order to know what this actually means. As a non-planner, I thought “Buildout” meant “We are done; there is no more land to do anything with.” Now I know that this perception is

incorrect and I assume that I am not alone in this assumption. Later in the document, Point #3 even says that “buildout estimates will change and increase in future” but this point that buildout is not a fixed number needs to be made clear here.

5.1 Conclusions

1.3 # 1—Agencies can accommodate more growth only by increasing capacity, which is very expensive. Land resources are also quite limited. Onsite or satellite treatment facilities may help, but this needs coordination with city and county planning as we await State Regulations, which are in process. “Accommodation” of growth, like magic, comes with a price. Sewage agencies neither inhibit nor encourage growth; we exist to serve. The language of “significant influence” seems to imply an agenda at sewage agencies that we don’t have. We are more influenced by other agencies, such as the City of San Rafael and the County of Marin, who are in turn influenced by the State and Regional agencies, than influencers in this regard.

1-4 # 2—Language: “outperforming” should be replaced by “exceeding.” This language seems to imply that growth is always good; all growth, all of the time. That is not my experience. Cancer is all growth, all of the time.

1-5 # 3—“Diseconomies of Scale.” As non-planner or economist, I have no idea what this means. Can there be a simpler, clearer wording to describe this? I also disagree with the statement made, that “...during the study period with the combined increases in operating expenses outpacing operating revenues by more than three-fold.” Revenues do not exceed operating expenses. We don’t run at a deficit. We do, like most capital projects, have to borrow for capital infrastructure, much like homeowners take out a loan. The loans are paid off with projected revenue, and we have a 5 year budget process to make sure they do. Can this statement please be clarified or corrected?

1-6 # 4— “...with favor assigned to independent agencies”? The word “public” or “publically elected boards” needs to be added to this phrase after “independent”, otherwise this is unclear. Both Ross Valley and LGVSD are governed by a *publically* elected board of Directors rather than a JPA (like CMSA), or other structure, and this is what the public seems to favor by your analysis.

1-7 # 7—Since wastewater demand is predicated on potable water demand, there should be language linking the drought, increasing water rates, etc. with decreasing wastewater (WW) usage. Grey water systems that resupply the garden with shower and washer water also lead to less WW, and again are drought, citizen action, and water rate dependent. I would avoid the term “normal conditions” unless these are spelled out. With Climate Change, there may be a new “normal,” or no normal at all. Perhaps “historical” or “the norm for this study period” could be used.

1-8 # 12—“Affected agencies should explore...”; we agree and we are doing this, in active partnership with county of Marin and independently in our own planning. I suggest the following, “Affected agencies which are not already exploring these issues, should explore and implement...” I think you’ll find that many of us in this study are very aware of this issue and are taking pro-active steps. The way this is worded implies the opposite, which is incorrect.

5.2 Recommendations

1-9 # 1—I have trouble understanding #1 re: DACs. We offer the same service to all. We have to by law. I think this is true for all Sewage agencies. No DACs getting worse service. This seems like boilerplate from some other report.

1-10 # 8—If the public holds an elected board as better governance than the JPA management (Conclusion #4), then any consolidation must incorporate an elected board as the governing structure. Please add this.

1-11 #9—Septic systems, when well run, do the job efficiently, and homeowners are less likely to put toxic products down into them, unlike sewer systems. They also replenish groundwater, which in drought times is highly useful. “Well managed” is the point here. Education goes a long way in helping residents understand the care and feeding of their septic system. Septic systems should be evaluated on a case-by-case basis here, not with a broad brush bias.

6.2 Location and Characteristics of Any DAC Comments

1-12 #2. —“Proximity” only exists on a flat world, non-topographic map. The unincorporated community of Nicasio lies on the other side of a high ridge, miles away from LGVSD, down a steep and narrow canyon. It would require pumping uphill from each property and laying miles of new pipe to the district; very expensive and wasteful given the energy cost of pumping sewage. This is not in keeping with Climate Change goals. There are local solutions that are much more efficient, including properly maintained septic systems. This suggestion seems to be ignoring topography as well as other onsite, local solutions that are being developed at a rapid pace. Changing the regulations on permitting of composting toilets would be far cheaper than extending a pipeline to a far away centralized sewage treatment system for this rural area. These points need to be added, otherwise this point looks as if LGVSD could easily or cheaply accommodate treating Nicasio’s sewage.

6.3 Capacity Comments

1-13 #1—I am not sure why putting all the districts into an “Average” is helpful or useful information, as each is independently run, managed and regulated. The independent reports are useful. This paints a picture and draws conclusions that are not very accurate given the individual characteristics of each agency. Well-performing agencies are being lumped in with ones having older and more problematic infrastructure or other historical issues. Also, LGVSD was put into “Central Marin” for the purposes of this study, and for political (District 1) partially shared boundary reasons, but I find this confusing given that Central Marin Sanitation is a specific agency with a specific boundary that is different from LGVSD’s. We also treat the WW of the Miller Creek Watershed and a small part of Hamilton (Novato); this should be corrected. We are usually associated with Northern, not Central, Marin.

6.4 Agencies’ Financial Ability Comments

1-14 #3—is partially incorrect. We do not need a 2/3 vote. We are special districts and come under Proposition 218 law for rate increases. This should be corrected.

1-15 #6 and #7—Wouldn’t comparing our industry to comparable industries (e.g. other sewage agencies) in the Bay Area be more useful than comparing us to a general corresponding inflation rate? Our infrastructure puts us into a quite specific Industrial category. Again, this text seems to be implying poor management or excessive rates without taking into account that these facilities were

run well, for many decades, and are now nearing their end of life, which requires a substantial capital investment to bring up to modern standards.

6.5 Status and Opportunities Comments

1-16 # 3. —“...relatively limited engagement between LGVSD and remaining affected agencies.” This statement demands retraction. We coordinate with CMSA on our FOG program; we do joint education outreach via the monthly managers meeting; we have joint emergency agreements with other Marin Sanitation agencies, and we are constructing an Operations Control Center with an educational area to serve the entire Marin County water and wastewater agencies area. We also coordinate with other California sewage agencies via CASA, including an annual Legislative visit day in Sacramento. We are members of NBWA (with 5 county members and many North Bay cities), have joint MOU’s with MMWD and NMWD, and are aligned with the North Bay in securing recycled water money via NBWRA (North Bay Water Reuse Association) and the bay area IRWMP. If anything, other southern Marin sewage agencies have failed to join in with all we are doing for the benefit of our ratepayers. We are also actively working with a private consultant on a sewer lateral ordinance for all of Marin so that each jurisdiction has similar requirements and plumbers won’t have to consult a map when laying in a lateral. There is much more cooperation and sharing of information and skills than is recognized by this #3. This point should either be stricken OR reworked to show how much cooperation actually exists among Marin sewer agencies. Again, I feel this shows a planning bias towards consolidation rather than a fair look at how much cooperation actually occurs.

1-17 # 4—LGVSD also has recycled water agreements with North Marin Water District because our recycled water plant was closer—and more cost effective—to the Hamilton area than Novato Sanitary was. This is an additional partnership. Our collaborative and cooperative efforts are significant. Recycled water *distribution* within our jurisdiction, however, is the responsibility of Marin’s water agencies (MMWD and NMWD). The District has proactively constructed a recycled water plant that can reuse all of the District’s effluent provided there is sufficient demand and storage. We are suppliers of recycled water, not purveyors.

6.7 & 6.8 Matters of Local Interest

1-18 #1, #2—We agree that there is merit for connectivity but this Summary ignores the longstanding work of the North Bay Watershed Association (NBWA) formed and supported by MMWD, LGVSD, Novato Sanitary, County of Marin, Napa, Sonoma, Solano counties and their water and wastewater agencies some 20 years ago. That other Marin Sanitation agencies have not joined this highly successful collaborative effort is unfortunate. NBWA has effectively leveraged this cooperation to secure IRWMP funds and to form the NBWRA (North Bay Water Reuse Association) group, going after Federal dollars for our recycled water efforts. While LGVSD may share jurisdictional areas due to the city of San Rafael overlap, we are much more aligned with North Bay, Novato and County of Marin interests. We are thrilled that outreach has brought the City of San Rafael back to the NBWA table and that Ross Valley recently joined. Given the period of this report (ending in 2014) it does not acknowledge our collaboration with County Parks Dept. on the McInnis marsh project, to help protect against SLR, as well as our BERS project (biogas to energy), upgraded Recycled water facility and our very large photovoltaic system. These projects all help to decrease our carbon footprint and help promote community resiliency in the face of Climate Change.

1-19 These statements in this summary are useless because they ignore specifics in order to make generalizations that paint a false picture or identify holes where none exist.

A. LGVSD Portion of report (p77)

1-20 P80—I find this statement to be strange: that “landowners wanted to remain independent of nearby San Rafael Sanitation.” San Rafael Sanitary is on the other side of Puerto Suello Hill. It is better (cheaper) to rely on gravity for sewage collection, rather than pumping up over a hill, with the cost and the amount of pipeline needing to be lain. And, with anticipated growth in this valley, a separate treatment system made much more sense. I would like to see the basis for this statement. It seems to misunderstand topography again and how sewage treatment plants were located in Marin and operated both historically and today. Given the later development of this 94903 area, it was a good decision to create an independent sanitation agency and treatment plant. Again, topography was dictating a lot of land use policy, and for good reasons.

1-21 P81—“ estimated 63% of all LGVSD’s lying within the unincorporated area and paced by the unincorporated communities of Santa Venetia and Marinwood.” What does “paced by” mean?

1-22 P81&82—No mention of Commercial properties, acreage or numbers. Shouldn’t this be included here as well?

1-23 P81—Do these acreage numbers include or exclude land in open space that is protected and not developable? The map does show them as excluded.

1-24 P83—“Silveira/St. Anthony” should be “Silveira/St. Vincent’s”. The sidebar quote also contains this spelling and place name error.

1-25 P87—“This principal act empowers LGVSD to provide a moderate range of municipal services upon approval by LAFCO. “ I think this 1923 legislative act well precedes the formation of LAFCO (LAFCOs were established in 1963.) This statement seems to give authority over to LAFCO for our operations, which seems incorrect. The second statement I also question: “All other latent powers enumerated under the principal act would need to be formally activated by LAFCO before LGVSD would be allowed to initiate.” Please clarify.

1-26 P88: Russ Greenfield has been on the board longer than Megan Clark. That number needs correcting.

1-27 P91—“The average amount also translates to an estimated 97 gallons per day for each resident.” This “average amount” per day also includes usage by multiple schools, a major hospital, several nursing homes/senior living centers, the Northgate Mall, commercial office buildings, Guide Dogs for the Blind campus, etc. It seems a bit crazy to put that into a “per capita” for residents only. A more accurate picture might be able to be derived from residential winter water usage figures that reflect a more accurate residential per capita usage. MMWD can provide this information.

1-28

P91—"High demand year" does not factor in I&I. The District has been taking steps for years to bring I&I down by tightening connections and requiring homeowner lateral fixes. Even Dry Weather Flows have been affected by I&I, as sewer lines lie below other utilities underground and water seeps in. These figures need to be analyzed bearing this in mind. It appears these per capita measures are not very accurate.

1-29

P96—"Treatment Facility Capacity" is a maximum value, derived from a peak day collection system capacity of 25MGD (which is due to a huge rain event; given that average daily summer flows are around 2 MGD). This treatment capacity in reality relies on "blending" primarily treated sewage with secondarily treated before discharge; not our favorite thing to do and increasingly frowned upon by regulators and Bay Advocates. Again, our actual "good" (non-blending) capacity is 8MGD; still more than needed for average daily summer needs but not nearly 25MGD. When the new plant is fully operational, we should have nearly 20 MGD maximum capacity, without blending. These numbers should be corrected. In addition, I believe the low bars on the graph are showing the results of the drought and homeowner's conservation measures as well as our advocacy in tightening up collection lines while high bars show the effects of storm water I&I in our system.

1-30

P101—LGVSD also has a shared FOG (Fats, Oils & Grease) monitoring program with Central Marin Sanitation overseeing restaurants, cafeterias, etc. where grease traps are used in order to prevent blocked pipes and sewage spills. Please add.

Thank you for considering my comments and corrections. I hope these will help make this report even more valuable, accurate and useful.

Sincerely,

Judy Schriebman
LGVSD Board Member

1.0 Response to Comments | Judy Schriebman, Member of the Public

Comment 1-1

Ms. Judy Schriebman cites general concerns with the draft report’s approach to group all seven affected agencies into one region and as part of a single study. Schriebman adds the draft report focuses more on agency problems and less on agency accomplishments.

Staff believes the regional grouping approach incorporated into the report to cover seven wastewater agencies operating within three adjacent watersheds is appropriate. Most notably, this approach is consistent with the municipal service review statute in terms of emphasizing a specific geographic area as opposed to individual agencies. The emphasis on a geographic area also provides appropriate context in assessing the availability and performance of similar services within a common area as defined by the Commission (G.C. Section 56430). Accomplishments covering all affected agencies are documented as appropriate.

Comment 1-2

Schriebman makes a general statement the draft report should be amended to more clearly define the use of the term “buildout” and specifically as it relates to time horizons.

Staff agrees with the suggestion and has revised the final report – and in particular within the Executive Summary and Regional Characteristics sections – accordingly to clarify “buildout” is specific to projections drawn from current housing elements adopted by the land use authorities in the region.

Comment 1-3

Schriebman cites concerns with the draft report’s conclusion in the Executive Summary section that the affected agencies collectively have significant influence in growth and development in Marin County. Schriebman asserts the phrase “significant influence” implies the affected agencies have an “agenda” as it relates to dictating land use authorities’ development activities.

Staff notes the underlying intent of the conclusion – which is supported by population projections independently made by Marin LAFCO and reflected in the draft report – is to highlight the integral role the affected agencies have in collectively accommodating development in Marin County. (As noted in the report the affected agencies currently accommodate nearly 50% of all Marin County residents.) This conclusion is further substantiated by noting the direct relationship between existing growth and the availability of public wastewater in the region; i.e. relatively limited development currently exists and/or is planned going forward in the region without connection to one of the agencies’ collection systems. Should any of the agencies’ collection or treatment facilities falter and become subject to a cease and desist order prohibiting new connections this would effectively and immediately curb new growth and development within their sphere of influence. Nonetheless, staff appreciates the word choice “influence” generates an unintended inference, and as such the final

| report has been revised to emphasize the agencies' substantive role in accommodating (as opposed to influencing) new growth in Marin County.

Comment 1-4

Schriebman suggests the draft report's conclusion in the Executive Summary section stating recent growth trends in the region have exceeded earlier estimates be amended. Schriebman specifically suggests the text replace the use of "exceed" with "outperform" to avoid the inference all growth is good.

| Staff agrees with this suggestion and has revised the final report accordingly.

Comment 1-5

Schriebman makes two distinct comments relating to the draft report's conclusions in the Executive Summary section regarding the increasing diseconomies of scale in operating wastewater systems in the region during the study period. The first comment addresses ambiguity with respect to the meaning of diseconomies of scale and suggests a different term be used. The second comment takes issue with the draft report stating the combined operating expenses exceeded combined operating revenues by three-fold. Schriebman notes this conclusion does not apply to LGVSD.

| Staff believes diseconomies of scale is a common and appropriate term for use in the report. Staff also notes the conclusion applies collectively to the region and not to any one specific affected agency.

Comment 1-6

Schriebman calls attention to the draft report's conclusion in the Executive Summary section citing variation in civic engagement in the region and specifically the stated correlation between board type and responsiveness with favor assigned to independent agencies. Schriebman suggests this conclusion also highlight the importance of independent agencies having their own directly elected board.

| Staff agrees with this suggestion and has revised the final report accordingly.

Comment 1-7

Schriebman provides a general comment the draft report should be amended to include additional analysis in connecting documented decreases in wastewater demands during the study period with the drought. It is also suggested the report analyze the impact of grey water systems on reducing wastewater demands in the region.

| Staff believes the report appropriately addresses the relationship between wastewater demands and the drought during the study period and relative to the data readily available. Expanding the analysis to address the impacts of grey water systems in the region would require additional and substantive resources beyond the approved scope of the study.

Comment 1-8

Schriebman supports the draft report's conclusion in the Executive Summary section stating all of the affected agencies should further explore strategies to reduce the impacts of climate change as part of future wastewater planning projects.

| Comment noted.

Comment 1-9

Schriebman notes the draft report's recommendation in the Executive Summary section for the Commission to work with the local agencies in developing a definition of a disadvantaged unincorporated community (DUC) is unnecessary given agencies do not make service distinctions based on residents' economic status.

| Staff believes the recommendation is appropriate to include the report and directly responds to direction from the Legislature to proactively identify and address municipal service issues within DUCs as locally defined (G.C. Section 56430 (a)(1)).

Comment 1-10

Schriebman notes the draft report's recommendation in the Executive Summary section for the Commission to prepare an addendum to fully evaluate options to consolidate public wastewater services in the region should also emphasize the importance of directly elected boards.

| Comment noted.

Comment 1-11

Schriebman comments on the draft report's recommendation in the Executive Summary section for the affected agencies to proactively work to identify and remove septic systems in their jurisdictions. Schriebman counters and outlines benefits to well-run septic systems and suggests the recommendation be amended.

| Staff acknowledges the potential attributes of well-run septic systems as described, but defers to the Legislature's ongoing direction to LAFCOs to proactively match urban development with urban services - like wastewater - whenever possible.

Comment 1-12

Schriebman references the draft report's determination in the Executive Summary section identifying LGVSD as the closest public wastewater service provider for Nicasio; the latter of which previously qualified as a DUC under a statewide definition. Schriebman outlines several service challenges associated with LGVSD potentially extending wastewater services to Nicasio and highlighted by cost.

| Comment noted. Staff adds the determination addresses a specific requirement of Marin LAFCO in identifying any potential service providers to adjacent DUCs as part of the municipal service review process. No other intentions are implied.

Comment 1-13

Schriebman questions the usefulness of the draft report's determination in the Executive Summary section citing changes in combined annual wastewater flow averages in the region during the study period.

Staff believes documenting combined annual wastewater flow averages and changes therein provide helpful context now and going forward and supplement information provided on individual agencies. This includes providing aggregate information on total demand exhibited during the study period throughout the region; the latter of which may prove helpful in the future should a consolidation be further explored as recommended.

Comment 1-14

Schriebman asserts the draft report's determination in the Executive Summary section citing that local financing opportunities to raise rates and establish new assessments are externally constrained under State law requires correction. Schriebman notes the determination incorrectly states user rates and assessments specific to wastewater utilities require two-thirds approval when only a simple majority is needed under Proposition 218.

Staff agrees with the suggested correction and the final report has been revised accordingly.

Comment 1-15

Schriebman comments the draft report determination in the Executive Summary section utilizing the consumer price index as a measurement in evaluating changes in the affected agencies' net assets during the study period provides limited value. Schriebman suggests a more appropriate measurement would involve comparing changes in net assets among sewer agencies throughout the greater Bay Area.

Staff believes the consumer price index is a useful tool to help understand and contextualize changes in local agencies' financial standing. Staff agrees the suggested analysis to compare changes among the affected agencies against other wastewater providers in the greater Bay Area would be useful, but would require additional and substantive resources beyond the approved scope of the study.

Comment 1-16

Schriebman takes issue with the draft report's determination in the Executive Summary section stating there is relatively limited engagement between LGVSD and the remaining agencies in the study. Schriebman notes several examples of joint projects with other agencies and request the referenced determination be retracted.

Staff notes the underlying intent of the determination is to highlight an observed distinction existing with the region between LGVDS and the other six affected agencies as it relates sharing resources as well as other social and economic communities of interests. Examples provided by Schriebman are noteworthy, but generally involve other agencies outside of the region.

Comment 1-17

Schriebman provides additional information regarding the draft report's determination in the Executive Summary section commending LGVSD in taking a leadership role involving recycled water in the region and in partnership with Marin Municipal Water District. This includes noting LGVSD has also partnered with the North Marin Water District.

| Staff appreciates the additional information provided and has revised the final report accordingly.

Comment 1-18

Schriebman makes note of the draft report's determinations in the Executive Summary section addressing matters of local interest and highlights the role and importance of the North Bay Watershed.

| Staff agrees the work of the North Bay Water Association merits recognition and the final report has been revised to include a new determination accordingly.

Comment 1-19

Schriebman expresses concern with the draft report's determinations in the Executive Summary section in addressing matters of local interest by noting they offer broad generalizations rather than specifics, and as such are "useless."

Comment noted.

Comment 1-20

Schriebman comments the draft report's background summary for LGVSD in the Agency Profile section should be expanded to document the importance of topography in the decision to form the District.

| Staff agrees with the suggestion and has amended the final report accordingly.

Comment 1-21

Schriebman requests editing the draft report's jurisdictional boundary summary of LGVSD in the Agency Profile section by replacing the word "paced" in describing historical growth patterns due to its uncertain meaning.

| Staff agrees with the suggested edit and has revised the final report to replace "paced" with "highlighted."

Comment 1-22

Schriebman comments the draft report's jurisdictional boundary summary of LGVSD in the Agency Profile section makes no mention of the extent (number, size, etc.) of commercial properties.

| Staff notes information on commercial and other non-residential property information within LGVSD is provided as part of the accompanying footnote.

Comment 1-23

Schriebman requests clarification in the draft report's jurisdictional boundary summary of LGVSD in the Agency Profile section regarding the breakdown of developed versus open space lands within the District's jurisdictional acreage total.

Staff notes there is approximately 1,281 acres of public open space lands within LGVSD's jurisdictional boundary; an amount that represents 30.3% of the total District boundary. A revision to the final report more clearly notes this information.

Comment 1-24

Schriebman suggests a grammatical correction is needed in the draft report's sphere of influence summary on LGVSD in the Agency Profile section to properly cite the "Silveria/St. Vincent" area.

Staff agrees with the suggested correction and has revised the final report accordingly.

Comment 1-25

Schriebman seeks clarification regarding the draft report's governance summary of LGVSD in the Agency Profile section and specifically the statement the District needs LAFCO approval to activate any latent powers.

State law was amended in 2008 to establish G.C. Section 56824.10 to make it explicit the activation of any latent powers or divestiture of any existing powers by special districts must receive LAFCO approval. Any LAFCO approvals are also subject to standard protest proceedings.

Comment 1-26

Schriebman notes a correction is warranted in the draft report's governance summary on LGVSD in the Agency Profile section regarding board tenure involving member Russ Greenfield and Megan Clark.

Staff agrees with the suggested correction and has revised the report accordingly.

Comment 1-27

Schriebman comments the draft report's wastewater service summaries for all of the affected agencies in the Agency Profile section inaccurately project per capita usage by not excluding flows generated from non-residential users.

Staff notes the per capita measurement is one of several tools used in the report to quantify demand and uniformly applied to all of the affected agencies, and as such serves as a useful comparison given the underlying similarities in the land uses in the region. Incorporating non-residential wastewater flows into per-capita measurements also does not undermine its value in contextualizing demands, and is similarly performed in analyzing other municipal services, like public safety calls. This is because it is reasonable to assume there is a causal relationship that a certain number of residents will generate a corresponding demand for non-residential uses (commercial, retail, etc.) within their communities. It is also unclear whether any

| of the affected agencies could readily extract non-residential wastewater flows for purposes of more precisely isolating just residential uses.

Comment 1-28

Schriebman comments the draft report's wastewater service summary on LGVSD in the Agency Profile section does not incorporate inflow and infiltration.

| Staff notes inflow and infiltration flows are accounted in the projections.

Comment 1-29

Schriebman comments the draft report's wastewater service summary on LGVSD in the Agency Profile section incorrectly identifies the District's daily treatment capacity at 25.0 million gallons. Schriebman comments the true daily treatment capacity is 2.0 million gallons once blending practices are removed.

| Staff notes the practice of discharging partially treated effluent is allowed by the State, and as such the 25.0 million gallon treatment capacity for LGVSD is appropriately cited.

Comment 1-30

Schriebman requests the draft report's wastewater service summary on LGVSD in the Agency Profile section and specific to preventative maintenance document the District's ongoing program with CMSA in reducing Fats, Oils and Grease (FOG).

| Staff agrees with this suggestion and has revised the final report accordingly.



ROSS VALLEY SANITARY DISTRICT

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June 27, 2017

Keene Simonds
Executive Officer
Marin Local Agency Formation Commission
1401 Los Gamos Drive, Suite 220
San Rafael, CA 94903

Dear Mr. Simonds:

The Ross Valley Sanitary District (RVSD or District) Board has reviewed the draft *Central Marin Wastewater Municipal Services Review* (draft MSR), issued by Marin LAFCO in April 2017. RVSD appreciates the opportunity to review and provide feedback on this report. We look forward to working with the five other local governments providing wastewater utility service within the study area, to address the policy and planning issues highlighted by the draft MSR. The RVSD response is organized along the following categories of comments:

- General editorial and report organization
- Comments on the draft MSR Themes
- Comments on the draft MSR Recommendations
- Comments on the RVSD Agency Profile

General Editorial and Report Organization

The draft MSR Summary uses terms such as “Conclusions,” “Themes,” “Recommendations,” “Determinations,” and “Findings.” The report should more clearly define and maintain consistent use of these terms, as they currently mix factual statements, analytic conclusions, and speculative or declarative statements. Common word usage in various areas of the report would be helpful for the report’s diverse audience. Examples include “de-intensifying,” “diseconomies of scale,” and “notional sense.” The agency names should match the related organizing law. For example, San Rafael Sanitation District was formed under California Health and Safety Code 6600 et seq. Sanitary Districts No. 1 and 2 were formed under California Health and Safety Code 6400 et seq. These agencies should not be referred to as “County sanitary districts,” which occurs throughout the report.

2-1

Themes

RVSD has the following responses to each theme statement.

- 2-2 • *No.1 Agencies Have Substantive Influence on Growth in Marin County:* RVSD disagrees with this statement. Wastewater utility agencies are not land use agencies and have no authority over land use and development decisions. RVSD exists to provide wastewater utility service to the Ross Valley service area. The five local land use authorities (County, Fairfax, Ross, San Anselmo, and Larkspur) have authority and responsibility over land use, planning, and community growth decisions. The draft MSR presents no evidence of factors related to wastewater utility service having influenced past or current land use, development, and growth decisions. No information is provided to support the assertion that wastewater utility service availability or utility agencies' policies or practices are a significant factor on future growth in the service areas. The draft MSR notes that both the RVSD service area and the entire MSR study area are close to full buildout based on approved land use and general plans, with approximately four percent (4%) total net new growth anticipated. If this is correct, and future growth will be minimal, there will simply not be substantial future growth to influence in the service areas.
- 2-3 • *No. 2 Service Areas are Nearing Buildout, Growth Exceeding Earlier Estimates:* RVSD agrees with this statement.
- 2-4 • *No. 3 Increasing Diseconomies of Scale:* RVSD disagrees with this statement. The scale of a wastewater utility, in terms of service population or similar measure, is not well correlated with financial health as reflected in such measures as independent bond ratings. The statement is also not supported by the relationship between rates (cost of service) and utility size. All of the agencies face increasing infrastructure replacement costs, similar to most infrastructure-intensive public agencies. The influence of service area size with how efficiently the service is provided, and the resulting cost structures for O&M and capital, is not explained sufficiently to support the Theme.
- 2-5 • *No. 4. Variation in Civic Engagement; Board Type Matters:* RVSD acknowledges this statement, but does not have a basis for evaluating further.
- 2-6 • *No. 5 Immediate Merit to Reorganize MPSMD and SQVSMD:* RVSD agrees with this statement, and would be willing to engage with local government, community stakeholders, and affected customers if a decision is made by the responsible local governments to consider dissolving these sewer maintenance districts and annexing the service areas into the RVSD service area. A notable challenge will be the large difference in current wastewater utility service rates between RVSD and the two county-administered maintenance districts. RVSD's rates are currently approximately twice the rates within MPSMD and SQVSMD.
- 2-7 • *No. 6 Additional Merit to Explore Regional Consolidation:* RVSD agrees with this statement, and in fact commissioned a study of the issue in 2012, but also recognizes the significant organizational and political challenges. The central Marin area has discussed consolidation several times over the past decade, with no substantial changes. As an interim step, there may be merit in exploring more readily achievable "functional consolidation" actions that produce measurable public benefits. Examples of these actions include common contracting of shared outside services, pooling of fleet and specialty equipment resources, provision of technical and O&M services between the public agencies, adopting consistent facility design/construction standards, adopting standard customer Level of Service objectives, and coordinating standard requirements for maintaining and replacing private sewer laterals.

- 2-8 • *No. 7 Wastewater Demands Deintensifying During Normal Conditions:* RVSD recommends changing the word “deintensifying” to “decreasing.” RVSD agrees with the facts behind the statement, but cautions against drawing long-term conclusions from any five-year historic period. Dry weather flows have decreased during the most recent five years of drought, reflecting both lower wastewater generation (water use) by Marin Municipal Water District customers and decreasing local groundwater levels’ influence on dry weather infiltration. Future variables such as annual precipitation and tide level patterns driven by climate change, and increased population density through redevelopment and new housing trends (e.g., Accessory Dwelling Units), may influence future “normal condition” flows.
- 2-9 • *No. 8 Wastewater Demands Intensifying During Peak Day Conditions; Increasing Impacts from I&I:* RVSD agrees with this statement, but cautions against developing long-term projections based on recent trends. Peak day conditions are driven by rainfall events and tide levels, and the resulting Infiltration & Inflow (I&I) through damaged or defective infrastructure. Climate change is impacting long-term rainfall patterns and tide level trends, with indeterminate local-scale outcomes. I&I rates will also be impacted by the extent of public sewer infrastructure upgrades and private lateral/property upgrades. RVSD is making significant capital investments to reduce both public and private sources of I&I to lower future I&I rates and resulting peak day flows.
- 2-10 • *No. 9 Collection System Capacities are Sufficient:* RVSD agrees with this statement, but would emphasize that the continued sufficiency of capacity is dependent on effective infrastructure asset management and re-investment in the aging wastewater system. The determination of “sufficient capacity” should include specifically defined flow conditions such as dry weather, average wet weather daily flow, and peak hour wet weather hourly flow.
- 2-11 • *No. 10 Treatment Systems Capacity are Sufficient to Accommodate Demands Now and Projected Over the Next 10 Years with Some Stress:* RVSD acknowledges this statement, but defers to the evaluation and response provided by Central Marin Sanitation Authority (CMSA), as the agency responsible for assessing demands and capacity factors for the WWTP.
- 2-12 • *No. 11 Near Term Finances are in Good Shape and Highlighted by Liquidity and Capital:* RVSD acknowledges this statement but notes the statement is based on three-year-old financial data that is no longer reflective of current RVSD financial metrics.
- 2-13 • *No. 12 Climate Change Requires Resiliency in Wastewater Planning:* RVSD agrees with this statement. RVSD’s 2016 Strategic Plan specifically includes a policy-level goal to “*plan and mitigate for long-term impacts of sea level rise on RVSD in infrastructure and operations.*” RVSD participated in the development of the *2017 Marin County Sea Level Rise Vulnerability Assessment*, and supports inter-agency coordination and planning for the impacts of climate.

Recommendations

The draft MSR presents eleven recommendations. RVSD offers the following responses to those recommendations directly relevant to RVSD. Recommendations 1, 3, 5, and 10 are not directly relevant to RVSD and therefore are intentionally not addressed.

- 2-14 • *No. 2 CMSA Should Allocate Treatment Capacity Among Member Agencies:* RVSD disagrees with this recommendation for the reasons noted under Theme 1. There is no demonstrated benefit from attempting to allocate treatment capacity by service area.
- 2-15 • *No. 4 CMSA Should Reorganize its Governing Board Structure to Limit or Remove the Larkspur Representative:* RVSD agrees with this recommendation. The City of Larkspur has not had financial, regulatory or functional responsibility for wastewater utility service since 1993. Steps to consider this change should be undertaken with the engagement of both the CMSA Board and the Larkspur City Council. The other JPA agencies should seek to provide reasonable assurance to the Larkspur Council that the quality of governance and management of the JPA can be relied upon to meet the utility service interests that its citizens share with the rest of the JPA service area population.
- 2-16 • *No. 6 Corrective Action is needed to Amend Jurisdictional Boundaries Between Ross Valley and San Rafael Creek Watersheds:* RVSD agrees with this recommendation, and is currently working with SRSD and LAFCO to determine the detailed changes needed.
- 2-17 • *No. 7 Dissolution and Annexation of the MPSMD and SQVSMD into RVSD:* RVSD agrees with this recommendation. The large difference in rates between the two County districts and RVSD should be considered in the planning and evaluation of a future consolidation effort.
- 2-18 • *No. 8 Consider Authorizing an Evaluation of Consolidation of Wastewater Services Between RVSD and SRSD:* RVSD acknowledges this recommendation, and the potential public benefits. The same concerns expressed under Theme No. 6 apply to this recommendation.
- 2-19 • *No. 9 Septic Systems:* RVSD agrees with this Recommendation.
- 2-20 • *No. 11 Agencies Should Coordinate on Resiliency Planning for Climate Change:* RVSD agrees with this Recommendation.

Comments on the RVSD Agency Profile

The Agency Profile section of the draft MSR was previously reviewed by RVSD staff, and a response provided in the April 5, 2017, letter to Marin LAFCO. Although the updated draft MSR made a number of factual corrections, the report’s evaluation of the study period flows and future flow projections raise the same concerns expressed in the April 5 letter. In summary:

- 2-21 • The analysis of flow data and demand projections should more rigorously separate out municipal wastewater flows from rainfall and tidal-dependent I&I flows.
- 2-22 • The stochastic (random) nature of annual wet weather storms and seasonal total precipitation limit the extent to which conclusions for future flows over the next 10 years can be made from 5 years of recent climate (rainfall) patterns.
- 2-23 • Conclusions about system capacity versus wastewater service demand under future forecasts should reflect the preceding two comments, and should include consistent, defined terms for flow conditions. The defined flow conditions should include both a *rate* and a *duration* of the flow condition. An example is the statement that RVSD’s conveyance system has a “capacity of 63.5 MGD.” This value represents a transient hourly peak with the critical infrastructure operating at maximum capacity, and not one that the system could sustain over an extended 24-hour period.

In closing, RVSD appreciates the work by Marin LAFCO to complete this important municipal services review. The Board and management of RVSD look forward to working with Marin LAFCO and our local government partners in the CMSA JPA to pursue those recommendations that have consensus support and clear value towards improved efficiency of wastewater utility service to the Central Marin service areas.

Sincerely,

A handwritten signature in black ink, appearing to read 'M Sylla', with a long horizontal flourish extending to the right.

Mary Sylla
President, Board of Directors
Ross Valley Sanitary District

2.0 Response to Comments | Ross Valley Sanitary District (RVSD)

Comment 2-1

RVSD makes a general comment that terms used in the draft report and specifically within the Executive Summary section, such as “conclusions,” “themes,” and “determinations,” leads to confusion for readers and should be more clearly defined. RVSD also comments the draft report incorrectly refers to County Sanitary District No. 1 and County Sanitary District No. 2 as “County Sewer Districts.”

Staff agrees with the suggestion for more language consistency, and as appropriate staff has revised the final report to provide more clear and uniform terminology throughout the document to further improve its readability to both technical and layman users. However, staff notes – and in response to the commenter’s specific example – the Executive Summary purposely distinguishes between “conclusions” (general policy takeaways), “determinations” (address specific legislative factors), and “recommendations” (specific actions drawn from the determinations) consistent with the municipal service review statute.

Staff separately did not identify any instances in the report in which either County Sanitary Districts No. 1 or No. 2 were referenced as County Sewer Districts.

Comment 2-2

RVSD disagrees with the draft report’s conclusion in the Executive Summary section stating the affected agencies have significant influence on growth in Marin County. RVSD asserts the District exists to only provide wastewater service to the Ross Valley service area and has no authority over land use and development decisions. RVSD also notes Marin LAFCO’s own projection that the affected agencies’ service areas are nearing their planned residential buildout diminishes the role/influence of future growth in the region.

Staff notes the underlying intent of the conclusion – which is supported by population projections independently made by Marin LAFCO and reflected in the draft report – is to highlight the integral role the affected agencies have in collectively accommodating development in Marin County. (As noted in the report the affected agencies currently accommodate nearly 50% of all Marin County residents.) This conclusion is further substantiated by noting the direct relationship between existing growth and the availability of public wastewater in the region; i.e. relatively limited development currently exists and/or is planned going forward in the region without connection to one of the agencies’ collection systems. Should any of the agencies’ collection or treatment facilities falter and become subject to a cease and desist order prohibiting any new connections this would effectively and immediately curb new growth and development in the service area. Nonetheless, staff appreciates the word choice “influence” generates an unintended inference, and as such the final report has been revised to emphasize the agencies’ substantive role in accommodating (and as opposed to influencing) new growth in Marin County.

Staff separately notes the term “buildout” as calculated and used in the report is dynamic and changes in step with updates in the land use authorities’ housing elements. Accordingly, it is equally reasonable for the final report to conclude the region is approaching its current buildout projection while also anticipating growth will ultimately exceed this near-term threshold as land use policies are updated.

Comment 2-3

RVSD agrees with the draft report’s conclusion in the Executive Summary section stating the affected agencies’ service areas are nearing their current planned buildout and recent growth exceeds earlier estimates.

| Comment noted.

Comment 2-4

RVSD disagrees with the draft report’s conclusion in the Executive Summary section noting increasing diseconomies of scale for wastewater services in the region. RVSD states this conclusion does not reflect other financial measurements, such as independent bond ratings, and discounts the relationship between rates and service area.

Staff believes there is sufficient justification provided in the report in substantiating the referenced conclusion. Most notably this includes citing the combined change and increase in operating expenses among the affected agencies during the study period exceeded the combined change and increase in operating revenues by over three hundred percent. Further, the report relies on independent calculations performed by Marin LAFCO based on audited financial statements issued by the affected agencies. The report does not incorporate information generated by credit rating agencies given unfamiliarity in how the ratings are calculated and/or their accuracy.

Comment 2-5

RVSD acknowledges the draft report’s conclusion in the Executive Summary section regarding observed variation in civic engagement among the affected agencies and specifically the stated correlation between board type and responsiveness with favor assigned to independent agencies.

| Comment noted.

Comment 2-6

RVSD agrees with the draft report’s conclusion in the Executive Summary section stating the immediate merit to reorganize and consolidate MPSMD and SQVSMD into the District. RVSD also notes the difference in rates could pose as a challenge in implementing the reorganization.

| Comment noted. Staff also appreciates RVSD’s willingness to actively participate in community outreach going forward in proceeding with implementing the recommendation.

Comment 2-7

RVSD agrees with the draft report's conclusion in the Executive Summary section stating there is additional merit for Marin LAFCO to more fully explore consolidation opportunities in the region.

| Comment noted.

Comment 2-8

RVSD recommends a grammatical change to the draft report's conclusion in the Executive Summary section in describing overall demand trends in the region during the study period to transition from "de-intensifying" to "decreasing."

| Staff notes the draft report purposefully uses "de-intensifying" to describe wastewater flow trends during the study period. Staff believes this term appropriately denotes the duality in which (a) average flow volume decreased in nearly all categories despite a concurrent (b) increase in residential growth. Comments on the changing criteria to describe "normal conditions" is noted.

Comment 2-9

RVSD agrees with the draft report's conclusion in the Executive Summary section stating wastewater demands are intensifying during peak day conditions with increasing impacts from inflow and infiltration. RVSD, however, also cautions against developing long-term projections based on these recent trends given climate change and infrastructure improvements.

| Comment noted, and staff agrees climate change represents a significant variable going forward in addressing inflow and infiltration and should be further explored by Marin LAFCO in subsequent municipal service reviews.

Comment 2-10

RVSD agrees with the draft report's conclusion in the Executive Summary section stating collection system capacities within the region are sufficient to meet current and projected demands through 2024.

| Comment noted.

Comment 2-11

RVSD acknowledges the draft report's conclusion in the Executive Summary section stating treatment system capacities within the region are sufficient to accommodate current projected demands through 2024 with some system stresses. RVSD adds it defers any further evaluation and response on this conclusion to CMSA. .

| Comment noted.

Comment 2-12

RVSD acknowledges the draft report's conclusion in the Executive Summary section stating near-term finances among the affected agencies are in relatively good shape highlighted by liquidity and capital. However, RVSD also comments this conclusion is based on financial data that is three-years old and may no longer reflect current RVSD's financial status.

Comment noted. Staff adds the financial data collected between 2010 and 2014 provides a sufficient snapshot in evaluating the affected agencies' financial standing and management practices therein. It also provides the Commission with an appropriate baseline to be updated and expanded as part of future municipal service reviews.

Comment 2-13

RVSD agrees with the draft report's conclusion in the Executive Summary section calling for additional work by the affected agencies in incorporating climate change resiliency in their wastewater planning. RVSD also notes its 2016 Strategic Plan includes a policy goal to reduce impacts attributed to sea-level rise as well as its participation in the 2017 Marin County Sea Level Rise Vulnerability Assessment.

Comment noted.

Comment 2-14

RVSD disagrees with the draft report's recommendation in the Executive Summary section that CMSA should develop a plan to allocate remaining treatment capacity among member agencies to enhance regional growth management. RVSD adds the District does not believe such an action would be beneficial given the lack of anticipated new growth and development.

Staff believes it would be beneficial to land use authorities and the general public for CMSA to establish an allocation system. More specifically, staff believes an allocation system would help inform decision-making in accommodating additional growth – which will inevitably occur given the State's commitment to ensuring an appropriate job to housing balance – now and as opposed to when circumstances may change. This comment is importantly premised on the presumption that growth will continue in the region, albeit slowly, and eventually it is reasonable to assume more competition/need will emerge for the remaining treatment capacity at CMSA.

Comment 2-15

RVSD agrees with the draft report's recommendation in the Executive Summary section that CMSA should reorganize its governing board structure to limit or remove the Larkspur representative.

Comment noted.

Comment 2-16

RVSD agrees with the draft report's recommendation in the Executive Summary section that corrective action is needed to amend and rationalize jurisdictional boundaries within the Ross Valley and San Rafael Creek Watersheds.

| Comment noted.

Comment 2-17

RVSD agrees with the draft report's recommendation in the Executive Summary section for MPSMD and SQVSMD to be reorganized and annexed therein into the District.

| Comment noted.

Comment 2-18

RVSD agrees with the draft report's recommendation in the Executive Summary section for Marin LAFCO to more fully evaluate consolidation opportunities in the region and specifically within the Ross Valley and San Rafael Creek Watersheds.

| Comment noted.

Comment 2-19

RVSD agrees with the draft report's recommendation in the Executive Summary section for the affected agencies to proactively identify and eliminate septic systems within their service areas.

Comment noted.

Comment 2-20

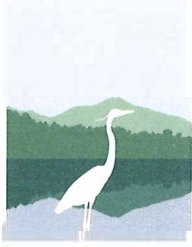
RVSD agrees with the draft report's recommendation in the Executive Summary section calling for additional work by the affected agencies in incorporating climate change resiliency in their wastewater planning.

| Comment noted.

Comments 2-21 through 223

RVSD makes several related comments regarding the draft report's wastewater service summary on the District in the Agency Profile section. This includes suggesting the draft report provide more detail in dividing and analyzing wastewater demand trends.

Staff believes the level and scope of analysis specific to evaluating the affected agencies' wastewater systems appropriately reflects a macro planning review relative to the Commission's regional growth management interests as prescribed by the Legislature. A more micro review of the wastewater collection and treatment facilities – while an option – would require Commission approval to amend the scope of work for the study. Staff also notes the macro approach is appropriate for the specific benefit of developing baseline information with the added option going forward to provide greater detail in subsequent municipal service reviews. Staff has revised the final report to more clearly define flow conditions in the document as requested.



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June 20, 2017

Mr. Keene Simonds
Marin Local Agency Formation Commission
1401 Los Gamos Drive, Suite 220
San Rafael, California 94903

Subject: Comments on Central Marin Wastewater Study

Dear Keene,

The Board of Directors of Sanitary District No. 2 (SD2 or the District) has supported Marin County Local Agency Formation Commission's preparation of a Central Marin Wastewater Municipal Service Review (MSR), and has reviewed the Final Report which was released for public review on April 17, 2017. The public review of Sanitary District No. 2 profile was released for formal public review on December 20, 2016. The District provided comments on January 30, 2017, and LAFCO staff met with the Sanitary District 2 Senior Civil Engineer, Ms. Patel, on March 28th to discuss the District's comments on our profile. The District Board appreciated LAFCO staff meeting with Ms. Patel to review and discuss comments, and understands that some comments were addressed in the revised Draft Central Marin Wastewater Services Study dated April 2017.

Upon review of the Wastewater Study, Ms. Patel and I noted that there were still instances of inaccurate or unclear information, and a few areas that we believe need to be considered in the District's profile before the final draft of the study is accepted. In addition, the District has some comments on other sections of the report. Below, we have referenced statements in the study, followed by our comments.

1.) *The period for collecting data to inform the Commission's analysis....has been set to cover the five year period from 2010 to 2014. (p. 2-2)*

3-1 A study term through 2016 is more appropriate so that the information presented in the MSR and its analysis is reasonably current and accurate. If the LAFCO Commission is agreeable with extending the term, District staff will provide the necessary 2015 and 2016 data.

2.) *Benchmarking Pension Obligations (p. 2-4)*

3-2 Sanitary District No. 2 is included in reference to pension obligations. SD2 does not make PERS pension contributions or have pension liability. It does not have any employees. Town employees perform work

on behalf of SD2. The District pays a portion of Corte Madera staff costs.

3-3

- 3.) *Increasing Diseconomies of Scale- “While buildout estimates will change and increase in the future in step with general plan updates, it is reasonable to assume the underlying constraints towards new growth in Central Marin will persist given community preferences, limiting opportunities going forward to spread out costs among a greater pool of ratepayers. The net effect is a diseconomies (sic) of scale in which the affected agencies’ costs to maintain wastewater infrastructure will continue to exceed associated revenues as evident during the study period with the combined increases in operating expenses outpacing operating revenues by more than three-fold.” (p. 2-7)*

This conclusion is troublesome for several reasons. First, it appears that LAFCO is incorrectly referencing the economic concept of "diseconomies of scale". Diseconomies of scale refers to situations in which marginal costs increase as output increases. Applying this concept to sewer services, would describe a situation where the number of ratepayers served increases while costs per ratepayer are also increasing. What LAFCO apparently is attempting to describe in this section is that future limited growth in the number of ratepayers served will not allow agencies to take advantage of economies of scale to reduce marginal costs. This argument is not backed up by any data that shows economies of scale have been realized in the recent past, nor how they might be realized with future growth.

Additionally, this conclusion apparently assumes that because in certain years costs exceed revenues, that trend is both troublesome and will continue into the future. The nature of infrastructure-heavy services such as wastewater treatment and collection is that there are certain times when large investments are made in capital maintenance or improvements, and those investments often show up in financial statements as large expenditures in certain years, while in other years relatively little is spent. These fluctuations are a normal part of capital planning and should not be assumed to indicate a financial problem nor indicate a long-term trend.

3-4

- 4.) *Variations in Civic Engagement; Board Type Matters- The level and effectiveness of engagement between agency and customer in Central Marin, nonetheless, appears expressively highest among LGVSD and RVSD, and demonstrates a direct correlation between board type and responsiveness with favor assigned to independent agencies. (p. 2-7)*

It is unclear on what this conclusion is based, as there does not appear to be any objective data related to civic engagement in the report. In addition, there are several problems with the assumptions upon which this conclusion is apparently based. First, LAFCO appears to assume that higher levels of civic engagement is a positive thing, when any local official will recognize that high levels of engagement are often directly related to high levels of dissatisfaction among local residents. For example, it is possible that the many past news stories about RVSD governance and legal issues had a direct effect on the level of local ratepayers’ interest in and engagement with the agency in recent years. Second, with the phrase “Board Type Matters” LAFCO apparently conflates correlation with causation by concluding that because LGVSD and RVSD have higher rates of engagement (though no data illustrating this is presented), it is the type of governance which accounts for the difference. This is a leap of logic that is not supported by the information presented.

3-5

- 5.) *Additional Merit to Explore Regional Consolidation- Information collected and analyzed in this study provides sufficient merit for the Commission to evaluate options and merits to reorganize and consolidate public wastewater services in Central Marin and **most pertinently** among agencies in the Ross Valley and San Rafael Creek Watersheds. This topic... responds to Marin*

LAFCO's directive to independently assess the notional sense affirmed in this study that consolidation would appear primed to produce greater accountability and efficiency within the combined watershed. The topic should be premised on identifying merits/demerits of regionalization in improving costs, accountability, and efficiency while being sufficiently fair to all agencies and their ratepayers in terms of shared control. (p. 2-8, similar statements on p. 2-12 and 2-24)

LAFCO does not discount SD2 in its consideration for further study of consolidation with other Districts. LAFCO should define which agencies are included in the Ross Valley Watershed and the San Rafael Creek watershed. These watersheds are not matching with the tables throughout the study, ie. p. 3-3.

LAFCO states that the information in the study provides merit to evaluate potential reorganization or consolidation, yet in no way explains how that conclusion is reached except to cite some undefined "notional sense" that it would be beneficial to pursue. In addition, LAFCO states that that "notional sense" that consolidation may produce "greater accountability and efficiency" yet fails to point to any information in the study which shows how and where such improvements might be gained. These types of vague, undefined conclusions should not be included in a study of local agencies. This section is also problematic as it states that any future consideration of consolidation should be "sufficiently fair to all agencies and their ratepayers in terms of shared control," yet does not address fairness in terms of other things such as assets. For example, the study shows varied levels of investment, and age of sewer lines and related capital equipment among the wastewater collection agencies. Any future study of consolidation must address how these prior investments using ratepayer funds will be accounted fairly in any reorganization or consolidation. This is of particular concern for SD2 as it appears that our sanitary district has been particularly consistent in maintaining its infrastructure over the years. Any future consolidation that either puts that investment in jeopardy or results in SD2's reserves "borrowed" to fund infrastructure in another district at the expense of maintaining SD2's infrastructure would be unfair to SD2 ratepayers. In addition, since SD2 consolidated with the Town of Corte Madera many years ago in order to improve efficiency and achieve cost savings, any discussion of consolidation in the Ross Valley must address how a deconsolidation of SD2 and the Town of Corte Madera and then subsequent consolidation of Ross Valley agencies will affect SD2 ratepayers and the operations of the Town of Corte Madera.

- 3-6 6.) *Year-end profit levels as measured by total margin – the net difference between all revenues less all expenses – largely stayed positive with a combined study period average of 14% with the notable exception CSD No. 2 and CMSA both finished the study period with slight losses. (p. 2-10)*

SD2 would not be considered to have losses if depreciation was not included as an expense. A calculation of the net difference between revenues less expenses is not a great way to show the financial situation of the District.

- 3-7 7.) *CMSA should develop a plan to allocate treatment capacity among its member agencies to enhance regional growth management. This plan would appropriately inform each member agency as well as local land use authorities with more certainty with respect to their ability to forecast and accommodate new development within their jurisdictional boundaries going forward. (p. 2-11)*

It is unclear whether a capacity allocation would in any way be beneficial in planning for new growth or forecasting, or would instead be a useless bureaucratic exercise. Many cities in Marin base their housing growth largely on the Regional Housing Needs Allocation issued by regional agencies (specifically, ABAG and MTC). Unless those regional agencies will consider wastewater collection and treatment capacity limitations in developing their quotas, we do not see how an exercise in allocating capacity will be of much help in land use planning.

- 3-8 8.) *CSD No. 2 should make additional efforts to distinguish itself as a stand-alone governmental entity separate from the Town of Corte Madera. An example herein would include developing stand-alone contracting arrangements with Corte Madera outlining specific services and costs therein with respect to the existing use of Town staff, supplies, and resources in carrying out District duties. (p. 2-11; similar statements on p. 2-23)*

This LAFCO recommendation is accompanied by absolutely no information to support it, so we are therefore unable to adequately analyze whether such separation from the Town of Corte Madera would in any way be beneficial. Many years ago SD2 was effectively merged with the Town (as a component unit), and ever since then the ratepayers have benefitted by sharing costs of overhead (including administration, accounting, et al). Reversing this or in some way accounting differently for shared costs is unclear.

- 3-9 9.) *CMSA should reorganize its governing board structure to limit and or remove the City of Larkspur's presence within the joint powers authority to better align and weight governance with vested participation among member agencies. (p. 2-11)*

Revision of the Joint Powers Authority (JPA) Agreement should address this. Perhaps it makes sense for the JPA Ad hoc and District Manager working group to discuss and make a decision on this.

- 3-10 10.) *Should residential buildout plans proceed as contemplated by the County of Marin and other overlapping land use authorities, the housing stock in Central Marin will increase by 3,352 and result in the estimated addition of 8,268 residents; a net increase of 6.7% over the end of the study period. (p. 2-14; similar comment on p. 3-1)*

The net increase is actually from the end of 2014 to 2024. In addition we find it beneficial for LAFCO to provide an explanation of how this growth was calculated. The study is unclear how the provided numbers were calculated/ forecasted.

- 3-11 11.) *The Commission estimates the average total daily flow of wastewater collected by the seven affected agencies....Additional wastewater flow tallies collectively generated over the 60 month period follow. a.) Average dry-day wastewater flows during the study period tallies 11.1 million gallons, or 91 gallons for every person...c.) Average peak-day wastewater flows generated over 24 hours during the study period tallies 102 million gallons, or 855 gallons for every person (p. 2-18).*

It would be more accurate to not include flows from commercial sites to determine the sanitary sewer generation from each person in the region. A per person comparison for agencies is like comparing apples and oranges because the number of commercial users varies from agency to agency.

- 3-12 12.) *Opportunities to increase direct revenues among all the seven affected agencies in Central Marin in support of their respective public wastewater systems is substantively constrained given two*

external factors...Second, opportunities to raise rates and or establish assessments are constrained under State law to require two-thirds voter approval. (p. 2-20)

This determination is not substantiated by the facts and is inaccurate. First, the assumption is made that adding new customers would provide opportunities to “spread-out costs” among a greater number of ratepayers. It is unclear if per-ratepayer costs would actually decline or perhaps increase in the event of new growth. It could be that the costs to expand the wastewater collection and treatment systems would exceed the revenue collected from new development fees and additional ratepayers. LAFCO should refrain from jumping to such conclusions without adequate analysis. Also, it is better stated “to raise rates and or establish assessments are constrained under State law to require two thirds property owner **written protest**”.

3-13 13.) *Four of the five affected agencies – LGVSD, RVSD, CSD No. 2, and CMSA – with pension obligations finished the study period with funded status ratios near or above 80%; the standard... The remaining agency – SRSD – ended the study period with a funded status – SRSD – ended the study period with a funded status of 72%. (p. 2-22)*

SD2 should not be included in this discussion as it does not have any employees, and therefore does not have pension obligations.

3-14 14.) *Estimated resident growth within the remaining four affected agencies accounts for the remaining 3% of the net over the study period and paced numerically by CSD No. 2 at 88. The other three affected agencies in the region – MPSMD, SQVSM, and CMSA – collectively account for a net increase of 8 over the preceding 60 month period. (p. 3-2)*

This statement and succeeding tables do not seem to make sense. We suggest revising the language.

15.) *Table 3.6 (p.3-8)*

SD2 staff calculates a different amount of Assessor Parcel Acres % of Total, Total Assessor Parcels, and Residential Units.

3-16 16.) *Current ratios- i.e., the amount of available cash and cash equivalents to cover immediate obligations due also finished in the positive for all of the agencies with a combine average of 12 to 1 and bookend by CSD No. 2 at 2 to 1 and SRSD at 41 to 1. (p. 3-24)*

It is unclear how these ratios were calculated. If depreciation was included as an expense, this could affect the calculation of the ratios.

3-17 17.) *Liquidity, Capital, and Profitability (p. 3-24 - 3-27)*

This section discusses indebtedness of the agencies. A measurement of 10.8% for long term debt was given for SD2. SD2 does not have any debt.

3-18 18.) *Preventative Maintenance- Planned Lien Replacement Completed Table (p.4-124)*

The information provided in the study does not match up with the information provided to LAFCO by the District. The actual feet should be as indicated below:

Year	Actual Feet
2010	14000
2011	4220
2012	1210
2013	4693
2014	0

19.)1.0 Overview (p. 4-101)

3-19 District staff is unsure of how LAFCO determined the agencies in the District and the percentages of the area of the District that they incorporate. It appears the provided information in the study is incorrect. District staff determined that Corte Madera accounts for 78% of the District land area, unincorporated County of Marin (including Greenbrae) is 7%, Tiburon covers 12%, and the City of Larkspur is 3% of the area.

20.)3.1 Jurisdictional Boundary (p. 4-105)

3-20 Kentfield is not within the boundary of Sanitary District No. 2.

21.)Peak Day Flows: This measurement has increased overall during the study period by 64.80%. (p. 4-117)

3-21 The average peak weather day flows vary based on the intensity of a storm event experienced during the calendar year. Calculating the increase of peak days flows over five years does not provide meaningful information. The amounts of rain can vary significantly from year to year.

3-22 22.)Table 4.87 Projected Wastewater Flows (p. 4-118)

Please include an explanation of the linear regression calculation of the estimated flows presented and the drop in flows in 2015 as we were unable to verify the figures provided.

3-23 23.)Capacity Tables (p. 4-120 and 4-121)

These tables compare to the average day and average dry-weather day flows to the maximum hydraulic capacity of the of the collection system. A better comparison to show would be the maximum peak hourly and five minute peak flow rates versus the collection system capacity. These comparisons show a false sense of available or unused capacity.

24.)Performance (p. 4-121 - 4-123)

3-24 The information provided for these tables was over fiscal years as originally requested. Marin LAFCO reported the information in the report by calendar year, and the information is inaccurate.

25.)Agency Finances (p. 4-125 - 4-128)

3-25 It appears that depreciation was included as an operating expense, thereby reducing our net asset amount. SD2 does not fund depreciation. It is included in our audited financial statement because it is required for accounting purposes.

3-26 26.)Pension Obligations (p.4-128, information also provided on p. 2-21)

SD2 does not make pension contribution, nor does it have any pension obligations for retired or separated employees. Any reference to pension contributions or liability is not applicable to the SD2.

LAFCO has apparently used the figures for the entire Miscellaneous staff for the Town of Corte Madera for this report. This seems excessive and inaccurate, as only a portion of the Town's staff works on SD2. In addition, much of the maintenance work for SD2 is contracted out to CMSA or private contractors in order to more efficiently operate the sewer collection system. Using the total costs for the entire Town of Corte Madera Miscellaneous employee group is inaccurate and misleading.

3-27 27.) *The first and predominate tier within Category One is based on a 2.5 at 55 formula, and as such provides eligible retirees with...The second tier is based on a 2.0 at 55 formula, and such provides eligible retirees with 20 years of total service credit 40% of their highest one year of salary beginning at age 55 and continuing each year thereafter.*

The Town of Corte Madera has only two retirement tiers. The first one is for "classic" employees and is 2.5% at 55 years of age. The second one, for those that are not "classic" employees, aligns with the CA Public Employees' Pension Reform Act (PEPRA) formula which is 2.0% at 62. Discussing Town of Corte Madera retirement formulas does not pertain to SD2 since we do not have employees of our own.

3-28 28.) *Revenue to Expense Trend, and Tables 4.97 and 4.98*

Depreciation should not be considered a real cash expense.

We thank LAFCO in advance for their time and effort in reviewing and considering the comments presented. Please do not hesitate to contact the Agency's General Manager to discuss any of the comments.

Sincerely,



Diane Furst
President, Sanitary District No. 2

3.0 Response to Comments | County Sanitary District (CSD) No. 2

Comment 3-1

CSD No. 2 makes a general comment that it would be appropriate to extend the draft report's study period term from 2014 to 2016 to reflect more current and accurate information.

Staff believes the five-year data window used in preparing the draft report covering 2010 to 2014 appropriately informs the Commission in analyzing trends and making informed deductions therein with respect to addressing the prescribed population, service, financial, and governance factors required under statute. It is also noted the selected five-year window purposefully aligns with the start of the study's data collection in late 2015 and ensured all agencies' completed audit reports – which typically run one to two years in the rear – were completed. Further, given the report emphasizes averages, extending the study period by two years would not likely substantively impact the resulting analysis.

Comment 3-2

CSD No. 2 makes a general comment it does not make CalPERS pension contributions or have pension liability, and therefore it is inappropriate for the draft report to incorporate Corte Madera's pension information when reviewing the District.

Staff believes it is appropriate to include a review of Corte Madera's pension obligations in step with analyzing CSD No. 2 given the District is a legal subsidiary, and as such is integrated with the legislative, legal, and administrative functions of the Town. This approach, markedly, is consistent with Corte Madera's own financial audit reports for the study period, which incorporate CSD No. 2's assets, liabilities, and equity into the Town's basic financial statements. Additionally, should staffing operations for CSD No. 2 be contracted to another separate legal entity it would be appropriate for Marin LAFCO to amend its analysis accordingly as part of future municipal service reviews.

Comment 3-3

CSD No. 2 disagrees with the draft report's conclusion in the Executive Summary section noting increasing diseconomies of scale for wastewater services in the region. CSD No. 2 comments that there is insufficient information provided to justify the conclusion, and adds fluctuations between costs and revenues are normal in terms of capital planning and should not be indicative of financial issues or long-term trends. CSD No. 2 adds the term "diseconomies of scale" is misused.

Staff believes the term "diseconomies of scale" – which is a general term used in the report to describe financial efficiencies – is appropriately applied in assessing the overall and combined relationship between operating costs and operating revenues among the affected agencies in the region. This comment is substantiated in the report by noting the combined change and increase in operating expenses among the affected agencies during the study period exceeded the combined change and increase in operating revenues by over three hundred percent. Staff agrees this

and other deductions in the report drawn from the 2010 and 2014 period should not be considered absolute, but rather used to inform short-term projections that will be updated – and revised and corrected as warranted – in subsequent municipal service reviews undertaken by Marin LAFCO.

Comment 3-4

CSD No. 2 takes issue with the draft report’s conclusion in the Executive Summary section stating there are variations in civic engagement among the affected agencies in the region and specifically the stated correlation between board type and responsiveness with favor assigned to independent agencies. CSD No. 2 states this conclusion is subjective and not based on facts. CSD No. 2 also states higher levels of civic engagement are often directly related to high levels of dissatisfaction among local residents.

Staff agrees the conclusion is qualitative in nature, and as such is consistent with Marin LAFCO’s quasi-legislative function to make informed recommendations and determinations regarding – and among other prescribed items – civic engagement. Staff is also not aware of a uniformly accepted metric to qualitatively assess civic engagement.

Comment 3-5

CSD No. 2 comments on the draft report’s conclusion in the Executive Summary section stating there is sufficient merit for Marin LAFCO to more fully explore regional consolidation opportunities in the region and specifically within the Ross Valley and San Rafael Watersheds. CSD No. 2 asserts the report fails to appropriately justify the need to further explore consolidation opportunities. CSD No. 2 also notes the report should clearly define which agencies are included in the Ross Valley and San Rafael Creek Watersheds.

Staff believes – and as provided in the draft report – there is sufficient justification for Marin LAFCO to prepare a future addendum to fully explore consolidation opportunities within the region and specifically for the five agencies collectively serving the Ross Valley and San Rafael Watersheds (RVSD, CSD No. 2, CMSA, SQVSMD, and MPSMD). Staff refers to this justification in the report as “notional” given – and as the commenter correctly addresses – no specific quantitative analysis or facts have been generated to date by Marin LAFCO; the latter of which would require additional resources in staff and budget to sufficiently address beyond the approved scope of work for the study. Nonetheless, and consistent with the Legislature’s explicit direction to LAFCOs to explore streamlining and eliminate redundancy in local government whenever possible, there remains notional or theoretical justification to explore consolidation given the existence of four separate and adjacent collection agencies that flow into a fifth agency’s treatment facility. Staff agrees any addendum reviewing consolidation prioritize fairness to ratepayers in recognizing investments infrastructure to date. Staff also agrees and has revised the final report to more clearly identify those affected agencies lying within the Ross Valley and San Rafael Watersheds.

Comment 3-6

CSD No. 2 provides comments on the draft report's conclusion in the Executive Summary section stating – and among other items – all of the affected agencies finished the study period with positive profit levels as measured by total margin with the exception of CSD No. 2 and CSMA. CSD No. 2 notes the conclusion's reliance on total margin and incorporation therein of depreciation is not an effective tool in measuring financial solvency.

Staff notes total margin is one of several metrics used in the draft report to objectively evaluate financial standing and more specifically profitability for wastewater enterprises. Staff agrees depreciation impacts – and often negatively – total margin ratios. Further, and given wastewater agencies' investment and reliance on depreciable physical infrastructure, depreciation is an appropriate expense to consider in evaluating an agency's revenue-to-expense relationship. Nonetheless and in deference to the comment, the final report has been revised throughout to more clearly distinguish the role and impact of depreciation when analyzing the affected agencies' revenue and expense trends through the study period.

Comment 3-7

CSD No. 2 comments on the draft report's recommendation in the Executive Summary section stating CMSA should develop a plan to allocate available treatment capacity among its member agencies to enhance regional growth management. CSD No. 2 comments it is unclear whether such an allocation would prove beneficial in planning or forecasting new growth, and instead may be a “useless bureaucratic exercise.”

Staff believes it would be beneficial to land use authorities and the general public for CMSA to establish an allocation system. More specifically, staff believes an allocation system would help inform decision-making in accommodating additional growth – which will inevitably occur given the State's commitment to ensuring an appropriate job to housing balance – now and as opposed to when circumstances may change. This comment is importantly premised on the presumption that growth will continue in the region, albeit slowly, and eventually it is reasonable to assume more competition/need will emerge for the remaining treatment capacity at CMSA.

Comment 3-8

CSD No. 2 disagrees with the draft report's recommendation in the Executive Summary section stating the District should make additional efforts to distinguish itself as a stand-alone governmental entity. CSD No. 2 finds the recommendation is not sufficiently supported by facts. CSD No. 2 adds the current relationship between the District and the Town of Corte Madera has proved beneficial over the years through cost-sharing and a separation now would be counterproductive.

Staff notes and clarifies the recommendation is for CSD No. 2 to take measures to distinguish itself as a stand-alone governmental entity with the singular task of providing wastewater collection services within its incorporated and unincorporated boundary; it is not a recommendation to reorganize the District as a dependent or independent entity with a different governing board. Staff agrees the function of CSD No. 2 as a subsidiary provides benefits to the ratepayers in terms of streamlining governance decisions with the majority land use authority, Corte

Madera. However, the subsidiary relationship does not waive the Legislature’s expectation exercised through Marin LAFCO that the District take reasonable measures in distinguishing and formalizing its operations apart from Corte Madera for the benefit – among others – of those ratepayers lying outside the Town boundary.

Comment 3-9

CSD No. 2 comments on the draft report’s determination in the Executive Summary section stating CMSA should explore reorganizing its governing board structure to limit and or remove the City of Larkspur. CSD No. 2 affirmatively responds and states this option should be explored by CMSA through a working group organized through the General Manager.

Comment noted.

Comment 3-10

CSD No. 2 comments on the draft report’s determination in the Executive Summary section projecting the overall population in the region will increase by 6.7% through the end of the study term. CSD No. 2 requests LAFCO provide an explanation of how this projection was calculated.

Staff notes the draft report summarizes how population and related housing projections (past and future) are calculated in Chapter Two (Executive Summary) under Section 2.3. Specific factors underlying the population and housing projections made for CSD No. 2 are outlined in Chapter Four (Agency Profile) and detailed in Footnote No. 51.

Comment 3-11

CSD No. 2 comments the draft report’s determination in the Executive Summary section addressing per capita use trends in the region during the study period incorrectly incorporates both residential and non-residential demands. CSD No. 2 adds this calculation should be modified and focus only on residential usage.

Staff notes the per capita measurement is one of several tools used in the report to quantify demand and uniformly applied to all of the affected agencies, and as such serves as a useful comparison given the underlying similarities in the land uses in the region. Incorporating non-residential wastewater flows into per-capita measurements also does not undermine its value in contextualizing demands, and is similarly performed in analyzing other municipal service functions, like public safety calls. This is because it is reasonable to assume there is a causal relationship that a certain number of residents will generate a corresponding demand for non-residential uses (commercial, retail, etc.) within their communities. It is also unclear whether any of the affected agencies could readily extract non-residential wastewater flows for purposes of more precisely isolating just residential uses.

Comment 3-12

CSD No. 2 comments the draft report’s determination in the Executive Summary section stating there are external constraints on the affected agencies in increasing direct revenues is not sufficiently supported by facts. CSD No. 2 separately provides grammatical suggestions to improve readability.

Staff believes sufficient information and analysis supports the referenced determination. Staff separately agrees with the suggested grammatical edits and the final report has been revised accordingly.

Comment 3-13

CSD No. 2 comments the draft report’s determination in the Executive Summary section identifying pension funding status among the affected agencies should exclude the District give it has no direct employees.

See Comment No. 3-2.

Comment 3-14

CSD No. 2 comments the draft report’s analysis of the region’s residential growth in the Regional Characteristics section and succeeding tables do not correctly align specific to the District.

Staff agrees and has revised the final report to correctly note the projected change in CSD No. 2’s resident population during the five-year study period is 86. (The draft report incorrectly showed the change as 88.)

Comment 3-15

CSD No. 2 notes the draft report’s analysis of the affected agencies’ jurisdictional boundaries in the Regional Characteristics section calculates assessor parcel acres, total assessor parcels, and residential units for the District that differ from the District’s own estimates.

Staff notes all boundary and assessor parcel information – including totals, uses, residential units, and land use authorities – presented in the draft report have been generated based on digital records established and maintained by MarinMap; a joint-powers exercise that includes – and among others – Marin LAFCO and Corte Madera. It is recommended CSD No. 2 and through Corte Madera inquiry with MarinMap should they believe any corrections are needed.

Comment 3-16

CSD No. 2 comments the draft report’s analysis of the affected agencies’ fiscal standing in the Regional Characteristics section is unclear how current ratios are calculated and whether depreciation is included.

Staff notes the calculation used in calculating current ratios is based on dividing current assets against current liabilities; neither of which include depreciation. The final report has been revised to more prominently show this calculation when cited. The report has also been revised to correctly read CSD No. 2 ended the study period with a current ratio of 2.3 and not 2.1. (The correct amount is shown in the associated chart.)

Response to Comment 3-17

CSD No. 2 states there is an error in the regional section of the draft report that discusses liquidity, capital and profitability. CSD No. 2 notes a measurement in this section which shows the agency has long-term debt, and maintains that the District does not carry any debt.

Staff has revised the final report to include updated calculations for all of the affected agencies with respect to calculating their debt to net asset ratios. This correction shows CSD No. 2 finished the study period without any long-term debt as noted identified by the District.

Comment 3-18

CSD No. 2 comments the draft report's wastewater service summary on the District in the Agency Profile section does not accurately show actual annual line replacement totals made during the study period.

Staff has revised the final report to show the actual feet of line replacement undertaken by CSD No. 2 as attested by the District.

Comments 3-19 and 3-20

CSD No. 2 comments the draft report's jurisdictional boundary summary on the District in the Agency Profile section shows a breakdown of land use authority percentages that differs from the calculation made by the District. This includes noting the draft report shows Corte Madera representing 56% of CSD No. 2's jurisdictional acreage while the District independently calculates this amount at 78%. CSD No. 2 similarly states the draft report incorrectly lists Kentfield as part of the District's jurisdictional boundary.

See Comment No. 3-15.

Comment 3-21

CSD No. 2 comments the draft report's wastewater services summary on the District in the Agency Profile section reporting on average peak-weather day flows is not meaningful when calculated over a five-year period.

Comment noted.

Comment 3-22

CSD No. 2 requests the draft report's wastewater services summary on the District in the Agency Profile section provide additional details on the linear regression calculation of the estimated flows going forward.

Staff has revised the final report to include an appendix showing all regression analysis incorporated into projecting future demands.

Comment 3-23

CSD No. 2 suggests the draft report's wastewater services summary on the District in the Agency Profile section could be improved with the inclusion of peak hourly flow and five-minute peak flow rates as it relates to comparing against collection system capacity. (The draft report focuses peak demands based on 24 hour totals.)

Staff believes the level and scope of analysis specific to evaluating the affected agencies' wastewater systems appropriately reflects a macro planning review relative to Marin LAFCO's regional growth management interests as prescribed by the Legislature. A more micro review of the wastewater collection and treatment facilities – while an option – would require Commission approval to amend the scope of work for the study. Staff also notes the macro approach is appropriate for the specific benefit of developing baseline information with the added option going forward to provide greater detail in subsequent municipal service reviews. Staff has revised the final report to more clearly define flow conditions in the document as requested.

Comment 3-24

CSD No. 2 seeks clarification in the draft report's wastewater services summary on the District in the Agency Profile section as it relates to confirming whether reported overflows and service calls are in calendar or fiscal year.

Staff notes the information presented on reported sewer overflows and service calls are shown in fiscal years. The final report has been revised to clarify this distinction.

Comment 3-25

CSD No. 2 comments the draft report's financial summary on the District in the Agency Profile section shows depreciation as an operating expense. CSD No. 2 notes it does not fund depreciation and it is only included in its audited financial statements.

Staff believes it is appropriate to show depreciation as an operating expense in step with the practice to rely on the third party audited financial statements of each agency in documenting and analyzing financial standing. This includes, importantly, documenting assets, liabilities, and net equity as well as revenues and expenses as booked by the agency and reflected in the basic financial statements. This approach results in depreciation being shown as an operating expense.

Comment 3-26

CSD No. 2 comments the draft report's financial summary on the District in the Agency Profile section incorrectly shows pension obligation belonging to Corte Madera.

See Comment No. 3-2.

Comment 3-27

CSD No. 2 comments the draft report's financial summary on the District in the Agency Profile section requires correction to show the Town of Corte Madera has only two retirement tiers.

Staff has revised the final report accordingly.

Comment 3-28

CSD No. 2 comments the draft report's financial summary on the District in the Agency Profile section should be revised to remove depreciation as a cash expense.

See Comment No. 3-25.



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June 30, 2017

Mr. Keene Simonds, Executive Officer
Marin Local Agency Formation Commission
1401 Los Gamos Drive, Suite 220
San Rafael, CA 94903

RE: Central Marin Wastewater Study, April 2017 Draft Report

Dear Mr. Simonds:

The San Rafael Sanitation District has reviewed the Central Marin Wastewater Study Draft Report and appreciates the opportunity to participate in the study through the Technical Advisory Committee and to provide its comments. The District has comments in regard to the following Recommendations stated in the Executive Summary portion of the report.

Recommendation #2: CMSA should develop a plan to allocate treatment capacity among its member agencies to enhance regional growth management. This plan would appropriately inform each member agency as well as local land use authorities with more certainty with respect to their ability to forecast and accommodate new development within their jurisdictional boundaries going forward.

4-1

SRSD disagrees. Wastewater agencies are not land use authorities and do not have any decision making authority on land use and growth. The local land use authorities are the County of Marin and City of San Rafael. SRSD works with the County, City, and developers to provide the capacity for the new developments.

Recommendation #4: CMSA should reorganize its governing board structure to limit and or remove the City of Larkspur's presence within the joint powers authority to better align and weight governance with vested participation.

4-2

CMSA and its JPA member agencies are currently reviewing the Joint Powers Agreement, which includes the CMSA governing board structure. The City of Larkspur's presence will be addressed through this review process.

Recommendation #5: SRSD should designate the lone board seat statutorily dedicated to a member of the County of Marin to the incumbent holding Supervisor District 1 given it covers nearly all of the District's jurisdictional boundary. This designation would provide a more logical and direct match between SRSD voters and their appointed representatives.

4-3

SRSD disagrees. The SRSD jurisdictional boundary includes Supervisor Districts 1, 2, and 4. Although District 1 has more coverage of SRSD, one can also say that the ratepayers in District 1 are double represented since the other two SRSD Board members are from the City Council. Also, by allowing the Supervisor from either District 1, 2, or 4 to sit on the SRSD Board, it offers the Board of Supervisors more flexibility in their appointment to the SRSD Board.

Recommendation #6: Corrective action is needed to appropriately amend jurisdictional boundaries to better align service areas with existing property lines within the Ross Valley and San Rafael Creek Watersheds. Similarly boundary clean-ups are needed to correct instances where actual service provision in this subregion does not match up with assigned jurisdictional boundaries.

4-4

SRSD agrees.

Recommendation #8: The Commission should consider authorizing an addendum to fully evaluate options to reorganize and consolidate public wastewater services in Central Marin and most pertinently among agencies in the Ross Valley and San Rafael Creek Watersheds. This topic – which has been previously reviewed by the agencies specific to assessing cost-savings but not the Commission - responds to Marin LAFCO's directive to independently assess the notional sense affirmed in this study that a consolidation would appear primed to produce greater accountability and efficiency within the combined watershed.

4-5

SRSD agrees and is in favor of performing a consolidation study. Several years ago, SRSD asked LAFCO to consider evaluating available alternative government structure options involving wastewater services within the region. SRSD is interested in the report findings and its determination of efficiency and best operations.

Recommendation #9: Septic Systems are increasingly problematic in urban and or developing areas in Central Marin and pose a public safety threat to the health and environment of the agencies' service areas. The affected agencies should work to identify all septic systems within their respective areas in step with resiliency planning and determining future system risks.

4-6

SRSD agrees and plans to work with the County's Environmental Health Services Department.

Recommendation #11: The affected agencies in Central Marin should coordinate efforts to establish policies and protocols in addressing the increasing effects of climate change relative to wastewater services. This includes resiliency planning with respect to droughts, storm events, raising water tables as well as future demands.

4-7

SRSD agrees. SRSD is currently working with the County of Marin on its Marin Shoreline Sea Level Rise Vulnerability Assessment (also known as the BayWAVE study) and the City of San Rafael's Local Hazard Mitigation Plan.

The District also has the following general comments on the draft report.

4-8

Wastewater Flow as a unit of measurement. The report compares daily-average flows, dry-weather-day flows, and peak-day flows and breaks them down to the amount of flow per resident, per occupied housing unit, and per service connection. This can be misleading and misrepresented for the following reasons: 1) the flow data includes all flow from residents, commercial, industrial, and inflow/infiltration; 2) our District has more commercial facilities, i.e. restaurants, than other agencies in Central Marin; and 3) during wet weather, the amount of rain varies throughout the City and County as well as from year to year.

4-9

Pension Obligations. The report discusses the City of San Rafael’s pension obligations. The District represents approximately 3.3% of the City of San Rafael’s total unfunded liability. This liability is reported in the District’s Financial Statements. The City’s unfunded liability, as a percentage of its unrestricted fund balance, is not relevant to the District’s financial position. The operating structure of the City and District are not the same; thus, the City, which has a much higher percentage of personnel costs to total expenditures than the District, will have a much higher pension contribution as a percentage of payroll than will the District.

Please see the attached Executive Summary, Regional Characteristics & Comparisons, and the District’s Agency Profile (Chapters 2, 3, and 4) with additional comments.

The District would like to thank LAFCO for its time and effort in reviewing and considering our comments. We look forward to working with LAFCO and the other Central Marin and local agencies to pursue the recommendations and improve efficiencies and operations in wastewater services. If you have any questions, please contact Doris Toy, District Manager.

Sincerely,

Katie Rice
Director, San Rafael Sanitation District Board

Attachments

4.0 Response to Comments | San Rafael Sanitation District

Comment 4-1

SRSD disagrees with the draft report's recommendation in the Executive Summary section stating CMSA should develop a plan to allocate treatment capacity among its member agencies to enhance regional growth management. SRSD asserts an allocation system is not needed given the wastewater agencies are not land-use authorities and already effectively coordinate the delivery of new wastewater services as needed.

Staff believes it would be beneficial to land use authorities and the general public for CMSA to establish an allocation system. More specifically, staff believes an allocation system would help inform and formalize decision-making in accommodating additional growth – which will inevitably occur given the State's commitment to ensuring an appropriate job to housing balance – now and as opposed to when circumstances may change. This comment is importantly premised on the presumption that growth will continue in the region, albeit slowly, and eventually it is reasonable to assume more competition/need will emerge for the remaining treatment capacity at CMSA.

Comment 4-2

SRSD comments the draft report's recommendation in the Executive Summary section stating CMSA should reorganize its board structure to remove or limit the City of Larkspur's involvement will be addressed as part of ongoing review of the agreement by the members.

| Comment noted.

Comment 4-3

SRSD disagrees with the draft report's recommendation in the Executive Summary section stating the District should designate the lone board seat statutorily dedicated to a member of the County of Marin to the incumbent holding Supervisor District 1. SRSD states while District 1 has more coverage of SRSD, it can also be said ratepayers in District 1 are double represented since the other two SRSD Board members are from the City Council. SRSD adds the existing baseline provides the County with more flexibility in their appointment to the District Board.

| Commented noted. Staff adds that Marin LAFCO estimates close to 70% of the projected *unincorporated* population within SRSD lies within Supervisor District 1 (emphasis added).

Comment 4-4

SRSD agrees with the draft report's recommendation in the Executive Summary section stating corrective action is needed to amend and rationalize jurisdictional boundaries within the Ross Valley and San Rafael Creek Watersheds.

| Comment noted.

Comment 4-5

SRSD agrees with the draft report’s recommendation in the Executive Summary section stating there is additional merit for Marin LAFCO to further explore consolidation opportunities in the region. SRSD adds it is in favor of performing a consolidation study and has requested several years ago for Marin LAFCO to prepare a municipal service review within the region for this specific purpose.

| Comment noted, and staff acknowledges SRSD’s patience with Marin LAFCO in proceeding with a full consolidation review of the region as earlier requested by the District

Comment 4-6

SRSD agrees with the draft report’s recommendation in the Executive Summary section for the affected agencies to proactively work to identify and remove septic systems within their jurisdictions. SRSD adds they plan to work the County’s Environmental Health Services Department to implement this recommendation.

| Comment noted. Staff also extends its interest and assistance in any related outreach or mapping should it prove helpful to SRSD.

Comment 4-7

SRSD agrees with the draft report’s recommendation in the Executive Summary section stating the affected agencies should coordinate efforts in mitigating climate change effects. SRSD states it is currently working with the County of Marin on the Marin Shoreline Sea Level Rise Vulnerability Assessment as well with the City of San Rafael in its Local Hazard Mitigation Plan.

| Comment noted.

Comment 4-8

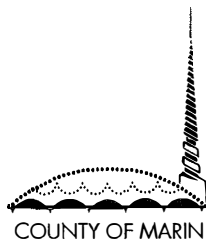
SRSD makes a general comment on the draft report’s calculation and use therein on per capita flows. SRSD notes the report incorporates non-residential flows into calculating per-capita demands and believes this to be misleading and particularly notable for the District given it has more commercial facilities than the other affected agencies in the region.

| Staff notes the per capita measurement is one of several tools used in the report to quantify demand and uniformly applied to all of the affected agencies, and as such serves as a useful comparison given the underlying similarities in the land uses in the region. Incorporating non-residential wastewater flows into per-capita measurements also do not undermine its value in contextualizing demands, and is similarly performed in analyzing other municipal services, like public safety calls. This is because it is reasonable to assume there is a causal relationship that a certain number of residents will generate a corresponding demand for non-residential uses (commercial, retail, etc.) within their communities. It is also unclear whether any of the affected agencies could readily extract non-residential wastewater flows for purposes of more precisely isolating just residential uses.

Comment 4-9

SRSD makes a general comment on the draft report showing the City of San Rafael's pension obligation as it relates to the District. SRSD notes it represents approximately 3.3% of San Rafael's unfunded liability and believes this percentage is not relevant to the District's financial position.

Staff believes it is appropriate to include a review of San Rafael's pension obligations in step with analyzing SRSD given the District is integrally connected with the City through a long-standing staff support services agreement. Should staffing operations for SRSD be contracted to another separate legal entity it would be appropriate for Marin LAFCO to amend its analysis accordingly as part of future municipal service reviews.



DEPARTMENT OF PUBLIC WORKS

Quality, Excellence, Innovation

Raúl M. Rojas
DIRECTOR

Date: June 27, 2017

Administration
PO Box 4186
San Rafael, CA 94913-4186
415 473 6528 T
415 473 3799 F
415 473 3232 TTY
CRS Dial 711
www.marincounty.org/pw

To: Rachel Jones
Administrative Analyst
Marin Local Agency Formation Commission
1401 Los Gamos, Suite 220
San Rafael, CA 94903

From: Betsy Swenerton
Capital Planning & Project Manager
Capital Projects Division

Accounting

Airport

Re: Comments of Draft Report - Central Marin Wastewater Study

Building Maintenance

Rachel,

Capital Projects

Certified Unified Program
Agency (CUPA)

Communications
Maintenance

County Garage

Disability Access

Engineering & Survey

Flood Control &
Water Resources

Land Development

Purchasing

Real Estate

Reprographic Services

Road Maintenance

Stormwater Program

Transportation &
Traffic Operations

Waste Management

Please find itemized below a list of comments prepared by the County of Marin, Department of Public Works on behalf of the San Quentin Village and Murray Park Sewer Maintenance Districts. These comments are similar to those submitted by Eric Steger earlier this year. Please find attached documents that support these comments, including the County's Comprehensive Audit Financial Reports for the Sewer Maintenance Districts, as well as Special District budget information. Also attached is an e-mail from Eric Steger that lists the vacant lots in Murray Park. This information is in support of the County's comment that the development potential in Murray Park is overstated in the Draft Report.

Summary of Comments – MPSMD Agency Profile:

- 5-1 1. MPSMD's adopted operating budget at the term of the study period was \$0.096 million.
5-2 2. LAFCO to review data provided on development potential provided by the County of Marin.
5-3 3. Section 5.2 Administration – change General Manager to District Engineer (two instances).
5-4 4. Delete Pat Echols as District Engineer. Only list Raul Rojas.
5-5 5. Section 6.1 System Structure – change feet to inches (in reference to sewer line size).
5-6 6. Section 7.0 Agency Finances – Update profile with financial information provided by the County of Marin.

Summary of Comments – SQVSMD Agency Profile:

- 5-7 1. SQVSMD's adopted operating budget at the term of the study period was \$0.068 million.
- 5-8 2. The unrestricted fund balance is \$0.029 million.
- 5-9 3. Section 3.2 Sphere of Influence – Change MPSMD to SQVSMD.
- 5-10 4. Section 5.2 Administration – change General Manager to District Engineer (two instances).
- 5-11 5. Delete Pat Echols as District Engineer. Only list Raul Rojas.
- 5-12 6. Section 7.0 Agency Finances – Update profile with financial information provided by the County of Marin.

Please contact Betsy Swenerton at (415) 473-6680 or Eric Steger at (415) 473-2754 with any questions regarding these comments.

5.0 Response to Comments | Murray Park Sewer Maintenance District and San Quentin Village Sewer Maintenance District

Comment 5-1

MPSMD comments the draft report's financial summary on the District in the Agency Profile section should be amended to show the adopted operating budget at the term of the study period was \$0.096 million.

| Staff has revised the final report accordingly.

Comment 5-2

MPSMD comments the draft report's jurisdictional boundary summary on the District in the Agency Profile section regarding buildout potential is unlikely to occur.

| Comment noted.

Comment 5-3

MPSMD requests the draft report's administrative summary on the District in the Agency Profile be amended to replace reference to General Manager to District Manager.

| Staff has revised the final report accordingly.

Comment 5-4

MPSMD requests the draft report's administrative summary on the District in the Agency Profile be amended to list Raul Rojas as the District Engineer.

| Staff has revised the final report accordingly.

Comment 5-5

MPSMD requests the draft report's wastewater system summary on the District in the Agency Profile section be amended to change feet to inches in reference to sewer line size.

| Staff has revised the final report accordingly.

Comment 5-6

MPSMD requests the draft report's financial summary on the District in the Agency Profile section be updated to show corrected amounts as presented.

| Staff has revised the final report accordingly.

Comment 5-7

SQVSMMD comments the draft report's overview summary on the District in the Agency Profile section should be amended to show the adopted operating budget at the end of the study term at \$0.068.

| Staff has revised the final report accordingly.

Comment 5-8

SQVSMD comments the draft report's overview summary on the District in the Agency Profile section should be amended to show the unrestricted fund balance at the end of the study term at \$0.029 million.

| Staff has revised the final report accordingly.

Comment 5-9

SQVSMD notes the draft report should be amended throughout to ensure the correct abbreviation is provided for the District.

| Staff has revised the final report accordingly.

Comment 5-10

SQVSMD requests the draft report's administrative summary on the District in the Agency Profile be amended to replace reference to General Manager to District Manager.

| Staff has revised the final report accordingly.

Comment 5-11

SQVSMD requests the draft report's administrative summary on the District in the Agency Profile be amended to list Raul Rojas as the District Engineer.

| Staff has revised the final report accordingly.

Comment 5-12

SQVSMD requests the draft report's financial summary on the District in the Agency Profile section be updated to show corrected amounts as presented.

| Staff has revised the final report accordingly.

**SANITARY DISTRICT NO. 1 OF MARIN COUNTY
SPECIAL BOARD MEETING MINUTES**

Monday, May 9, 2011
6:00 p.m.

300 A Drake's Landing Road.
Greenbrae, CA

Members Present Marcia Johnson, President
 Peter Sullivan, Secretary
 Patrick Guasco
 Pam Meigs
 Frank Egger

Members Absent: None

Staff Present: Wendy Martin-Miller, Acting General Manager
 Jolie Houston, District Counsel
 John Clark, Chief of Operations
 Randell Ishii, District Engineer
 Eva Waskell, Recording Secretary
 ADSI Security Guard

Public Present: The names reflected are those who signed in on the attendance sheet:
 Paul M. Davis; Jeffrey Blanchfield; Barbara Heller; Kathy Hartzell; Len
 Rifkind. However, there were seven (7) additional members of the public
 present.

Item #1-ORDER The meeting was called to order by President Johnson at 6:02 p.m.
President Johnson then led the Pledge of Allegiance. Roll call was taken and a quorum was
present.

Item #2-APPROVAL OF AGENDA M/S Sullivan/Egger to approve the Agenda as submitted.
The motion carried unanimously.

Item #3-OPEN TIME FOR COMMENTS FROM THE PUBLIC There were no comments
from the public.

6-1

**Item #4-LAFCO WORKSHOP – PRESENTATION BY MR. PETER BANNING, EXECUTIVE
OFFICER OF THE MARIN LAFCO WITH A QUESTION AND ANSWER PERIOD** Mr. Banning
said that his discussion with General Manger Richards about his talk tonight set out a pretty
straightforward presentation on what LAFCO is and how it works. He will be including some
information on special district consolidation but he will not be talking very much on the
specifics of consolidation that would involve Ross Valley Sanitary District or other members
of CMSA, regardless of how this session was described in yesterday's *Marin Independent
Journal*. They didn't get that information from us and that wasn't what we intended to do.

LAFCOs have been in California since 1963. They followed a statewide effort to get a grip on
the rapid growth in the post-war period that created a lot of pre-mature conversion of

agriculture and open space land, i.e. urban sprawl. There was also a lot of confusion and disorder with respect to the way that local governments were formed and how their boundaries operated. There were 3 or 4 separate processes by which cities could incorporate, for example. So the state legislature decided that someone needed to take charge of this. Rather than set up a department of state government in Sacramento, the legislature decided to set up LAFCOs in each county of California.

The enabling legislation under which LAFCO operates is Section 56001 of the Government Code, which is the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000. LAFCO's primary mandates are to encourage orderly growth, to provide for the logical formation and determination of local government boundaries, discourage urban sprawl and preserve agriculture. Mr. Banning noted that the handout includes the additional language contained in this particular section of the Government Code.

LAFCO has a total of 7 members: 2 members of the county board of supervisors appointed by the county board of supervisors; 2 members of the city councils appointed by the council of mayors; and the presiding officers of the special districts determine which 2 members of their boards will serve as special district members on LAFCO. These 6 members together appoint a public member who is a registered voter in the county and *not* be a member of any board of any special district or county. Mr. Banning listed the names of the current LAFCO members, which were listed on a handout.

Several features of LAFCO are worth noting, he said. 1) Members of LAFCO are appointed and not elected. So it's not a status assignment but pretty much of a thankless task. 2) It's a *state* agency but *locally* implemented. There's no central oversight watching over all 58 counties, only the 58 LAFCOs. 3) As a state agency, LAFCO's decisions are *not* subject to local initiative or referendum. 4) The major powers and duties of LAFCO, described in a handout, are to perform special studies of local government services and local government agencies; to adopt spheres of influence, which are boundary plans for each city and special district; and to process proposals for changes of organization when they're brought to LAFCO by resolution of local government agencies or by citizens by petition.

Since 1993 LAFCOs have also had the authority to initiate the consolidation of special districts. LAFCO can *initiate* the process and have the public hearing but is *not* able to necessarily carry it through to the end as a rule. There's a protest phase at the end of the process that stays in place. LAFCO may attach terms and conditions of approval to the boundary changes that it approves. There are, of course, limits to LAFCO's authority. Decisions made by LAFCO are in *almost* every case subject to the protest of voters and landowners within the area affected by the boundary change. LAFCOs are also specifically prohibited from messing with contracts with local government agencies. We can't reach into a Joint Powers Agreement and change it around at all. LAFCO is also prohibited from setting terms and conditions on a boundary change that would determine the zoning or the land use in the area affected by that decision. And sometimes LAFCO's decisions are subject to election. In other words, LAFCO's decisions are quasi legislative; they're *not judicial*. Their decisions are required to take into account a fairly extensive list of factors. These factors are listed on a handout and they are *subject areas and not rigid standards, definitions or thresholds* because every local government and every service issue in the entire state has unique aspects. LAFCO considers this list of factors, its own studies, public testimony, and

any other information it deems relevant and it makes a decision. LAFCO's decisions are not appeal-able to a higher level. And although they conceivably could be subject to civil litigation, they would be judged by the more lenient standard of *legislative* activity as long as they're based on information on the record, conform to the Cortese-Knox Act and LAFCO's own policies, and they're not arbitrary and capricious.

Mr. Banning said he was going to talk about how LAFCO carries out a boundary change because he spoke with the District's General Manger and officials from the county department of pubic works who are interested in the annexation of Murray Park and San Quentin Village to Ross Valley Sanitary District. Mr. Banning noted that a fair amount of the activity of the boundary change process happens *before* the application and it has to do with the process for the exchange of property taxes between the agency that *did* provide the service and the agency that's *going to* provide the service. With respect to special district boundary changes, in most cases it's the county that determines what that property tax exchange is going to be, unless there is some interceding on your part. Under the *county's* normal policies and the way they do things, especially where an enterprise district is concerned, there will be *no* property tax dollars transferred from the county to the annexed special district. This might make a difference to you because if you're *not* going to get any property tax, you might want to consider a rate zone or some other way to differentiate the rates in that area from the rates elsewhere in your district. He doesn't have a clue about this but the subject did come up with District staff.

Director Sullivan remarked that it actually came up a couple of years ago. Mr. Banning said that from discussions with District staff and county staff, it wasn't clear to him who *exactly* is going to be the applicant here. But there are some alternatives. The application could come to LAFCO by a resolution of the Marin County Board of Supervisors or by a resolution of the RVSD Board. Or best of all it could come from substantially similar resolutions from both boards at the same time. He clarified that "best" means it's easiest for him and his staffers. He also explained that the applicant is the one who gets to determine the exact nature of the application, i.e. what the boundaries of the annexing area will be, and what terms and conditions of approval will at least be proposed to be approved. The application packet also has to contain a plan for providing service. What service are we talking about? Where is it going to be provided? How is it going to be paid for? If you need to set up a rate zone, you might want to ask LAFCO to install this as a condition of approval.

Mr. Banning said that LAFCO gets a proposal, staff analyzes it and refers copies to various county departments and to other agencies whose jurisdictions overlaps yours. We write a staff report, make a recommendation and set up a public hearing. This will definitely require a 21-day notice of public hearing before LAFCO and probably *not* an individual mailed notice, but it's possible. It depends on how many people we're talking about. Any one wishing to speak about the issues needs to be heard by the Commission, within reason. LAFCO can approve or deny the proposal or approve it with conditions or amendments, including the ability to amend the boundary of a proposal if it finds reason to do so. After the proposal is approved by LAFCO in some form, there's a protest hearing unless there's been 100% consent among all the property owners in the affected area.

That would not apply to Murray Park or San Quentin Village. You'll *never* get them, so there will be a protest hearing. It's an administrative hearing by staff, by him. He has to open that

hearing by summarizing what LAFCO has done in its resolution of approval. He invites anyone who's attending the hearing that wants to speak. But there's no discretion here. What Mr. Banning says or what people say at the meeting makes no difference. The only thing that makes a difference is the number of signatures on the protest petition at the end of that hearing. If the total number of signatures on that protest petition are less than 25% of the total number of registered voters in the affected area, Murray Park in this case, then the annexation will proceed to completion. There are a few exceptions to that answer but not in this type of proposal. If the total protesters approved are between 25-50%, then we have to call an election. If the total number is greater than 50%, we know how that election is going to turn out. If it survives protest, there's some final paper work that involves a lot of notification to the State Board of Equalization, the counties, the mapmakers, the affected agencies, and other agencies whose jurisdictions overlap with yours. The boundary change become effective on the date we record the completed papers with the county recorder unless a different date has been specified.

Regarding the statewide interest in the consolidation of special districts and cities, Mr. Banning said it was the natural outgrowth of difficult economic times and the public interest in efficiently provided services. Marin LAFCO's *policies* generally favor consolidation of small single-purpose local agencies, as seen in the handouts, but it favors consolidations initiated and supported by the consolidating agencies themselves. With respect to the consolidation going on in southern Marin, in 1999 when Mr. Banning became executive officer, the proceedings for the consolidation of Tamalpais and the Alto Richardson Bay Fire Protection Districts were just winding down. In 2005, the City of Belvedere was annexed to the Tiburon Sanitary District and it was initiated by both of those agencies. It isn't a consolidation was initiated by the districts themselves and has been very successful. There's a report on the cost-savings achieved by doing this.

consolidation of special districts but it's a form of consolidation of local agencies. Belvedere had received treatment services from the Tiburon Sanitary District on a contractual basis for many years through which they simply paid a cash sum every year, but they did not have a seat on the board of the district. So the annexation of the city to the district enabled the residents of the City of Belvedere to run for election on the district board. There were terms and conditions. There is a rate zone and the residents of Belvedere pay substantially higher fees than the residents of the rest of the district.

The proposed annexation of the City Sausalito to the Southern Marin Fire District is now ongoing. In this case, the cost savings are a serious issue. The city is a single station fire agency, and the escalating requirements of CalOSHA and the other laws that govern how fire protection is provided mean that all of the costs of administration have been increased substantially in the last few years. If those costs aren't spread over a large organization, they become very cumbersome to a single-station operator. In this case, Sausalito has had a contract with the Southern Marin Fire District for those administrative services for about 5 years now. But the agreement is not exactly equitable to the district. They're not getting a fair share under the contract for the costs of providing that service. They're getting marginal, not proportional costs. So Sausalito is currently faced with the prospect of re-establishing headquarters' operations for its fire department and re-establishing itself as an independent

entity before annexing to the district. It's much cheaper to annex the organization than enlarge the organization. The city will be transferring responsibility for fire service from their fire department to a separate authority and responsibility of the fire district. This will be an interesting issue for the voters in Sausalito in the fall.

In general, the process of consolidation of special districts follows the same outline as the annexation process. There's the pre-application phase, the application, the report and recommendation, the notice of public hearing, and the protest phase. However, there are a few things that distinguish special district consolidation from other types of boundary changes. First, terms and conditions are *crucial* in determining how the consolidation will be implemented. And implementation is really everything—starting with the composition of the governing board of the consolidated district. Who sits on that board and how many seats are there? What happens to district employees? What's the status of labor contracts that were adopted by the predecessor agencies? Is there a need for rate zones? If so, what is their nature? What will be the disposition of the reserves and other assets of the predecessor agencies? What property will exchange hands exactly how and to whom? What is the effective date of consolidation? It usually falls on July 1 just for administrative convenience and bookkeeping. And finally, his personal favorite permitted term and condition, i.e. any other term and condition that's necessary to affect the quality of consolidation.

Another thing to remember about the consolidation of special districts is that the protest phase is measured *separately* within the jurisdiction of each of the consolidating agencies. If the vote is *against* the consolidation in one of the consolidating areas, the thing goes down in flames. During this time when your District has been receiving a lot of public criticism and he's been getting questions about various ways of reorganizing sewer service in Ross Valley, what Mr. Banning has been needing to tell people in some of these conversations is that any consolidation proposal that comes to us has to make sense and stand on its own. LAFCO's interest lies in the *structure* of local agencies, not so much in how the agencies are *managed* or the particular decisions that the agency boards are making about the structure and the relationships here and how the services are provided. A proposal that attempts to use LAFCO and reorganization of special districts *only* to achieve something that could not be achieved at the ballot box is not really going to pass muster here.

Mr. Banning said he would be happy to explain AB 1232, a bill that applies to consolidation of the member agency districts of only the Sewage Agency of Southern Marin (SAMA), and the options it allows Marin LAFCO, but not necessarily to defend its approach. Maybe the best you can say here is that the legislature defines, and sometimes redefines, what local government authorities would be both for LAFCO *and* for all special districts. Marin LAFCO did not take a position on this bill when it was before the state legislature, but we must now determine what, if anything, LAFCO is going to do in response to the additional discretion the bill grants us. Under AB 1232, Marin LAFCO, and *only* Marin LAFCO, has the authority to initiate consolidation of SAMA member agencies and complete those proceedings *without* the protest phase. We are currently in the process of updating the studies of SASM agencies that were done in 2005 as a basis for deciding what, if anything, LAFCO will *do* with the additional authority. Staff has not yet completed this work. The Commission has made no decisions on what it will do here. Stay tuned until the summer and fall.

There are some next steps that the District would be interested in that would apply to Ross Valley agencies. Marin LAFCO last looked at the services in the Sphere of Influence of Ross Valley cities and special districts in 2007. At that time there were extensive consolidation studies underway in both sewer services and fire agencies. Unfortunately, neither one of these efforts reached a solid conclusion. We were very happy these studies were underway and we had no desire to duplicate them. We expected to learn a lot from their results. As a result we sat back on the study we did in 2007 and pretty much took a wait-and-see approach. We are required to review our determinations every 5 years. So sometime in the next year or 2 LAFCO will be setting out to do itself what could not be done in 2007 by the affected agencies themselves in the course of these studies. He expects this will come before the Commission as an *internal* matter when it considers its budget and work program for fiscal year 2012-13. This will be discussed and acted upon between January and May of next year. We will keep you informed and be in communication.

Mr. Banning clarified for President Johnson that the study that LAFCO ends up publishing every 5 years will probably be called something like a service review or the Sphere of Influence Update.

Director Sullivan observed that San Francisco has *twice* our population and *one* of everything, i.e. one police, one fire, one ambulance service, one sewer district, one water district And every 6 months Dick Spots wood writes about how many different agencies there are in Marin. Based on what Mr. Banning just said, why isn't LAFCO making us all into one?

Mr. Banning said he understood what Director Sullivan was saying and noted that this came up on a *very* much smaller scale when LAFCO was doing the fire study in 2007. The labor groups and the chiefs were largely in agreement that fire agencies in Ross Valley really needed to consolidate. They went through an extensive process, but the upshot of it was that in order to accomplish what they needed to accomplish, the thing needed to be done all at once. The solution had to be global to the Ross Valley at least, and so many different things had to be done to align the service levels that were provided by the different agencies, and deal with the different personnel and other issues among a *handful* of agencies, instead of a *pair* of agencies, that there was no way to make a consolidation *election coherent*. If you have a consolidation that involves maybe 5 different agencies and it goes down in one area, it's going to go down in all of them.

Director Sullivan said he doesn't see us ever doing this if any *one* small area can nix it. It will require either extreme pain on behalf of all the taxpayers or some organizing group at the county level to push it. Mr. Banning said that the best possibility is consensus.

Director Guasco wanted to know if there were examples of where the consolidation or transfer of services/agencies provided *benefits* to others who are not ratepayers or responsible for the funding of the service agency. Mr. Banning said he really wouldn't know what that would look like.

Director Guasco said suppose there are solid waste contracts and there's been some form of consolidation. Are there any examples of solid waste contracts that were consolidated and showed some sort of benefit to the ratepayers? Mr. Banning said he didn't know.

Director Guasco asked how LAFCO safeguards against various forms of corruption, political and otherwise. Let's say that consolidation is not in the best interest of everyone but it's in the interest of one particular group. Does LAFCO help protect against that? Mr. Banning said that's what LAFCO is for, i.e. to have a public process that's held to the daylight and where decisions are based on information in the record and can be challenged in public. It gets a lot of press and it's subject to protest. If LAFCO is hearing about corruption at a public hearing, it can simply deny the proposal.

Director Guasco asked if "hearing about" meant a protest from the local media and the public and individuals and city council members? All of the above, responded Mr. Banning. And the formal protest by the property owners and registered voters in the area that's affected. He further clarified that a large consensus of ratepayers would also carry weight.

In response to a question from President Johnson regarding the use of Murray Park and San Quentin Village as an example, Mr. Banning said he talked to District staff about the process that would be involved and he assumed the District was interested. He also talked to the county staff and the county is interested. They're currently responsible for sewage collection for Murray Park and San Quentin Village in a contract with the District to provide the service. But the instrument through which they're actually responsible are these 2 small sewage maintenance districts on the books that are the formal parties you have a contract with. The county doesn't see this as useful anymore, and so they want to formally annex these territories, to which you've provided services, to the District and dissolve the sewage maintenance districts. The county is no longer involved in this at all. He does not have an application. He just answered questions from District staff and county staff.

Director Meigs referred to Mr. Banning's earlier statement about LAFCO not reaching into a JPA agreement. But if consolidation does occur, she asked, doesn't that dissolve the JPA agreement? Mr. Banning noted that AB 1232 actually says LAFCO can consolidate SAMS, a JPA, and its member agencies. LAFCO didn't write this bill. A JPA is a contract between public agencies. Elsewhere in the Cortese-Knox Act, LAFCO is specifically prohibited from messing with the contract with public agencies. So we can't go there. His read of this is that LAFCO would be able to consolidate some of the *member* agencies in SASM. But SASM itself would still remain. The member agencies would then logically do something to change SASM. He clarified that AB 1232 is about LAFCO and SASM and its member agencies only.

Director Meigs recalled that a consolidation somewhere in the East Bay was appealed and it was revoked. Mr. Banning did not know the specific example she was referring to. Perhaps it was the protest phase she was thinking of, he remarked.

District Counsel Houston asked if a LAFCO decision is subject to validation by the voters or an interested person? Mr. Banning said it's subject to an election in *some* cases but not

necessarily. If the protest is between 25% and 50%, for example, it's subject to the validation Ms. Houston spoke of. Also, one of the terms and conditions of approval may require a financing mechanism. If the annexation of Sausalito to Southern Marin Fire Protection District requires that the *city* approve the parcel tax that's now charged by the district, that has to go to an election.

Director Meigs asked if Mr. Banning knew of any protest hearings that have been won on the vote recently in Marin or around the Bay Area. Mr. Banning said that hasn't happened while he's been here in Marin. But if he consulted his colleagues, he's sure he'd come up with something in the Bay Area. He clarified for President Johnson that the Ross Valley fire consolidation study never resulted in a proposal.

Director Meigs wanted to know why the rates went up really high after the Belvedere annexation. Mr. Banning said that Belvedere's rates were already high under the contract because Belvedere had something like 9 pump stations and the rest of Tiburon Sanitary District has none. In addition, Belvedere did not want to let go of any of its property tax when it annexed and so that had to be taken into account in the rate. These 2 things were written into the terms and conditions that LAFCO approved when the annexation took place. You might be thinking that the Tiburon Sanitary District raised the rates soon after the annexation was in place. In that case, there was a change in the general manager of the District and the new person thought they didn't get a very good deal because some costs in the Belvedere rate zone hadn't been properly accounted for. So the board took action to raise rates in that rate zone, i.e. the City of Belvedere. The city had *no members* on that district board.

Director Egger said he has seen consolidation done in 2 different ways. One where governmental agencies come to an agreement, sign a JPA and form a consolidated operation, and another where the consolidation is accomplished with voter approval. He wanted to know if this could work either way. Mr. Banning noted that Director Egger was referring to 2 slightly different topics. Functional consolidation occurs when there's a contract or JPA between existing local agencies to work together more efficiently to provide a service. In a political consolidation the nature of the agencies themselves is changed. For example, if you have 2 predecessor districts and each of them has a 5-member board, there is now *one* governing body that has 5 or 7 members. The authority has changed and the composition of the organization itself has changed. Political consolidation is a LAFCO process. Functional consolidation, the formation of JPAs and so forth, is a separate matter that happens between those agencies, and LAFCO doesn't really have any authority over that.

Director Egger gave 2 examples of consolidations in the area that went to the voters and 1 example that didn't. He asked if a legal consolidation of agencies in the central Marin area could be done via voter approval rather than having each agency approve a JPA? Mr. Banning said he would need a more detailed conversation about the proposal Director Egger described. But it would probably have to go to the voters because there would certainly be some financing mechanism that was required to make it run. That's one way for it to get to the voters. If it *didn't*, it might be possible for whoever proposed it to simply request that LAFCO require an election as a term and condition of approval. He would have to check that with the attorneys.

Ms. Houston said if you're going to consolidate, and even if you get voter approval, you would still have to go through some part of LAFCO to start moving boundaries. Mr. Banning said if what Director Egger is proposing is a big JPA, then no. Director Egger clarified that he's proposing a big voter approved district. Then that would have to go through LAFCO, said Mr. Banning. He further clarified that there's no provision in the enabling statute for sanitary districts that provides for election of the board by districts.

In response to questions from Director Egger, Mr. Banning said that the question of a consolidation between RVSD and MMWD has been *raised*, not discussed. He doesn't know how logical it is and LAFCO hasn't looked at it. He clarified that the legislature could dis-incorporate a special district, and noted that dis-incorporation is just the reverse of incorporating a new city and that's a LAFCO decision. It's the same process with a reserve result.

Ms. Houston pointed out that LAFCO is a state agency but implemented locally. One of the questions that's been raised several times is, Can the local pre-empt or get around the LAFCO process by going straight to the voters? She doesn't think that would be allowed. You want to make a district and make it go to the voters and that seems that it would be a logical thing to do. But once you start moving those boundary lines around, LAFCO comes in because they want it to be done their way or orderly or not to leaves islands or pockets. Mr. Banning agreed with this assessment.

President Johnson said that SASM got in trouble from some perspective because they did not increase rates and did not work on their infrastructure improvements. As a result, they had a catastrophic event and then we had AB 1232. So if we're getting some message from a component of our public saying they don't want us to increase rates, which would then prevent us from doing pipe rehabilitation, which is the same thing that got SASM in trouble, if we are to vote for a rate increase against what some members of the public are saying, are we going against the public interest or are we really preserving the public interest because the public interest is in having the infrastructure done.

Mr. Banning said this is the Board's decision; it's your challenge to communicate with the public about what's at stake here.

Director Guasco asked if LAFCO has received any application to change the boundaries of Ross Valley Sanitary District. If so, who's controlling it and who submitted it? Mr. Banning said LAFCO doesn't have any applications currently. The last time there were boundary changes of the District was 5 years ago.

Director Guasco asked if the 2007 Sphere of Influence report, like the one for Ross Valley, was important to LAFCO right now? Yes, replied Mr. Banning. We take our own reports seriously. But the thing about the 2007 study as it regards RVSD was that we sat back because a much more complete and ambitious study was underway at that time. We expected to learn a great deal from the studies you were participating in at the time. That never came to completion. So now we're faced with reviewing what we've done and we'll

need to undertake that work because it's obviously a matter of public concern. It's a big job and it's not a simple issue. He didn't even know what all the alternatives are for how a sewer service could be organized in Ross Valley. And it's spilling over the ridge to San Rafael, of course.

President Johnson noted that the Sphere of Influence Report mentioned that the Larkspur vote on the CMSA Board was obsolete. Did that mean there should be one less voting position on that board or that that vote should be a Ross Valley Sanitary District vote on that board? Mr. Banning said that LAFCO can't reach into the JPAs so we have no authority with respect to who gets to vote for what on the JPA board. It's a matter for the members of the JPA to decide. Mr. Banning's dim recollection is that Larkspur is no longer involved in providing sewer service. Yet they maintain a seat on that board. What's that about?

Ms. Houston asked Mr. Banning if that was a term and condition of the annexation. No, replied Mr. Banning. Absolutely not. Director Sullivan pointed out that there were all kinds of legal stuff going back and forth during that annexation regarding this seat. So before you say yes or no you have to look at all the letters that went back and forth and the legal opinions. President Johnson added that it might have been part of the amendment to the annexation that *they* didn't get involved in. Director Sullivan said that Larkspur had a vested interest in the attorney, and they originally said they weren't going to keep the seat. The attorney said you can't do that. You're the city, it's your seat, and you have to do it this way. There was a lot of correspondence back and forth. The packet is 5-6 inches thick. Ms. Houston said that if it was in the LAFCO application in the terms and conditions, it was a condition of the process.

Director Guasco asked how LAFCO gathers the information used in the Sphere of Influence Report and how long it takes. Mr. Banning said we usually ask for it from each agency we're updating. That's the majority of it. It's *our* process and the length of time it takes to do this varies enormously from one study to another, from one place to another, and what is under study. Sometimes we use consultants; sometimes we don't. Sometimes it's perfunctory; sometimes it's detailed and expensive.

President Johnson referred to the \$1.4 million that was proposed for us to spend in central Marin, which is one of the reasons the study fell apart, i.e. the extreme cost, and noted that LAFCO's budget isn't even that much in a year. Mr. Banning said that LAFCO's budget is more like \$330,000. President Johnson observed that LAFCO would be able to produce an update on the 2007 Sphere of Influence Report for a much more reasonable cost. Mr. Banning stated that it hasn't been determined *what needs to be done*, and LAFCO does set its own budget. So the determination about the scope of the study and how we would *fund* it if it were more than we were used to spending—that's the serious question we'd have to ask. He clarified that LAFCO is also updating the Sphere of Influence Reports for other areas of the county on a continuing basis. Most often very little has changed from what we studied 5 years ago. So we're asking about what's happening with your general plan, and is there some reason why your ability to provide services or the method by which you provide service has *changed* since we were in your office last time. Generally, the answer is no, no, no. So maybe 8 times out of 10 we're not really doing a study or restudying anything because nothing has changed.

Director Egger asked if there was any way to guarantee that any future regional sanitary agency that may do collection and treatment has a directly elected board and not an appointed political board? Mr. Banning said you could make it a *sanitary* district rather than a *sanitation* district. Sanitation district means that board representation is keyed to appointed members from underlying agencies of different types. The board can't be elected at large. If you were a sanitation district, and not a sanitary district, your board members would be a member of the Fairfax City council, a member of the San Anselmo City Council, and a member of the Marin County Board of Supervisors.

President Johnson noted that the cost of treatment has gone up 20 times in the past 20 years or more. Se asked if, in the case of consolidating wastewater treatment and sewer collection, LAFCO looks at cost efficient services. Mr. Banning replied in the affirmative.

Director Sullivan said when he first came onto the Board, the Murray Park situation was being discussed. Both the District and the county knew that it would be *prohibitively* expensive to fix all of their antiquated pipes, which would have to essentially be done all at the same time. At that point we said that unless there's some reasonable way to pay for this, it doesn't seem right to ask the citizens of Larkspur, San Anselmo and Fairfax, who already paid a lot of money to have their pipes fixed in the last couple of years, to step in and put up a couple of million dollars to fix the pipes in Murray Park. How can this problem be addressed?

Mr. Banning said if the county has done a really rotten job of maintaining those pipes and he was sitting in your place, he would say that Murray Park is this *huge* liability for us. Why should we annex them? This is one of the specific situations where your District has the ability to say no. It's pretty much within your discretion whether or not this annexation takes place. He cited 2 instances where a city or a special district can say no. Mr. Banning also observed that a possibility in the case of Murray Park is to set up a rate zone and have the costs go to the people who would benefit from having those pipes fixed. He noted that the District would have to know the actual condition of those pipes. Director Sullivan pointed out that District staff is servicing those pipes and has sent televisions out there to look at them. Director Guasco said he didn't know if a damage severity index has been created for that system, and that would need to be done before the District could consider the cost involved. But t here was a stumbling block with the county on who would pay for that assessment.

Ms. Houston requested clarification regarding exactly who can vote and who can protest because she thought this would help the public. She also gets many questions about this. She wanted to know if the registered voters in the affected area have to be registered voters in the affected area that would be subject to the consolidation and also be *residing* in the district. So if you're just on the tax roll but you are *not living* in the area, you can't protest. Is that correct? Mr. Banning stated that the more complete answer is a little more arcane. A protest can actually be made by a person registered to vote as residing in the area that's affected by the boundary change. A protest can also be made by property owners within that area. The petition has to be one or the other. Property owners want to set up for areas where there are few people and the owners of the property are the ones who receive the services that are in question. So the protest can be mounted by either registered voters or property

owners. But if there are more than 12 registered voters, then the Commission determines that the area is inhabited and there's a protest. The election is 5 registered voters only. Ms. Houston commented that there *are* some very arcane sections when you really start looking at who can vote and who can protest.

Mr. Banning clarified for Director Egger that a protest has to be sufficient in percentage terms. So if you have 16 registered voters, it's inhabited. If 4 or fewer protest, it's going to happen. If 4 to 8 protest, there's going to be an election. If more than 8 protest, it's terminated.

Director Egger asked if LAFCO would look out to see that a particular group of ratepayers wasn't disadvantaged in a situation where there was consolidation among sanitary districts with different financial issues like a huge outstanding loan or bond, or a huge pension liability, or being almost broke, or having an infrastructure that's falling apart. Yes, absolutely, replied Mr. Banning. Mostly it's the interest in self-preservation of the predecessor districts that do the lion's share of the work. The issues Director Egger mentioned would be worked out and equalized in the terms and conditions. If the consolidation isn't equitable, LAFCO isn't going to go there.

Director Guasco said that the 2007 Sphere of Influence Report noted that there would be difficulties with merging San Rafael Sanitary District with RVSD. Did that mean governance issues only or were there other difficulties anticipated by LAFCO? Mr. Banning said while he did write the report, he didn't remember the reasons behind them. If Director Guasco gives him a chance to review that, he could go over this on the phone with him.

Mr. Banning clarified for President Johnson that the Cortese-Knox Act has been amended to allow the consolidation of dissimilar special districts that were *not* formed under the same enabling statute. With respect to *how* dissimilar they could be, that would depend on the individual case. He noted that there would be other ways to consolidate apart from consolidation of similar agencies, and he gave several examples.

The Board took a break from 7:22 p.m. to 7:36 p.m.

Myra Drotman of Sleepy Hollow wanted to know if flat rate systems were in LAFCO's ballpark. Mr. Banning said they were not. That's an operational issue the special districts make.

Director Meigs asked if CMSA can initiate an application. Mr. Banning explained that the general rule is that a JPA can exercise any *power* that all of its members hold in common. So San No.1 and San No. 2 could certainly do this, and so could San Rafael Sanitary District and CMSA. But CMSA can't participate in it as a JPA, observed Director Sullivan. The agreement would be between the other 3 groups. Mr. Banning agreed with this assessment and added that since all 3 members of CMSA all have the ability to initiate an application to LAFCO, theoretically the JPA itself could do it, too. But this is a very dissonant idea that he doesn't really get.

Ms. Houston said that the members of the JPA would have to vote on voting on that application. She asked if each agency would have to or the JPA? Mr. Banning said this is getting really theoretical, but the resolution of application just requires a majority vote of the board that adopts it. In response to a question from Director Sullivan with respect to what happens to the JPA in the later steps of the process when each agency has to deal with the application, Mr. Banning said he hadn't thought of that process and didn't know where that road would go.

In that case, asked Ms. Martin-Miller, who would be considered the population that could protest or approve, seeing that CMSA doesn't go directly to the voting population of Ross Valley or Corte Madera or San Rafael to do *any* action or get approval. Would it be the member agencies? Mr. Banning said that the applicant, whoever that is, is the one who defines what the application is, i.e. the area that the application affects. Ms. Martin-Miller said she is just saying that *legally* the members that CMSA serves are the member agencies and not the voting public. So would that 25% and 50% be based on what each agency votes? Mr. Banning said this is very hypothetical and he hasn't really considered the idea that the JPA could be an applicant to LAFCO. He will talk to LAFCO's lawyers and give it more thought.

Mr. Banning clarified for President Johnson that the most frequent applicant to LAFCO is a single property owner who has a bad septic tank and needs to connect to the sewer pipe in front of his house. The number of applicants per year varies a lot. When the economy is rocking and rolling we can get 25, but this entire fiscal year we've gotten 2 or 3.

Director Guasco wanted to know what constituted a small district—100 connections or 500 connections? Mr. Banning said he had no idea.

Director Guasco asked what empirical evidence demonstrates performance, or the lack of performance, needed to require a larger organization? Mr. Banning said there are no fixed criteria. There is a list of *factors* to be considered and they're many and diverse, as he mentioned earlier. The cases LAFCO deals with are never the same; they're almost always unique in every case. So there's no possibility of writing an objective performance standard for any of that stuff. President Johnson observed that this situation is unlike the legal system where legal precedent means something. Mr. Banning agreed and said there's also something else that needs to be considered. If LAFCO acts inconsistently with regard to cases that are somewhat similar and you can show that LAFCO has acted arbitrarily or capriciously, that's grounds for possible legal action.

Director Guasco asked the following 2 questions: What measurable factors delineate the difference between adequate and excellent service in a flat region, versus a highly saturated steep valley region? Does LAFCO have empirical measurable criteria, which demonstrate when an organization has become ineffective? Mr. Banning noted that he answered both those questions and Director Guasco agreed that he had.

Director Guasco asked if the criteria used for recommendations made in the Sphere of Influence Report are based on metrics other than financial? What *are* those metrics? Do they vary for different types of agencies and municipalities being examined and how so? Mr.

Banning said they vary a lot. There are really only 4 criteria in the *law* that determinations have to address: the general plan of the affected agencies; the demand for service; the ability to provide that service of the agency under study; and what the legislature calls communities of interest. If the Commission determines that communities of interest play a part in this particular decision, it gets really wonky. If you're talking about supermarket market areas, for example, or a school district boundary or anything that potentially ties the area already within a city or a special district to the area outside of it, it allows LAFCO to consider all kinds of things that might come into an individual unique case.

At the request of Director Guasco, Mr. Banning further clarified the concept of communities of interest. He said that for a long time Marin City was within the Sphere of Influence of the City of Sausalito. Nobody liked that and each side thought they had nothing to do with the other. But one of the main arguments for keeping Marin City within the Sphere of Influence of the City of Sausalito was that it's the same school district. That is the kind of community of interest commonality that that provision in the law is meant to address, i.e. to allow the *Commission* to address.

Director Egger asked if AB 1232 was going to work with an incorporated city like Mill Valley and some of these little special districts? How is LAFCO going to reconcile all of that? That's a good question, said Mr. Banning. What he's been saying consistently since the bill was passed is that he did *not* see a way for LAFCO to reach into the multi-functions of the City of Mill Valley or to the several functions of Tamalpais Community Services District and have a way to strip away *only* the sewer function and consolidate *that* with another agency. He simply doesn't see how that works. LAFCO's lawyers tell us we could find a way to do that but Mr. Banning is very leery of that. He doesn't think that the legal capability at the end of a lot of litigation is really a good reason to think that would be feasible or sensible. The bill was just drafted perhaps overly broad. He further clarified that he's still working on the studies that have to be put in front of LAFCO to help them make a decision about what they're going to do. The state is not paying for these studies. But it's not a huge study we're talking about. The pieces are mostly in place. It's about updating some information we got in 2005, discussing what we already know, and describing what's *happened* with those districts since 2005. At that time we all said that functional consolidation is the way to go and that's what we worked on. The other major thing that happened in 2008 was these spills. So updating the study involves *partly* the way the agencies were able to function together or *not* when they respond to this crisis.

Director Egger asked how long it would take to consolidate 2 cities or 2 fire districts or 2 sanitary districts if everybody said yes that's what we want to do, and all went really well? Mr. Banning said it varies but the *big* variable is if an election is required. If it is, you have to hit a certain election date and you have to have 88 days *prior* in order to set the date for that election. And even if there's a special election, it gets down to certain dates during the year.

President Johnson wanted to know when LAFOC would start looking at the update for the Ross Valley Sphere of Influence Report. Mr. Banning said that the Commission has its strategic plan meeting in late January of each year. During that time, we're doing prep work before the budget cycle starts. We look at our work program, what we got done in the last

year, what remains to be done, what's come up that we didn't know about at all, what applications we are likely to receive, and what resources we are going to need.

Director Guasco wanted to know how the consolidation of wastewater treatment services under the JPA of CMSA rate in terms of success? Is the cost of sewage treatment now *less* than it was for individual plants that existed under the prior arrangements? Are fewer employees, managers and board members around now as opposed to then? What specific metrics are used in forming LAFCO's rating of the level of success of consolidation? Mr. Banning said it's a JPA and we're simply not involved in this. He didn't think about this question at all. It doesn't concern us. We *do* look at the JPA and how it functions. We have to understand how services are provided. But we're not involved with the specific pieces mentioned in Director Guasco's questions.

Director Meigs noted that there was a LAFCO meeting on Thursday, May 12 at 7:00 p.m.

Board members thanked Mr. Banning for his time and agreed that his presentation was very informative. Mr. Banning said he was treated very well.

This study session was for discussion purposes only and no action was taken by the Board.

Item #5-ADJOURN The Board adjourned at 7:57 p.m.

Peter Wm. Sullivan,
Secretary of the Board

6.0 Response to Comments | Pam Meigs, Member of the Public

Comment 6-1

Ms. Pam Meigs submitted minutes from RVSD's Board meeting held on May 9, 2011 in which former Marin LAFCO Executive Officer Peter Banning made a presentation that covered – among other items – consolidation options involving the District.

Comment noted. Staff adds it appears the presentation made by Mr. Banning was part of the Executive Officer's ministerial duties to perform community outreach. It does not appear any formal discussion was subsequently held with the Commission regarding consolidation opportunities – including merits or demerits – thereafter.



June 29, 2017

Keene Simonds, Executive Director
Marin Local Agency Formation Commission
1401 Los Gamos, Suite 220
San Rafael, California 94903

Subject: Comments on the LAFCO Draft Central Marin Wastewater Services Study

Dear Keene,

Thank you for attending the May 9, 2017, CMSA Board of Commissioners meeting to present the draft Central Marin Wastewater Study’s findings, recommendations, and determinations, and to receive Board member comments and answer their questions. After that meeting, Board members provided detailed comments to General Manager Jason Dow, and considered and approved consolidated and summary versions of those comments at their June 13 Board meeting. Over the past 18 months, General Manager Dow has kept the Board apprised of the Study’s development status, and his meetings with LAFCO staff to review comments on the initial and final draft agency profiles. The Board appreciates LAFCO staff meeting with GM Dow to review and discuss his comments, and understands many were incorporated in the draft Study’s agency profile section for CMSA.

GM Dow and I have reviewed and agree with the comments provided by the San Rafael Sanitation District (SRSD), Ross Valley Sanitary District (RVSD), and Sanitary District #2 (SD2). CMSA’s comments on the Study’s General Conclusions, Recommendations, and Agency Profile sections, as they pertain to CMSA, are presented below, and detailed comments on the CMSA profile section are shown in the attached document.

7-1

General Conclusion No.1 - Agencies Have Substantive Influence on Growth in Marin County

Comment: CMSA does not agree with this comment. Growth and development are determined and approved by land use planning agencies, local city and town councils and/or the County Board of Supervisors, who have that statutory authority. Sanitary Districts, Sanitation Districts, and JPA wastewater agencies do not have any decision-making authority on growth, and do not influence those planning and approval processes as they don’t possess any general planning powers under their respective enabling legislation. CMSA’s wastewater treatment facilities have adequate capacity for the projected future development in the Agency’s service area, and therefore, do not influence development decisions by the planning agencies.

7-2

General Conclusion No. 3 - Increasing Diseconomies of Scale

Comment: CMSA does not agree with the comment and believes there is no justification for this statement. In fact, a national rating agency, Standard and Poors (S&P), would also disagree. S&P has recently rated one wastewater agency in Central Marin "AAA" and others agencies "AA+" and "A+." These are extremely high credit ratings and are for bond issues with 25-to 30-year terms. The discussion that limited growth in Central Marin will cause future diseconomies of scale implies that bigger is better and less expensive. The discussion also ignores the fact that the CMSA treatment plant was itself a consolidation that eliminated four smaller and less efficient treatment plants with one facility with an excellent operating and regulatory compliance record. The real economies of scale are with treatment, not with collection systems.

General Conclusion No.7 - Wastewater Demands Deintensifying During Normal Conditions

General Conclusion No.8 - Wastewater Demands Intensifying During Peak-Day Conditions

7-3

Comment: CMSA generally agrees with these comments as they are derived from the flow data obtained during the Study period. If the Study's flow interpretations and projections are correct, dry-weather flows are declining because of water conservation and wet-weather flows will increase.

In 2015 and 2016, dry weather flows stabilized and wet weather flow did increase due to significant storm events resulting in increased rainwater and groundwater inflow and infiltration (I&I) into sanitary sewer systems. This I&I requires wastewater infrastructure and facilities to handle peak wet weather flows that are often ten times or greater than average dry weather flows; CMSA's peaking factor is approximately 16:1.

SRSD, RVSD, and SD2 are actively planning and implementing maintenance and capital projects to reduce I&I, and intend to devote considerable resources on these efforts in the future. CMSA believes, given these investments, I&I may decrease in the future as these collection agencies continue to replace and rehabilitate leaking gravity sewers, manholes, and sewer lateral pipelines. Additionally, new technology such as smart covers (manhole covers with flow sensing devices) allow the agencies to locate and correct major inflow sources.

Recommendation #2

"CMSA should develop a plan to allocate treatment capacity among its member agencies to enhance regional growth management. This plan would appropriately inform each member agency as well as local land use authorities with more certainty with respect to their ability to forecast and accommodate new development within their jurisdictional boundaries going forward."

7-4

Comment: CMSA does not agree with this recommendation, and believes there is no beneficial reason to allocate treatment capacity. A wastewater agency's core purpose is to provide service where it is needed. CMSA provides treatment of all wastewater flows from its service area that

are resultant from development actions of the cities and county areas served. The strength of CMSA is the regional ability to operate, improve, and finance treatment facilities in an economic and reliable manner.

LAFCO's recommendation is a model that has been used by some JPA wastewater treatment agencies that allocated capacity at the time of their creation. For some of those agencies, a problem resulted when one of their collection agencies ran out of its allotted capacity. The solution offered is that the agency could buy capacity from another agency that has remaining capacity. However, the other agencies either won't sell any capacity or if willing, they would charge the cost of providing future capacity. This means that any advantages from economies of scale would be lost, as the resources of only one agency would be used to fund future capacity. There are several examples of this situation.

Recommendation #4

"CMSA should reorganize its governing board structure to limit and or remove the City of Larkspur's presence within the joint powers authority to better align and weight governance with vested participation among member agencies."

Comment: CMSA is interested in LAFCO proposing alternative forms of a reorganized CMSA governing board structure given the recommendation, and the process to achieve the recommendation.

7-5

Revised Agency Profile Comments: Most previous comments have been incorporated into draft Study, and others that should be considered are shown as handwritten comments in the attached CMSA profile section. Significant remaining comments, similar to those presented in the Agency's December 2016 comment letter, are associated with the study term, the treatment demand versus capacity graphs, and using depreciation in financial metrics, as briefly described below.

7-6

Study Term: The current study term is from 2010 to 2014. CMSA believes a study term through 2016 is more appropriate, so the information presented in the Study and used in its various analyses are reasonably current and accurate. If the LAFCO Commission is agreeable with extending the term, staff will provide the necessary 2015 and 2016 data.

7-7

Peak Flow Demand vs. Capacity Graphs: This graph compares the maximum daily volume, in million gallons (MG), received during each year of the study period to CMSA's hydraulic capacity of 125 MG per day. Using only maximum day information represents that CMSA has a significant amount of underutilized hydraulic capacity, which is incorrect. Wastewater treatment plants are designed to provide adequate hydraulic capacity to prevent wastewater overflows from the treatment processes, and adequate treatment capacity to clean the wastewater to meet regulatory requirements. When assessing available hydraulic and treatment capacities, maximum peak hourly and 5-minute peak flow rates need to be considered, as these better represent available capacity during significant storm events. CMSA

suggests adding peak hourly and maximum peak wet weather flows, which will show volumes over 110 MG per day that are much closer to the Agency's maximum capacities.

Agency Finances Section: Financial information presented throughout this section is extracted from the Agency's audited financial statements. In several locations, LAFCO states CMSA's expenses exceed revenues resulting in an operating loss. On the basis of cash flow, budgetary, and financial management this is incorrect. Historically, CMSA's annual operating revenues exceed our annual operating expenses resulting in surplus funds for investment that are used to fund future capital activities. LAFCO includes depreciation as a cash expense, which is customary from an auditing perspective to determine net assets, but would most likely be misunderstood by the general public. Local agencies don't fund depreciation with revenues, as depreciation is not a real operating expense.

Please do not hesitate to contact General Manager Dow at 415-459-1455 or jdow@cmsa.us to discuss any of the Agency's comments.

Respectfully,



Kathy Hartzell
Commission Chair



Jason Dow
General Manager

Attachment

- CMSA profile section with comments and suggested revisions

7.0 Response to Comments | Central Marin Sanitation Agency

Comment 7-1

CMSA disagrees with the draft report's conclusion in the Executive Summary section that the affected agencies have substantive influence on growth in the Marin County. CMSA notes none of the affected agencies have any decision-making authority on growth and with sufficient treatment capacity do not influence decision by the land use authorities.

Staff notes the underlying intent of the conclusion – which is supported by population projections independently made by Marin LAFCO and reflected in the draft report – is to highlight the integral role the affected agencies have in collectively accommodating development in Marin County. (As noted in the report the affected agencies currently accommodate nearly 50% of all Marin County residents.) This conclusion is further substantiated by noting the direct relationship between existing growth and the availability of public wastewater in the region; i.e. relatively limited development currently exists and/or is planned going forward in the region without connection to one of the agencies' collection systems. Should any of the agencies' collection or treatment facilities falter and become subject to a cease and desist order prohibiting any new connections this would effectively and immediately curb new growth and development in the service area. Nonetheless, staff appreciates the word choice "influence" generates an unintended inference, and as such the final report has been revised to emphasize the agencies' substantive role in accommodating (and as opposed to influencing) new growth in Marin County.

Comment 7-2

CMSA disagrees with the draft report's conclusion in the Executive Summary section noting increasing diseconomies of scale for wastewater services in the region. CMSA states it has received high-bond credit ratings for bond issues with 25 to 30 years. CMSA adds the conclusion incorrectly infers bigger is better and less expensive.

Staff believes there is sufficient justification provided in the report in substantiating the referenced conclusion. Most notably this includes citing the combined change and increase in operating expenses among the affected agencies during the study period exceeded the combined change and increase in operating revenues by over three hundred percent. Further, the report relies on independent calculations performed by Marin LAFCO based on audited financial statements issued by the affected agencies. The report does not incorporate information generated by credit rating agencies given unfamiliarity in how the ratings are calculated and/or their accuracy.

Comment 7-3

CMSA generally agrees with the draft report's conclusion in the Executive Summary section stating wastewater demands are de-intensifying during normal conditions. CMSA also provides additional and related information on inflow and infiltration involving 2015 and 2016.

Comment noted and the additional information noted by CMSA is appreciated and will further help inform future municipal service review updates.

Comment 7-4

CMSA does not agree with the draft report’s recommendation in the Executive Summary stating the Agency should develop a plan to allocate treatment capacity among its member agencies to enhance regional growth management. CSMA believes there is no beneficial reason to pursue this project.

Staff believes it would be beneficial to land use authorities and the general public for CMSA to establish an allocation system. More specifically, staff believes an allocation system would help inform and formalize decision-making in accommodating additional growth – which will inevitably occur given the State’s commitment to ensuring an appropriate job to housing balance – now and as opposed to when circumstances may change. This comment is importantly premised on the presumption that growth will continue in the region, albeit slowly, and eventually it is reasonable to assume more competition/need will emerge for the remaining treatment capacity at CMSA.

Comment 7-5

CMSA welcomes suggestions from Marin LAFCO with respect to the draft report’s recommendation in the Executive Summary section for CSMA to reorganize governing board structure to limit and or remove Larkspur.

Staff would be pleased to assist and offer suggestions for consideration by CMSA.

Comment 7-6

CMSA makes a general comment that it would be appropriate to extend the draft report’s study term from 2014 to 2016 to help ensure Marin LAFCO’s analyses are current and accurate.

Staff believes the five-year data window used in preparing the draft report covering 2010 to 2014 appropriately informs the Commission in analyzing trends and making informed deductions therein with respect to addressing the prescribed population, service, financial, and governance factors required under statute. It is also noted the selected five-year window purposefully aligns with the start of the study’s data collection in late 2015 and ensured all agencies’ completed audit reports – which typically run one to two years in the rear – were completed. Further, given the report emphasizes averages, extending the study period by two years would not likely substantively impact the resulting analysis.

Comment 7-7

CMSA makes a general comment regarding the analysis in the draft report relating to peak flow demands and capacities. CMSA suggests amending the report to add peak-hourly flow and maximum peak wet-weather flows would provide a more accurate assessment of performance relative to capacity.

Staff believes the level and scope of analysis specific to evaluating the affected agencies' wastewater systems appropriately reflects a macro planning review relative to Marin LAFCO's regional growth management interests as prescribed by the Legislature. A more micro review of the wastewater collection and treatment facilities – while an option – would require Commission approval to amend the scope of work for the study. Staff also notes the macro approach is appropriate for the specific benefit of developing baseline information with the added option going forward to provide greater detail in subsequent municipal service reviews. Staff has revised the final report to more clearly define flow conditions in the document as requested.

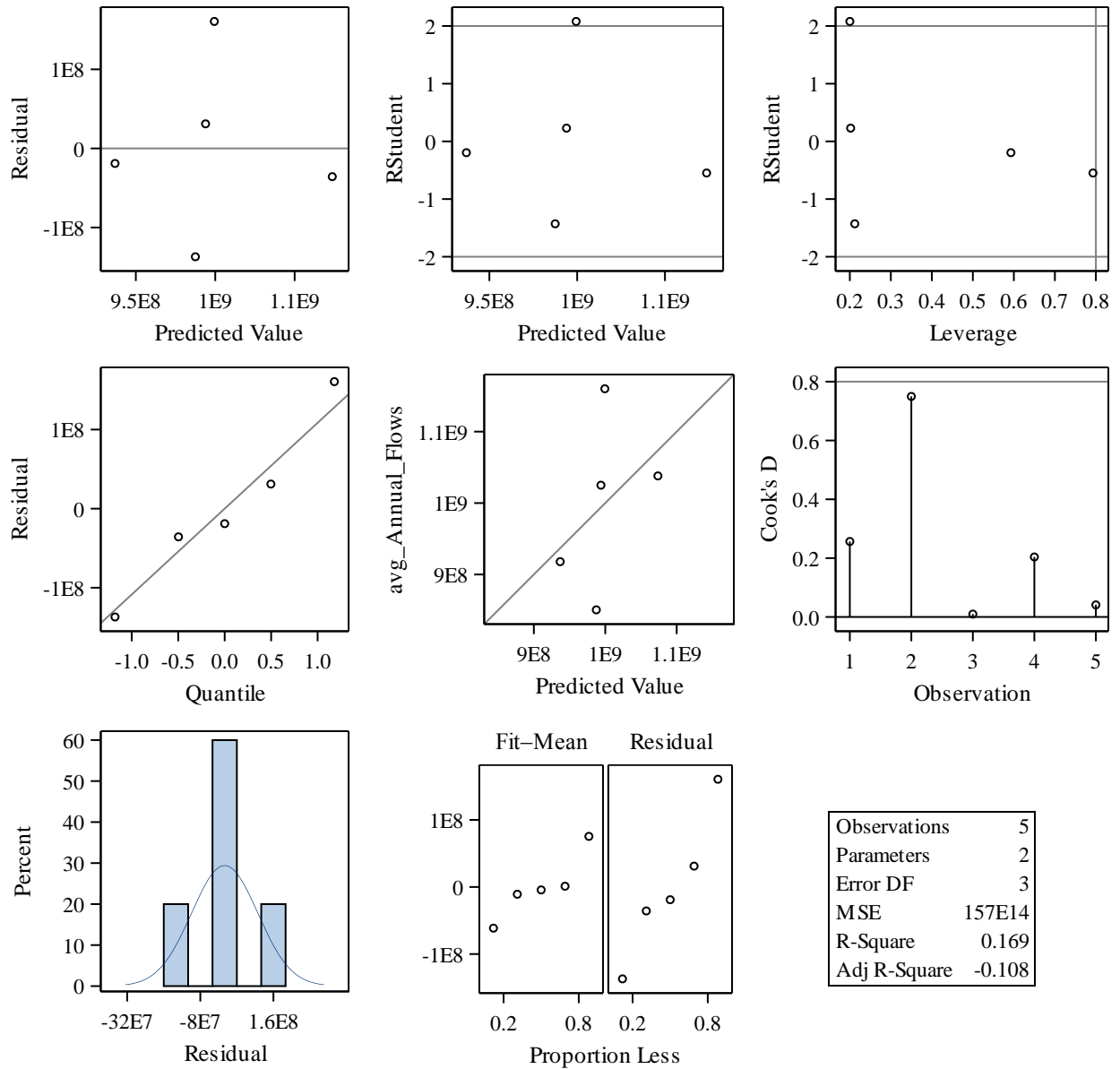
Comment 7-8

CMSA comments the draft report's financial summary on the Agency in the Agency Profile section incorrectly incorporates depreciation as a cash expense and in doing so unnecessarily show annual operating losses.

Staff believes it is appropriate to show depreciation as an operating expense in step with the practice to rely on the third party audited financial statements of each agency in documenting and analyzing financial standing. This includes, importantly, documenting assets, liabilities, and net equity as well as revenues and expenses as booked by the agency and reflected in the basic financial statements. This approach results in depreciation being shown as an operating expense. Nonetheless and in deference to the comment, the final report has been revised throughout to more clearly distinguish the role and impact of depreciation when analyzing the affected agencies' revenue and expense trends through the study period.

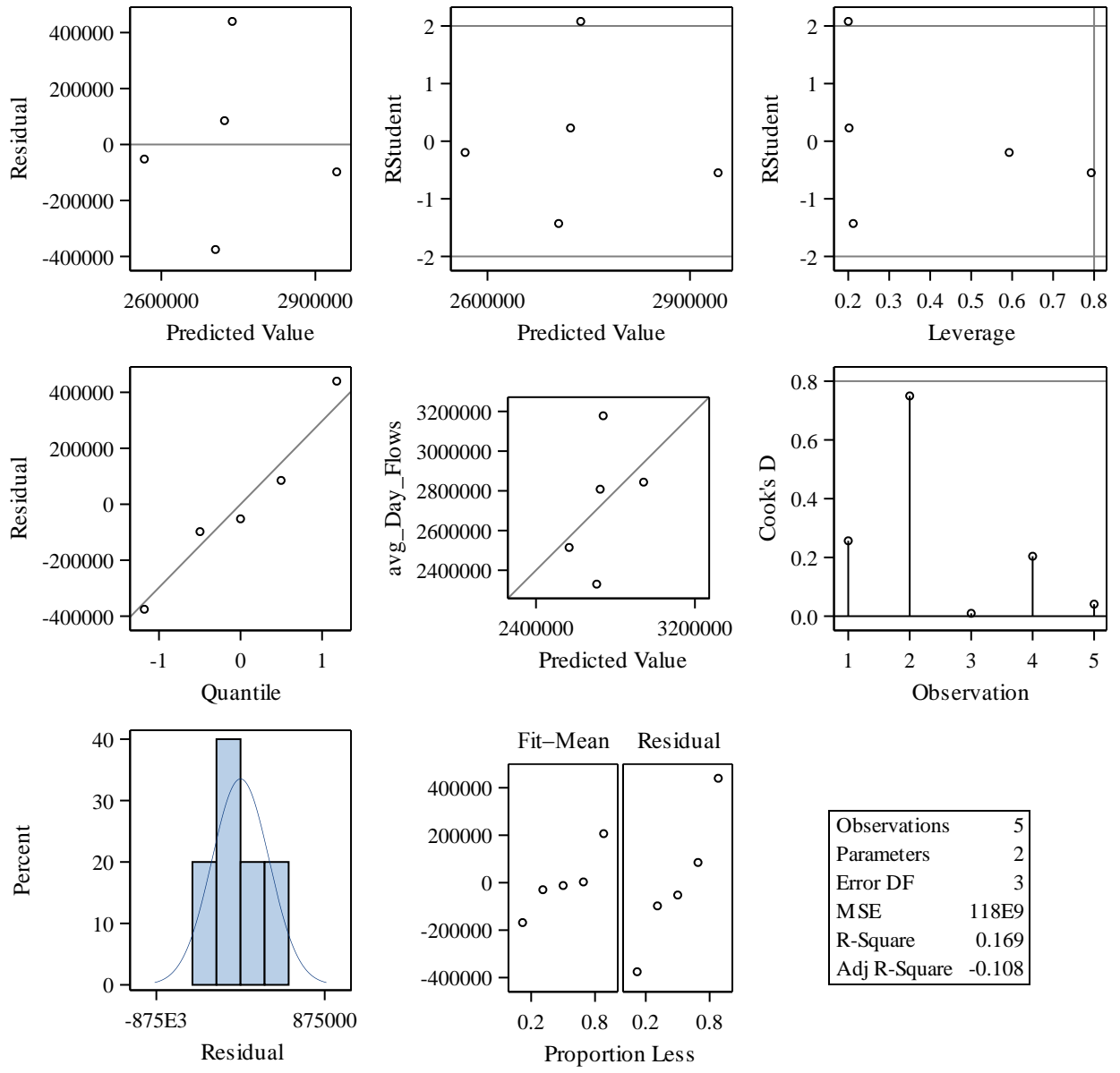
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Fit Diagnostics for avg_Annual Flows



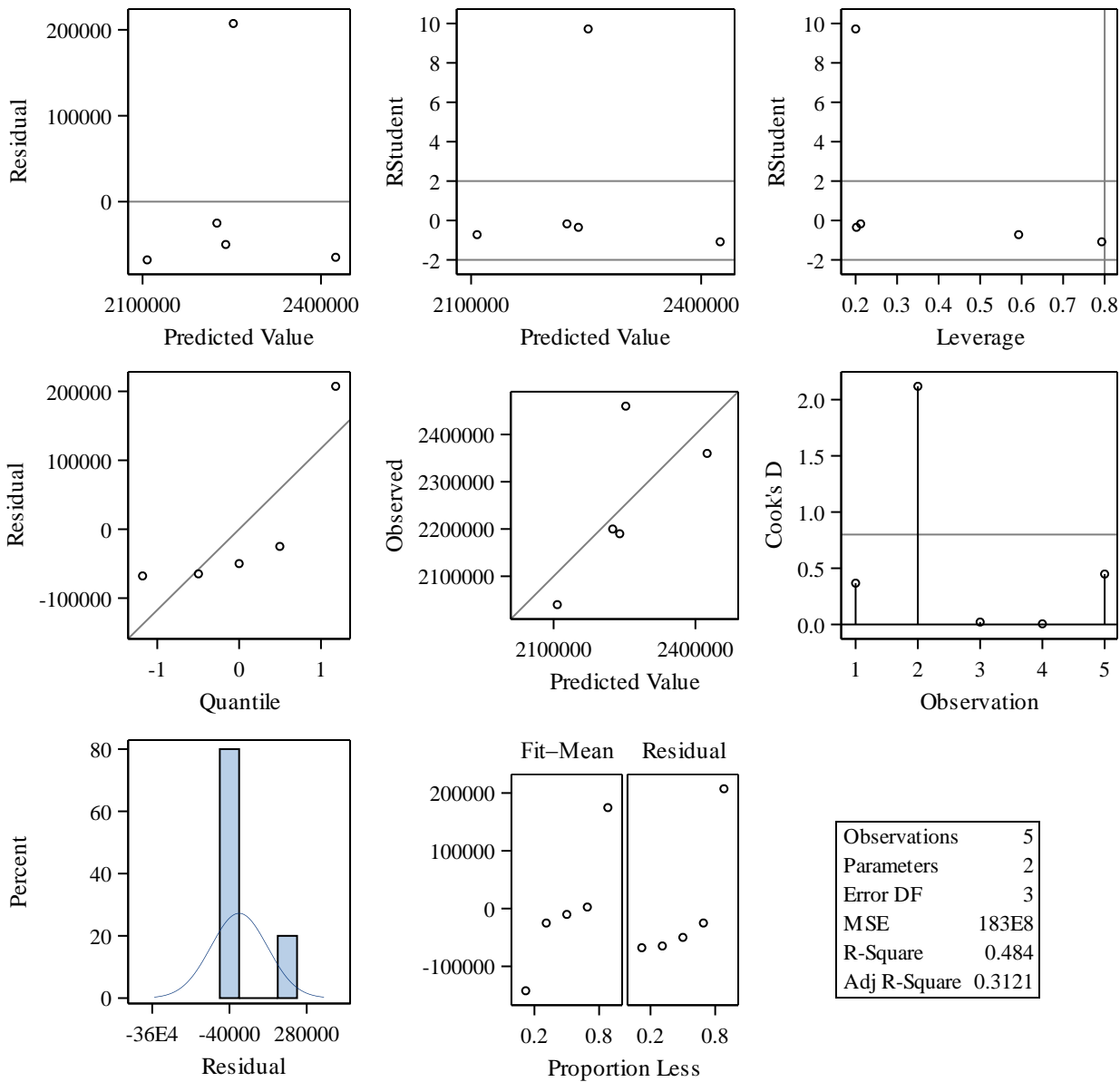
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5	2019	873569565.87
6	2020	860834566.76
7	2021	848073191.26
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9	2023	822485698.23
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Fit Diagnostics for avg_Day_Flows



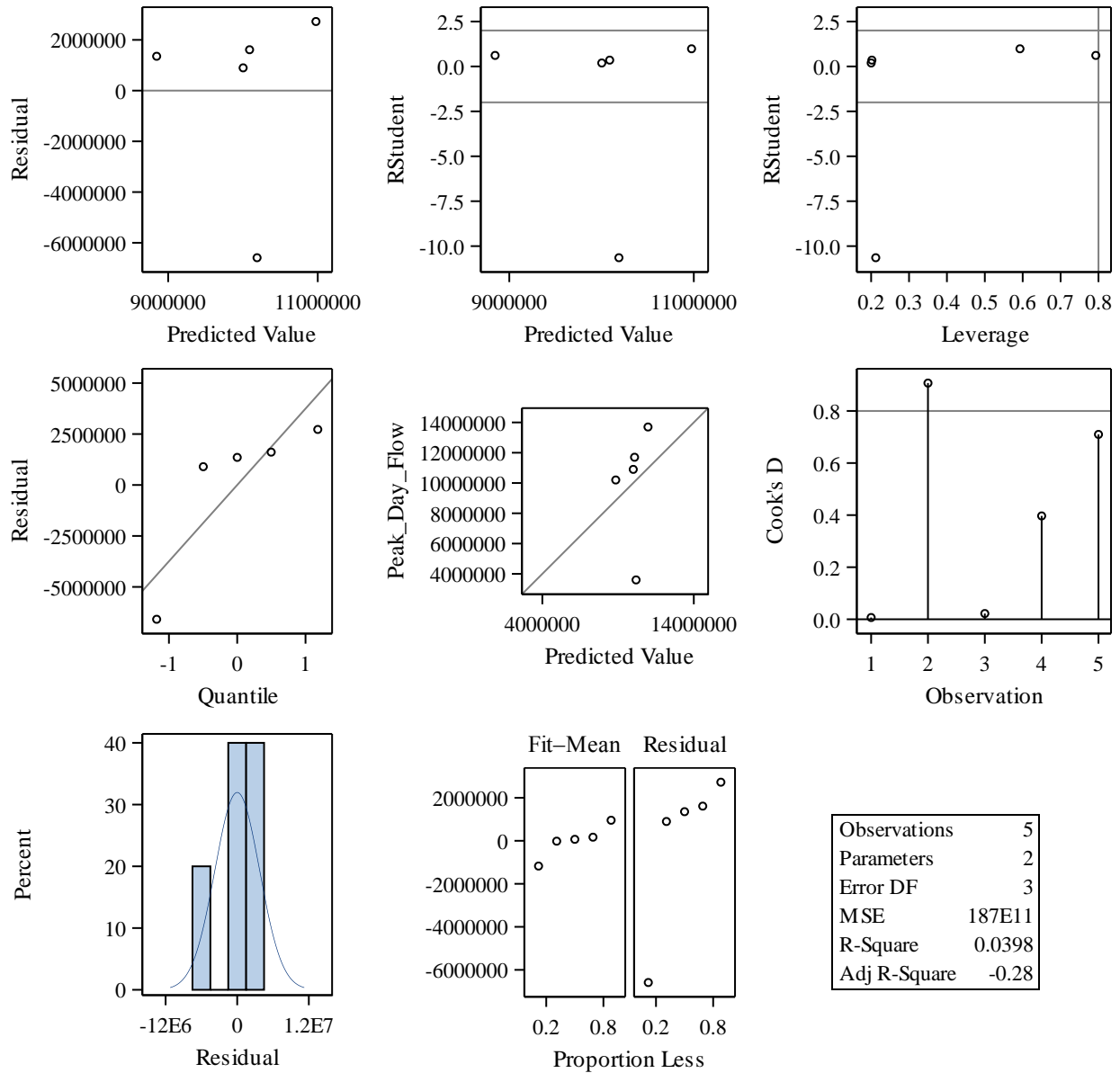
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2	2016	2497638.04
3	2017	2462938.15
4	2018	2428172.56
5	2019	2393341.27
6	2020	2358450.87
7	2021	2323488.19
8	2022	2288466.39
9	2023	2253385.47
10	2024	2218232.28

Fit Diagnostics for avg_Dry_Weather_Day_Flows



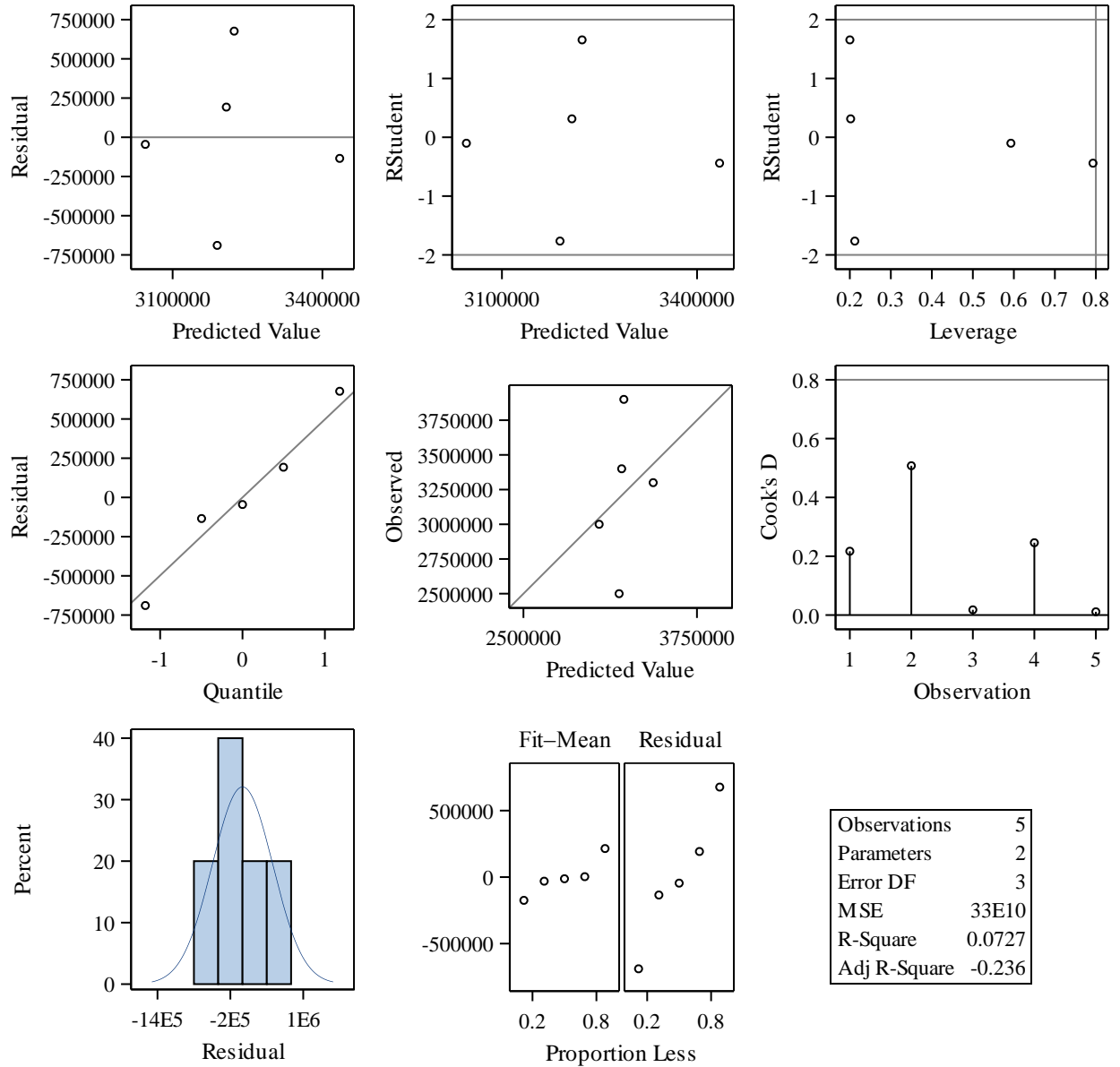
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2	2016	2049238.86
3	2017	2019891.33
4	2018	1990488.23
5	2019	1961029.58
6	2020	1931520.91
7	2021	1901951.13
8	2022	1872331.35
9	2023	1842661.56
10	2024	1812930.65

Fit Diagnostics for Peak_Day_Flow



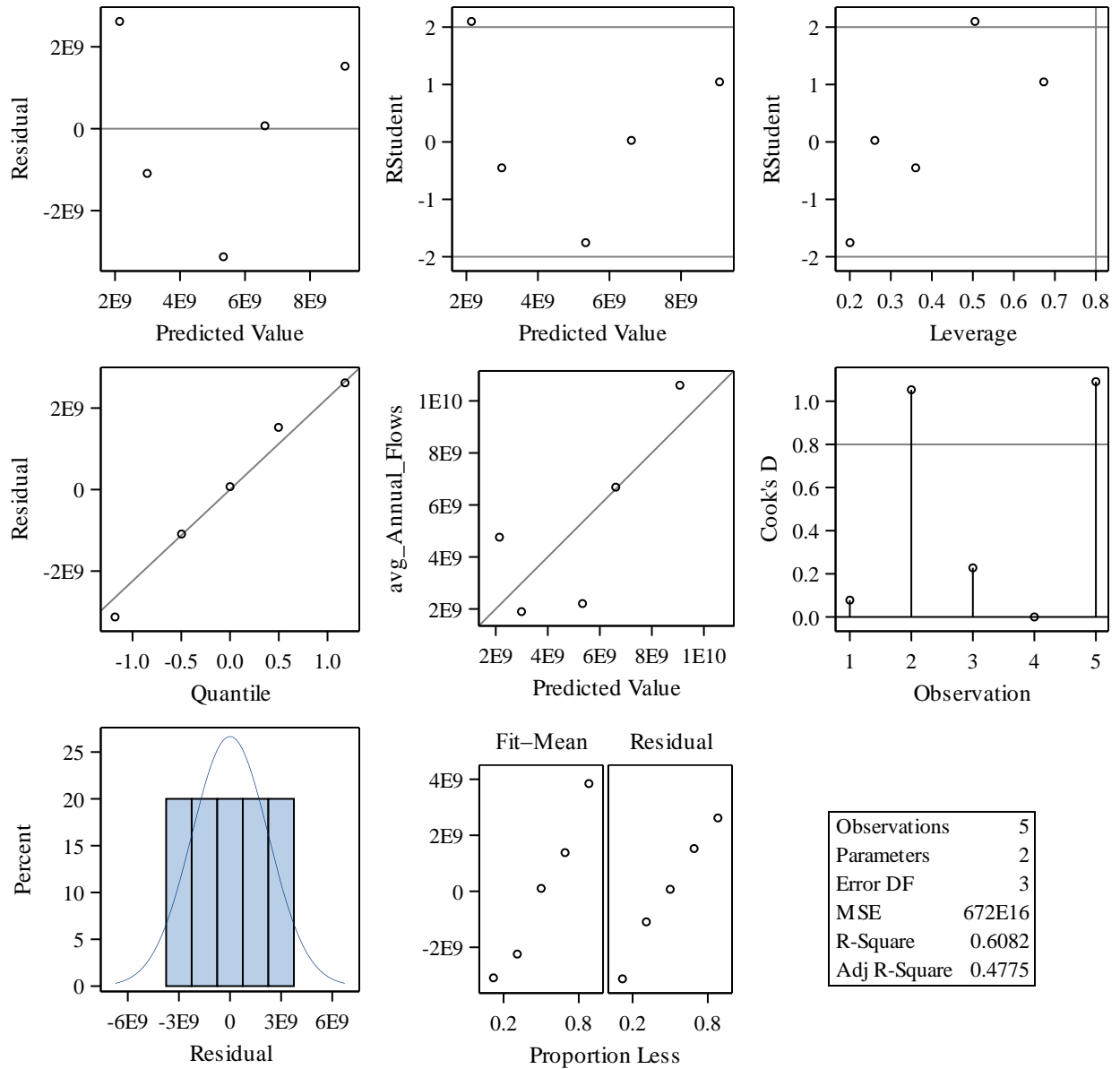
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2	2016	11368651.74
3	2017	11565799.47
4	2018	11763320.45
5	2019	11961214.67
6	2020	12159444.81
7	2021	12358085.52
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9	2023	12756374.70
10	2024	12956097.82

Fit Diagnostics for avg_Wet_Weather_Day_Flows



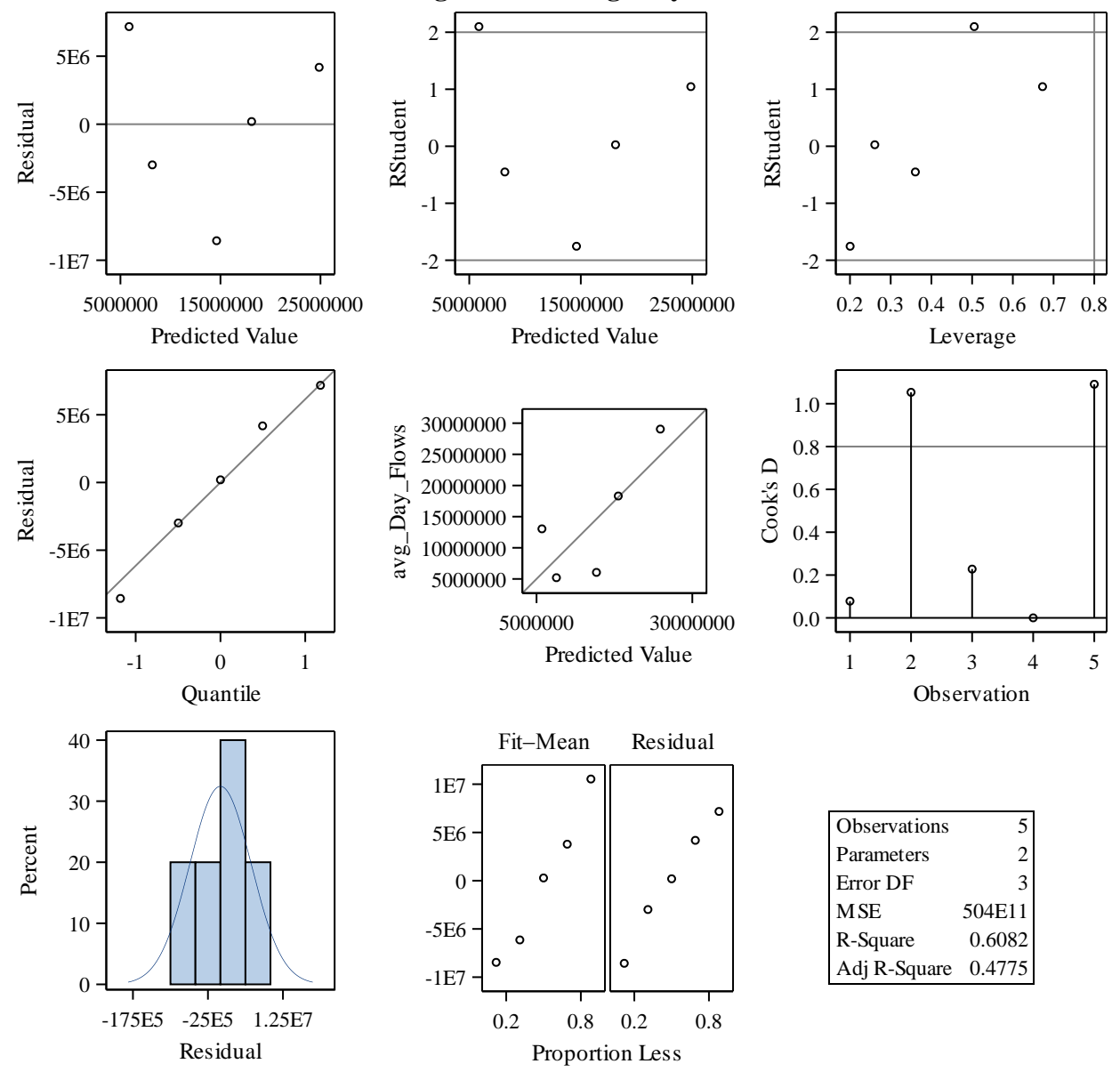
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1	2015	3009400.12
2	2016	2973423.47
3	2017	2937378.58
4	2018	2901265.45
5	2019	2865084.08
6	2020	2828841.29
7	2021	2792523.44
8	2022	2756144.17
9	2023	2719703.48
10	2024	2683187.73

Fit Diagnostics for avg_Annual Flows



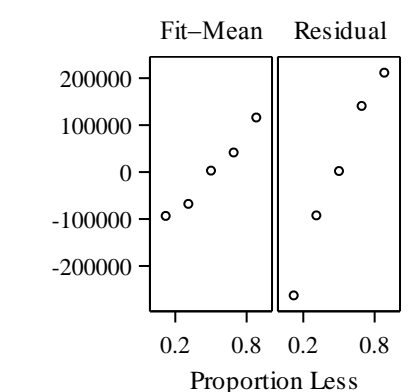
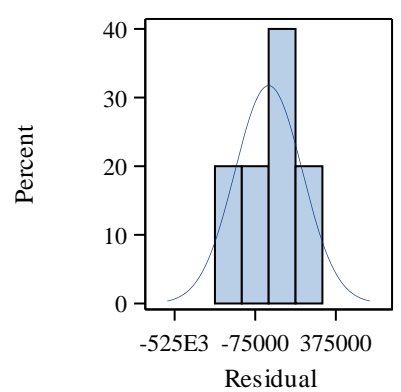
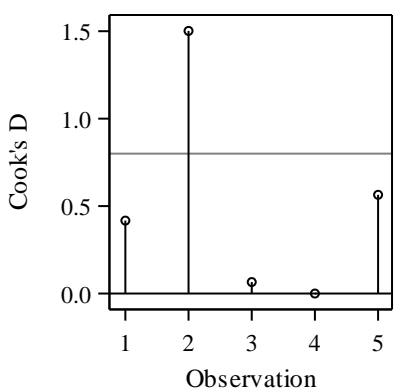
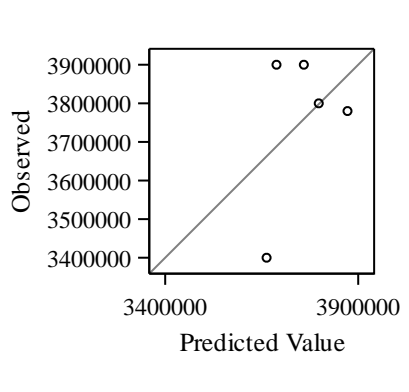
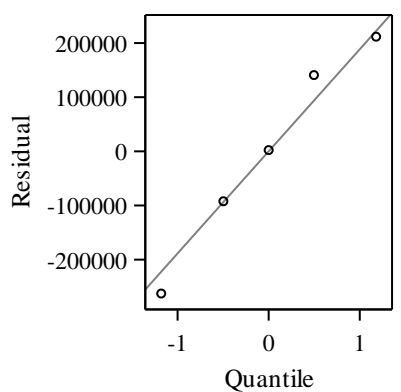
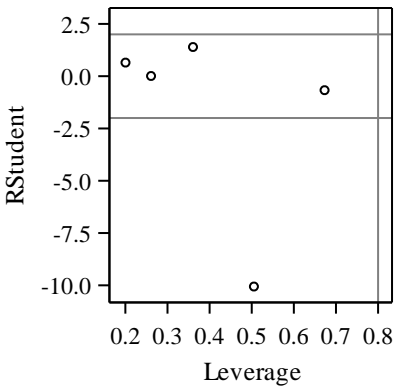
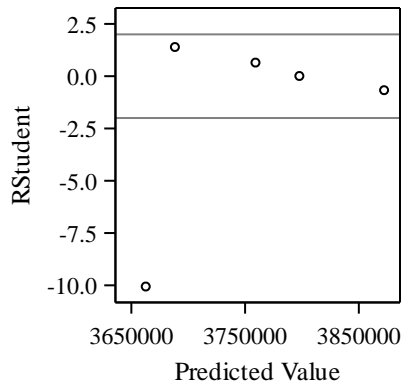
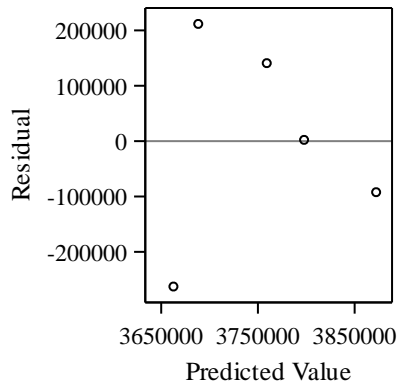
Obs	Year	predavg_Annual_Flows
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3	2017	12884823681
4	2018	14171256901
5	2019	15466533427
6	2020	16770831914
7	2021	18084152360
8	2022	19406584093
9	2023	20738127112
10	2024	22078915406

Fit Diagnostics for avg_Day_Flows



Obs	Year	predavg_Day_Flows
1	2015	28324622.37
2	2016	31800762.83
3	2017	35300886.80
4	2018	38825361.37
5	2019	42374064.18
6	2020	45947484.70
7	2021	49545622.90
8	2022	53168723.54
9	2023	56816786.61
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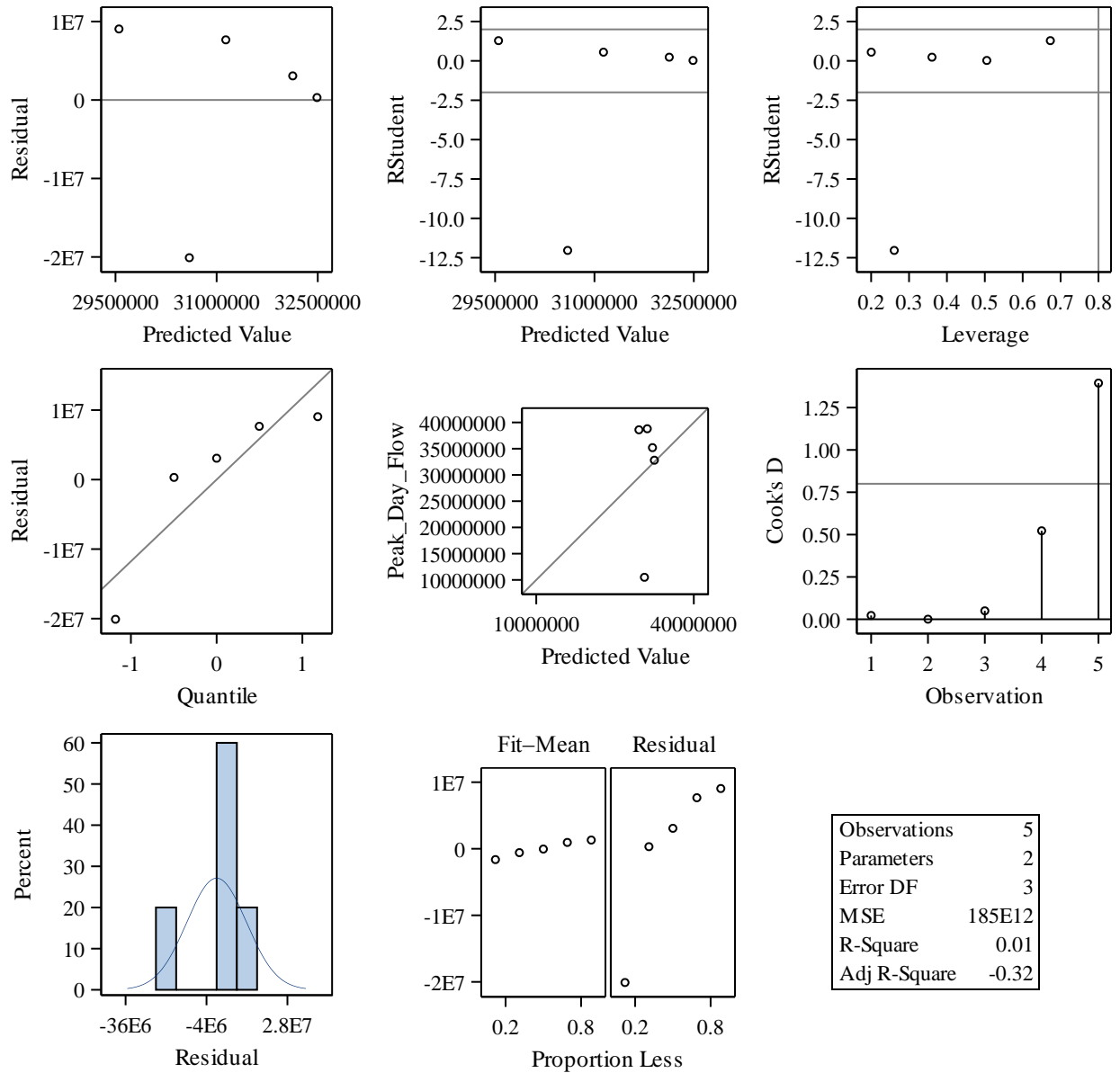
Fit Diagnostics for avg_Dry_Weather_Day_Flows



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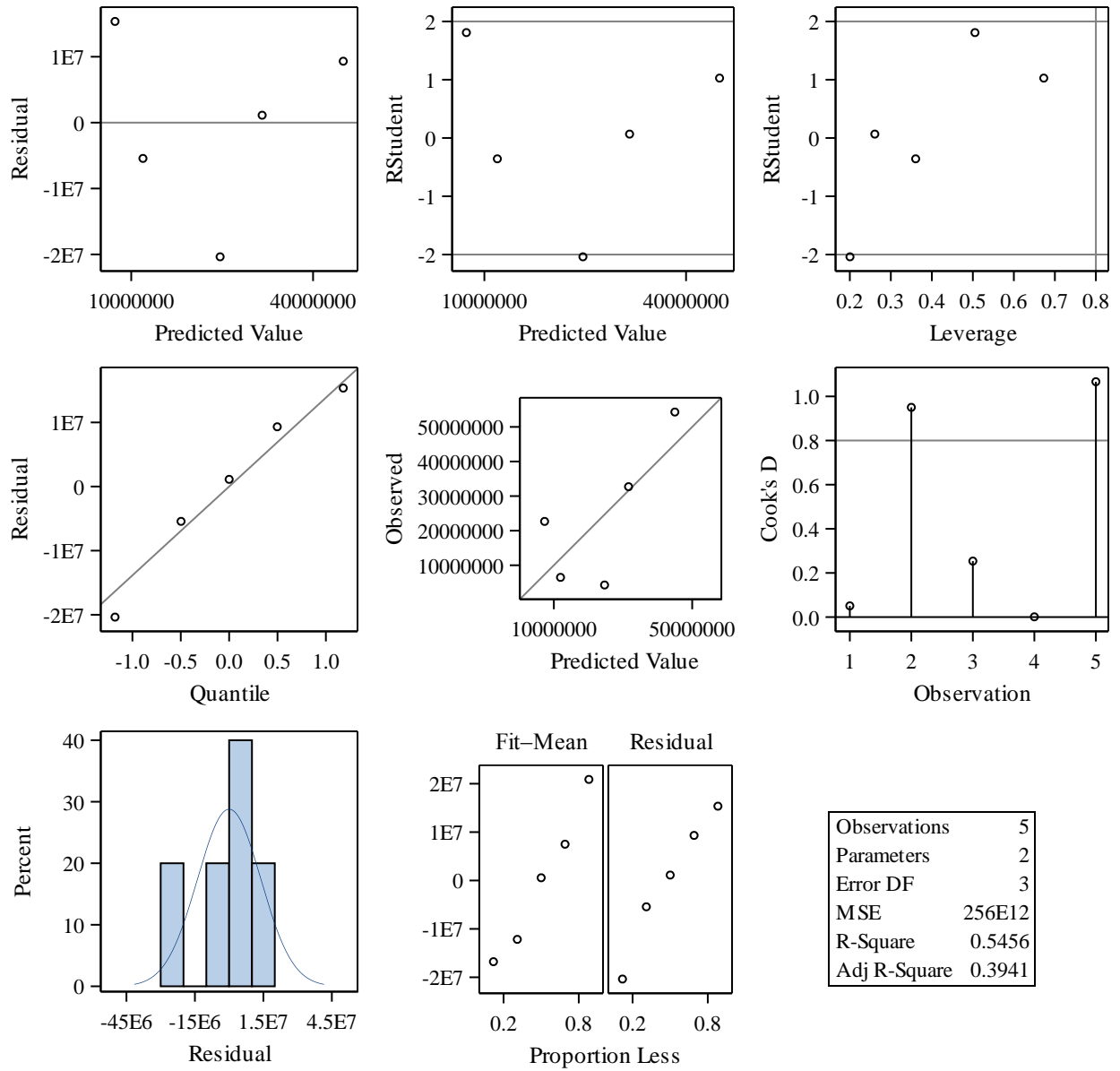
Obs	Year	predavg_Dry_Weather_Day_Flows
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6	2020	4104705.73
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Fit Diagnostics for Peak_Day_Flow



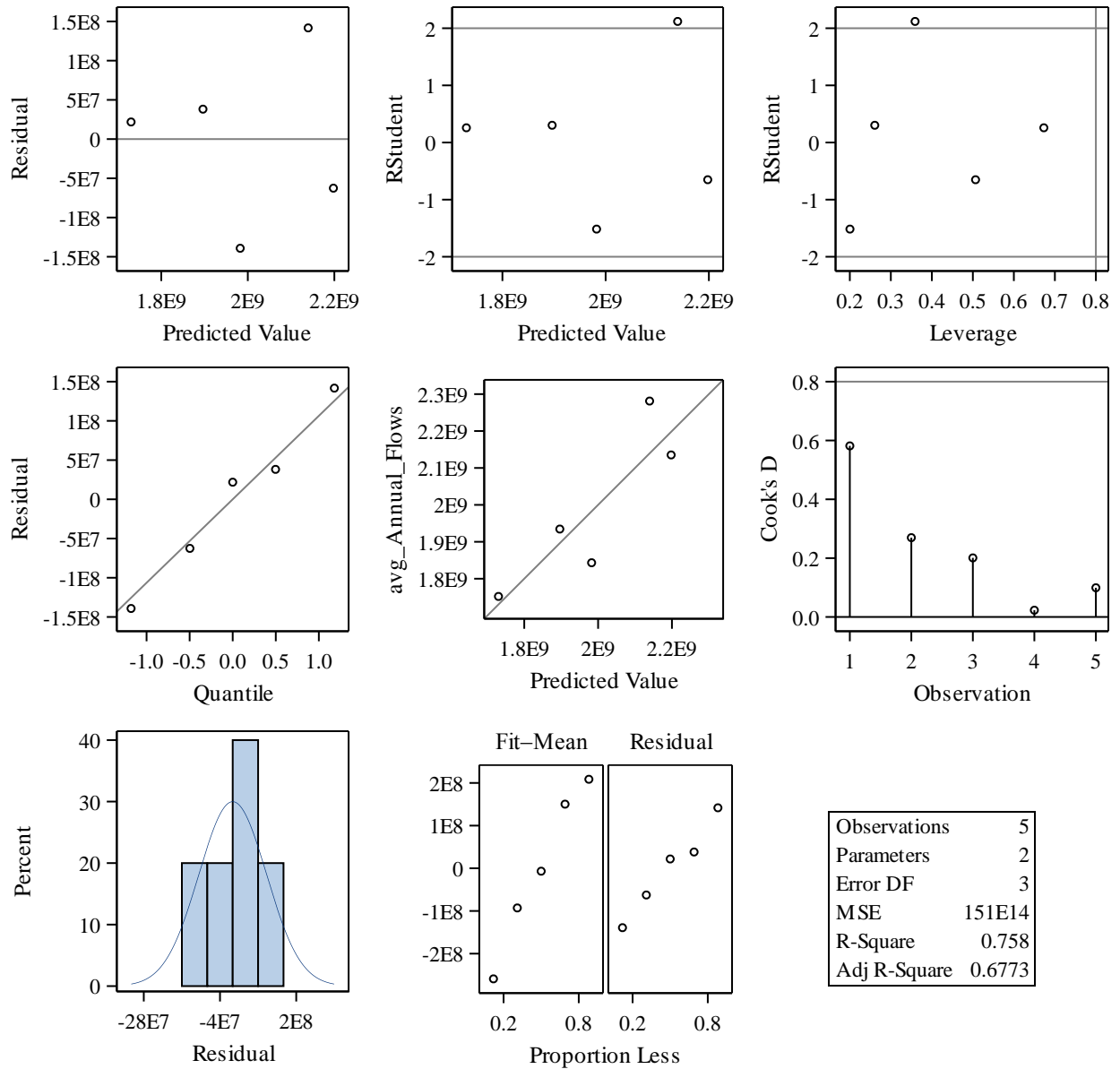
Obs	Year	predPeak_Day_Flow
1	2015	29017406.09
2	2016	28480236.88
3	2017	27939361.49
4	2018	27394723.20
5	2019	26846340.91
6	2020	26294138.98
7	2021	25738117.42
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9	2023	24614501.94
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Fit Diagnostics for avg_Wet_Weather_Day_Flows



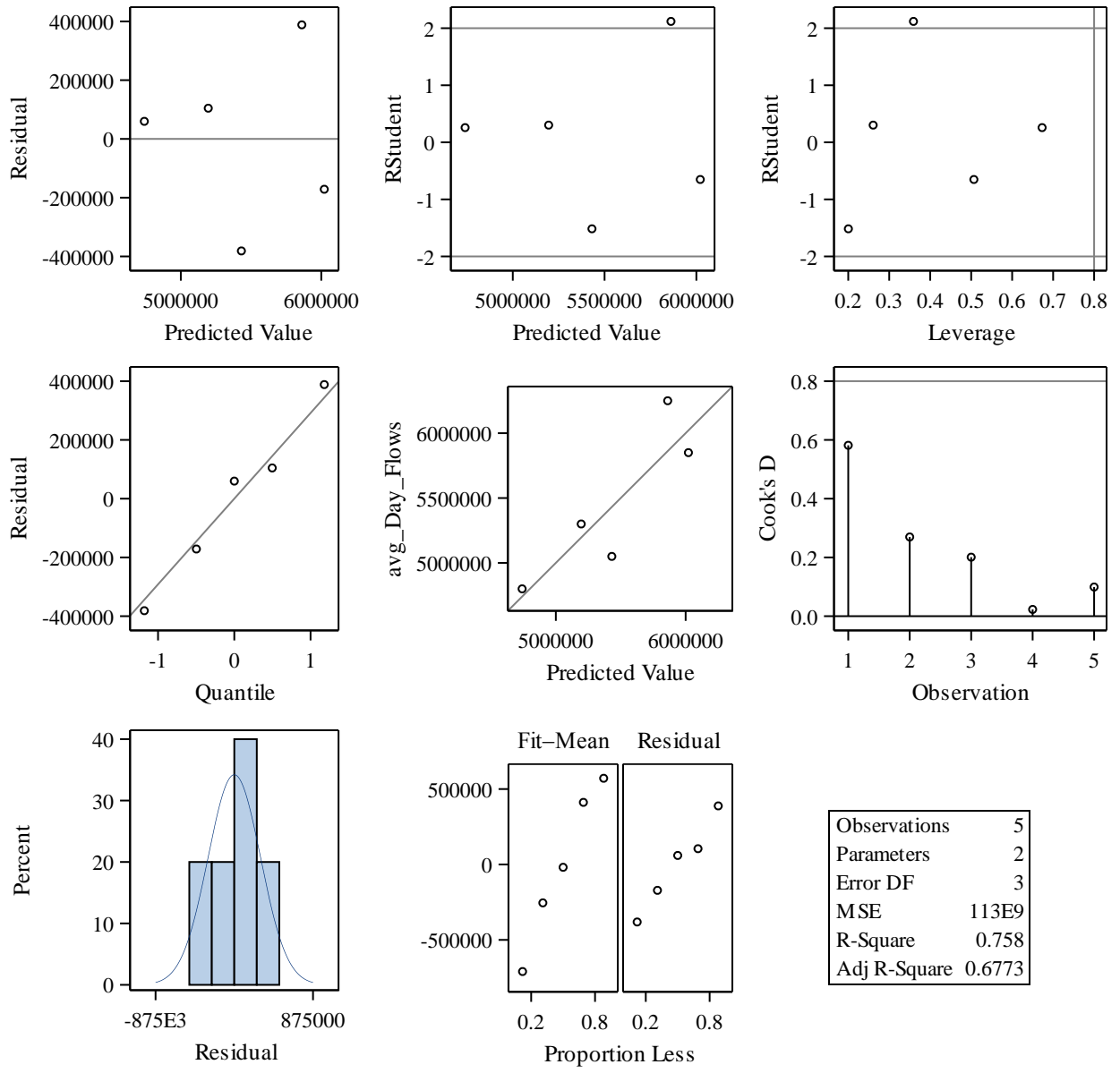
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2	2016	58722632.91
3	2017	65658993.31
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5	2019	79676241.82
6	2020	86757857.42
7	2021	93888457.24
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9	2023	108298064.55
10	2024	115577799.52

Fit Diagnostics for avg_Annual Flows



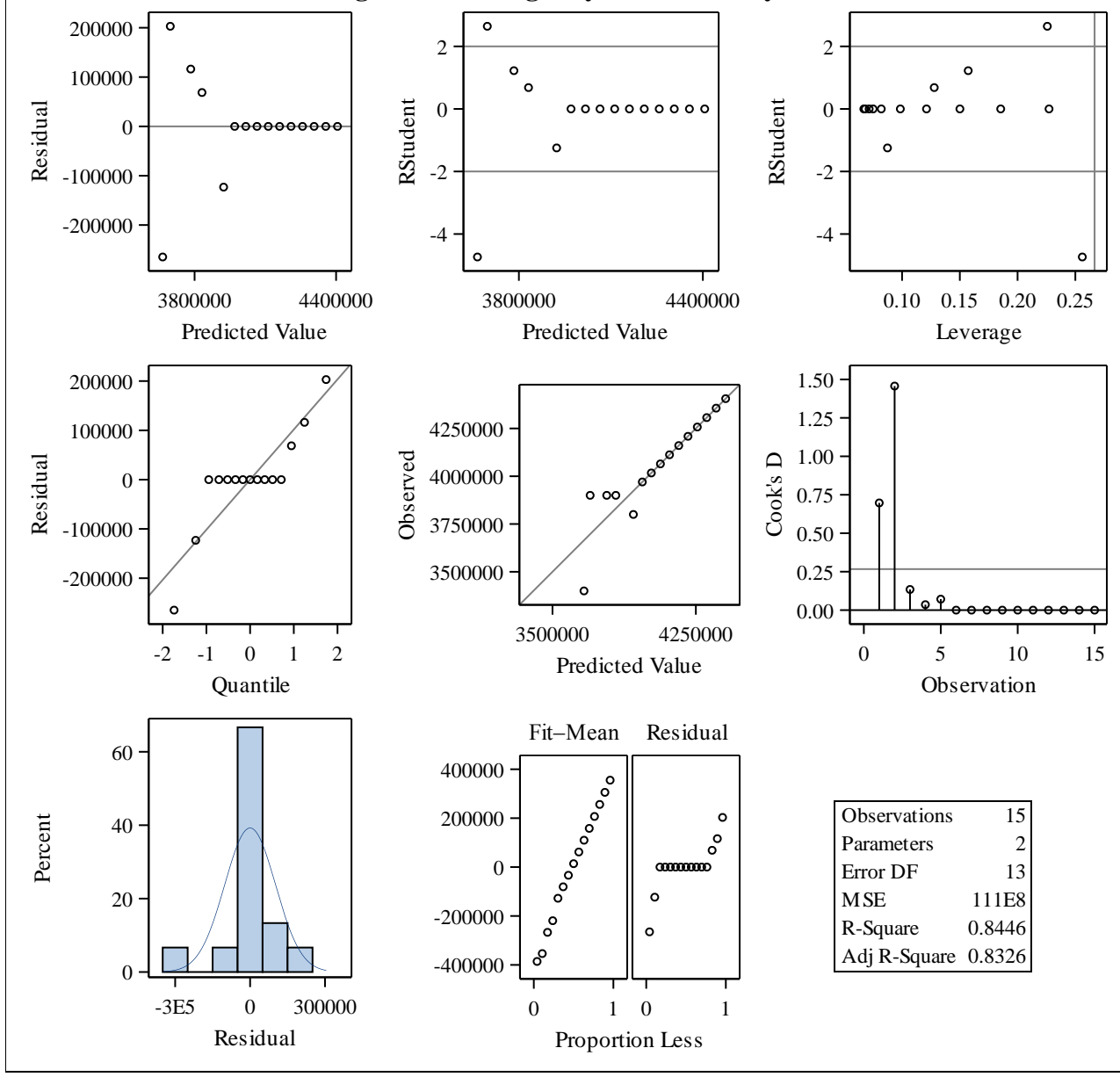
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2	2016	1560013344.45
3	2017	1474120700.16
4	2018	1387638984.52
5	2019	1300565176.65
6	2020	1212890213.93
7	2021	1124614096.33
8	2022	1035730782.12
9	2023	946237250.41
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Fit Diagnostics for avg_Day_Flows



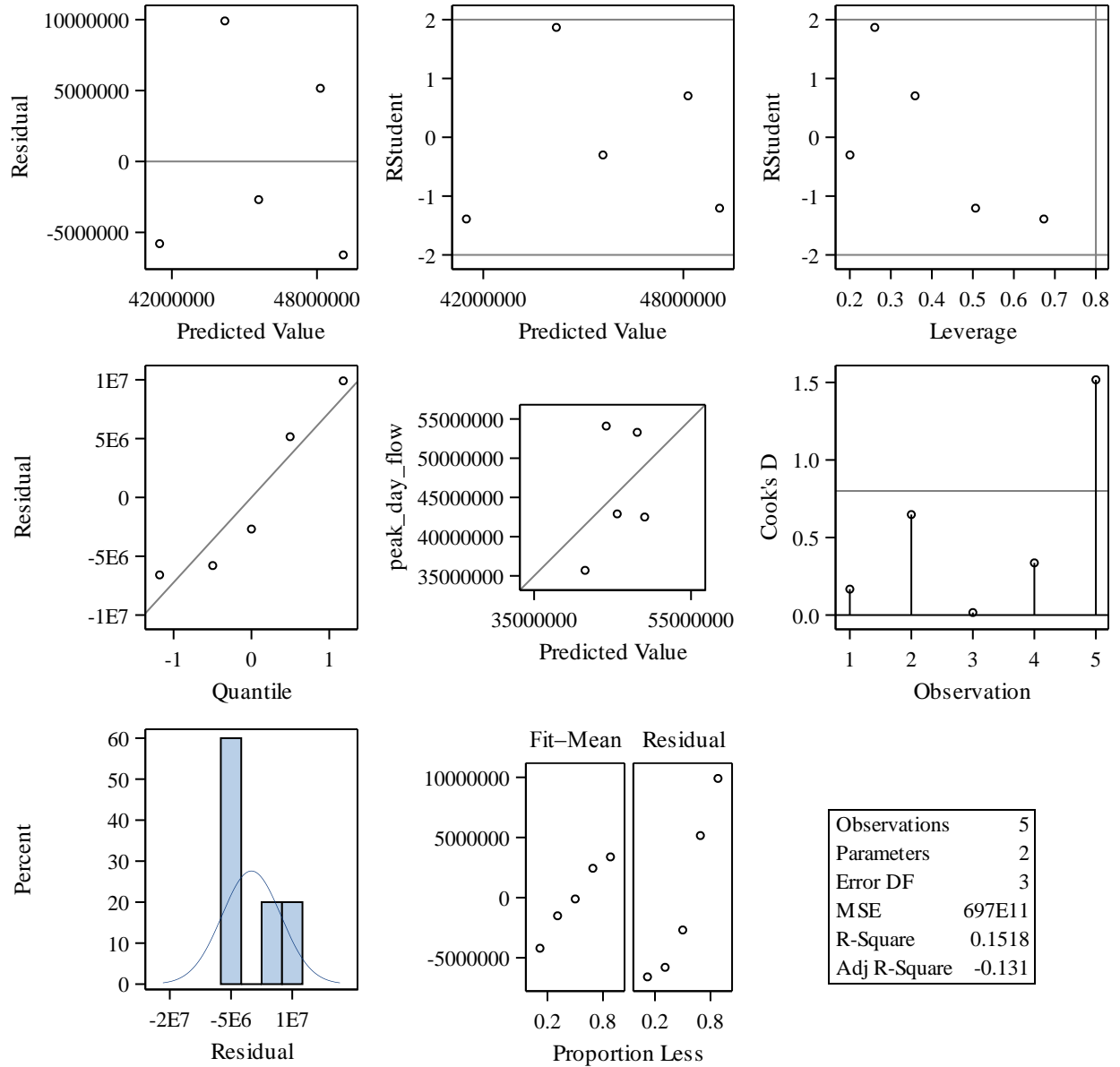
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4	2018	3801750.64
5	2019	3563192.26
6	2020	3322986.89
7	2021	3081134.51
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Fit Diagnostics for avg_Dry_Weather_Day_Flows



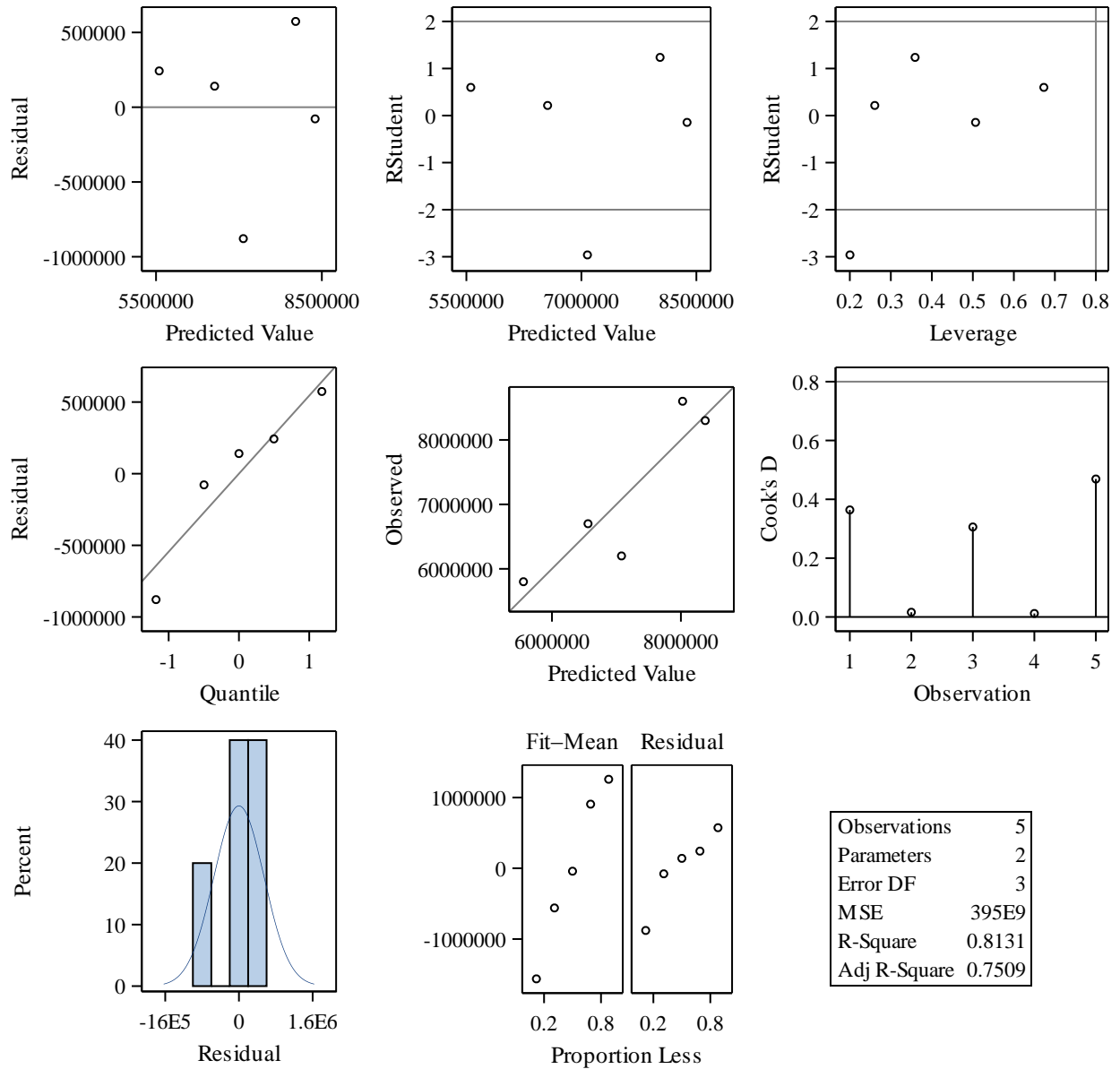
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2	2016	4017117.48
3	2017	4064566.01
4	2018	4112339.95
5	2019	4160440.97
6	2020	4208874.08
7	2021	4257639.28
8	2022	4306739.90
9	2023	4356177.62
10	2024	4405955.77

Fit Diagnostics for peak_day_flow



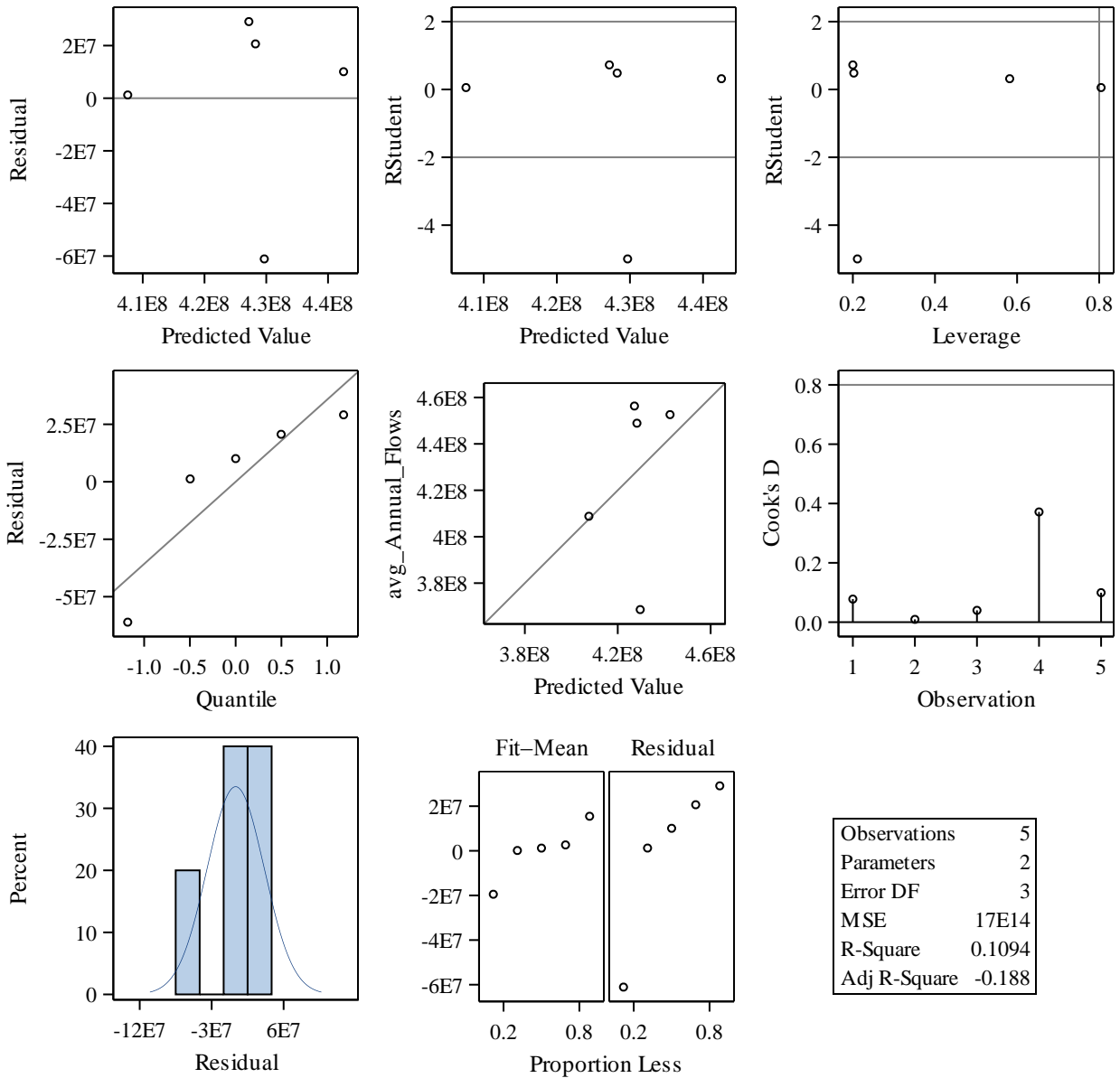
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5	2019	34516701.24
6	2020	33092979.87
7	2021	31659496.57
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Fit Diagnostics for avg_Wet_Weather_Day_Flows



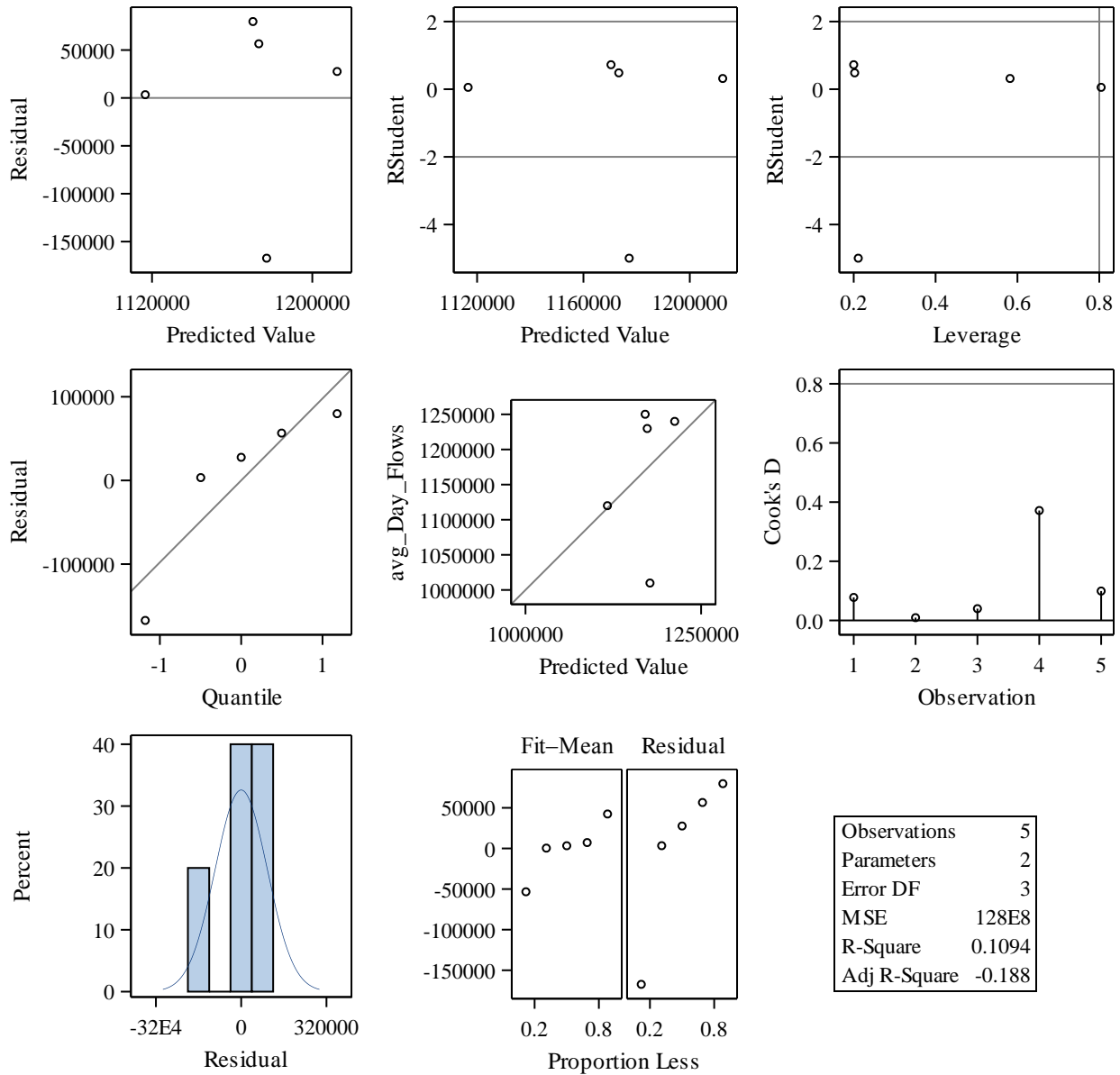
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5	2019	2965943.56
6	2020	2437099.69
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Fit Diagnostics for avg_Annual_Flows



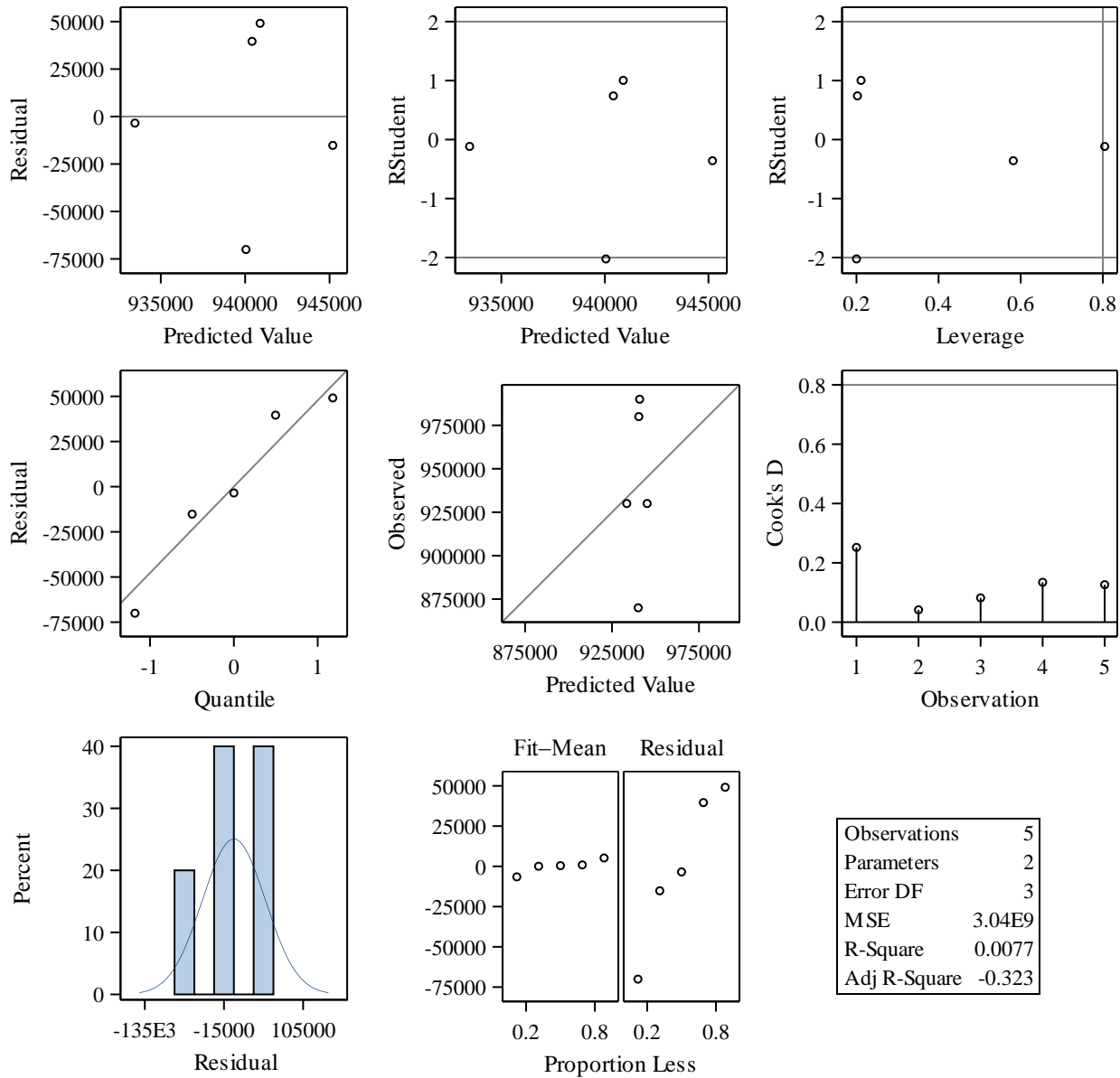
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5	2019	457996625.18
6	2020	461106732.58
7	2021	464223973.25
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9	2023	470470937.82
10	2024	473604228.36

Fit Diagnostics for avg_Day_Flows



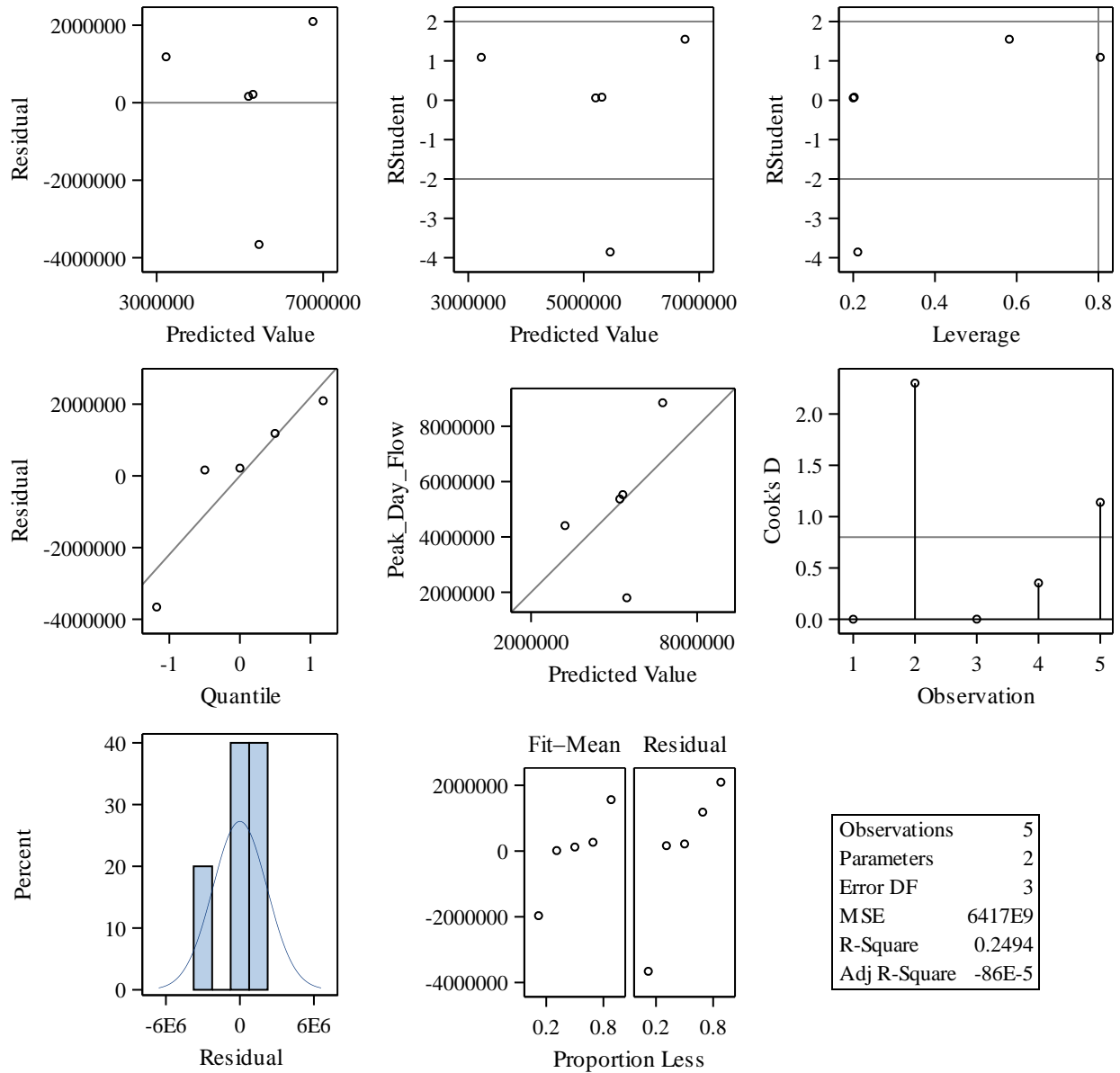
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6	2020	1263306.12
7	2021	1271846.50
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Fit Diagnostics for avg_Dry_Weather_Day_Flows



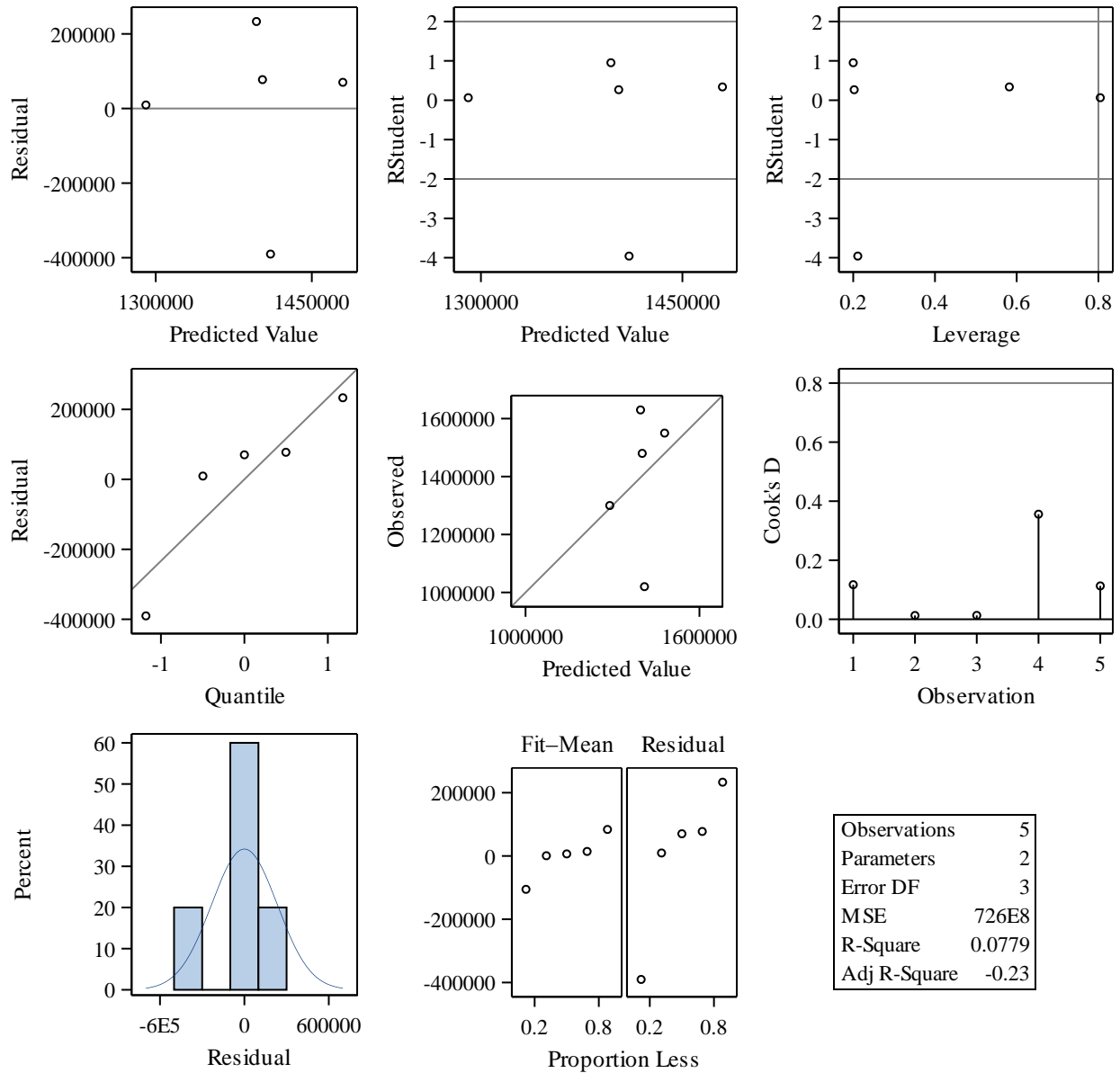
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4	2018	949343.18
5	2019	950384.70
6	2020	951428.02
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8	2022	953520.63
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Fit Diagnostics for Peak_Day_Flow



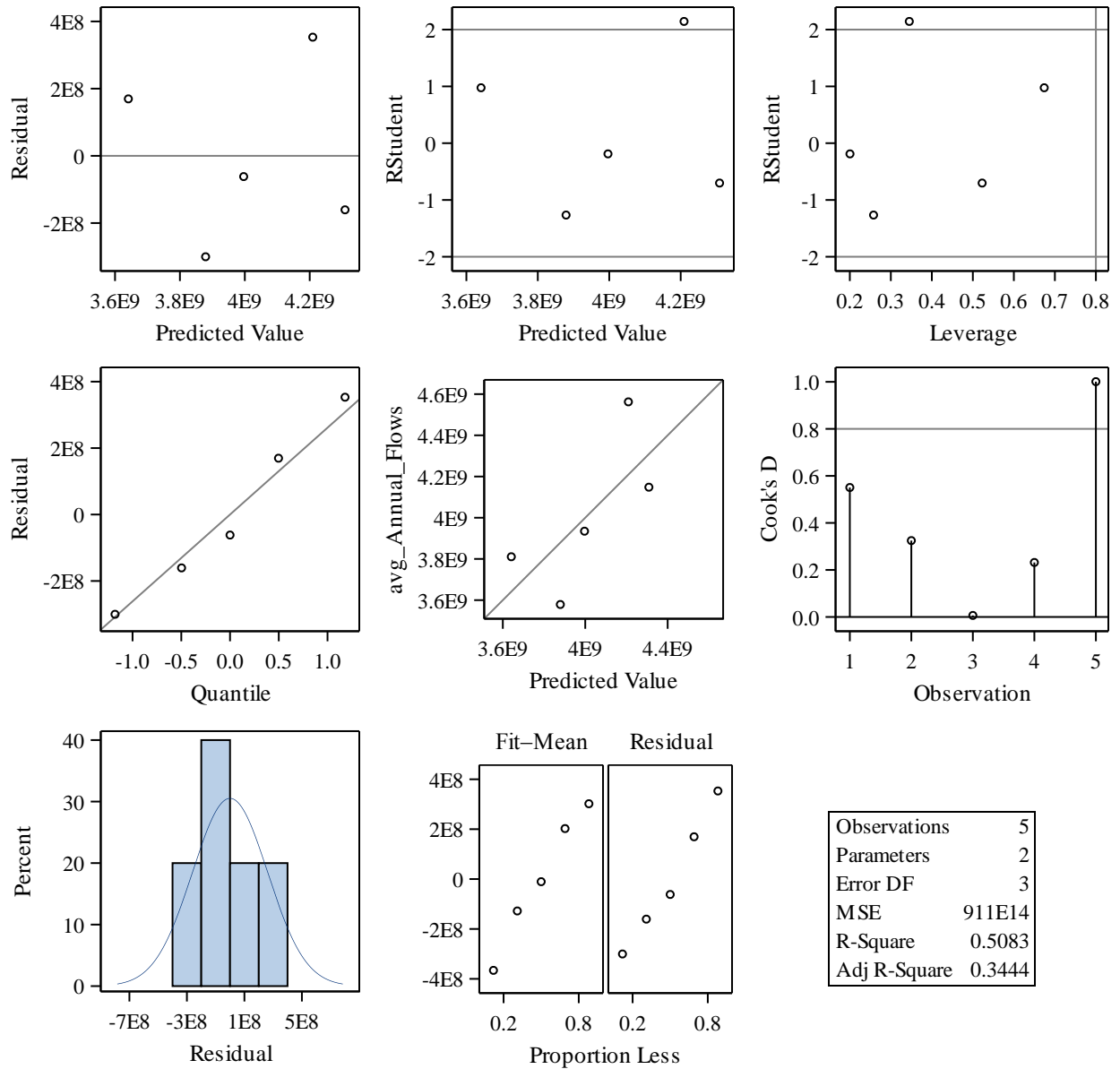
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Fit Diagnostics for avg_Wet_Weather_Day_Flows



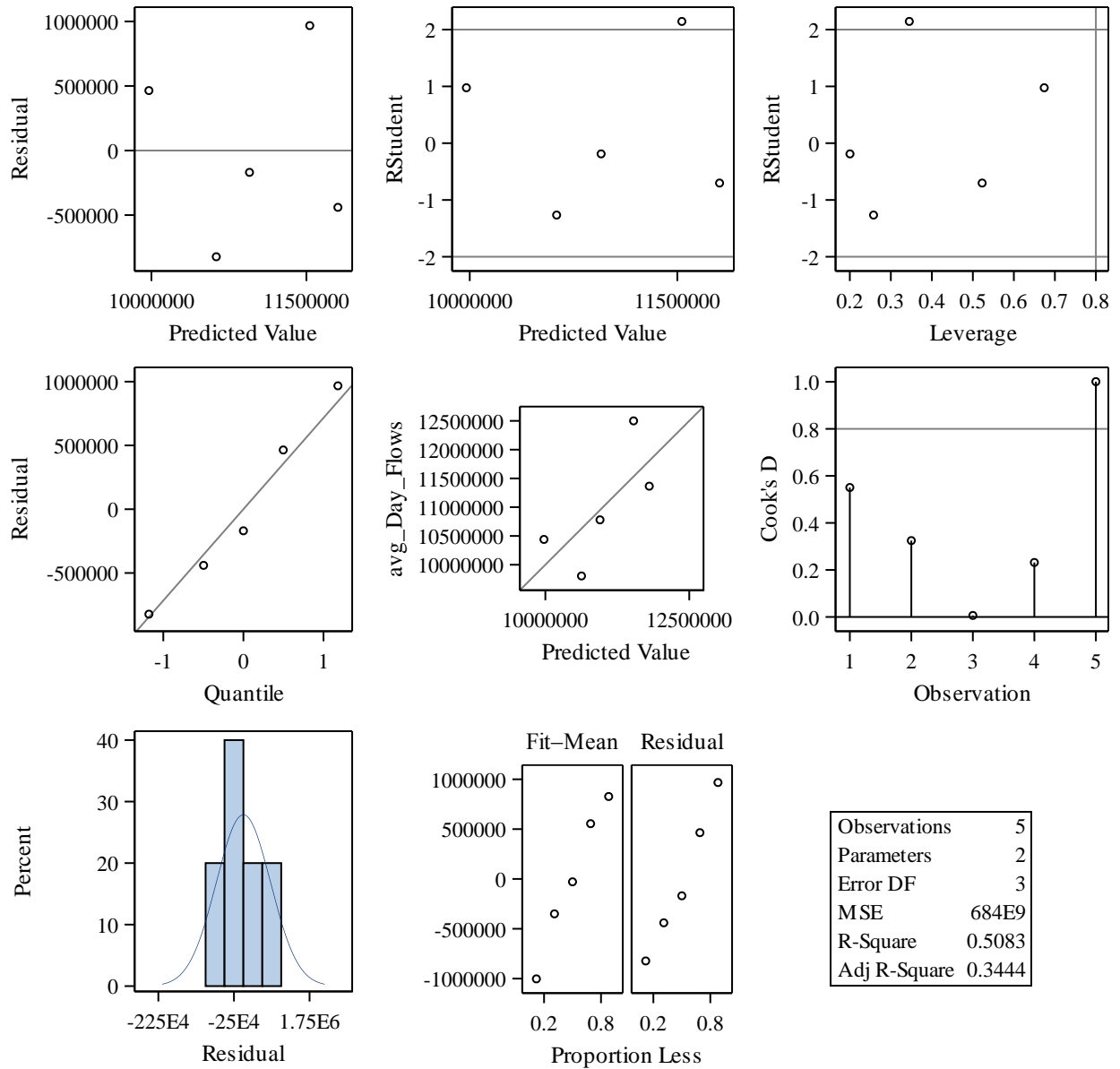
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6	2020	1580436.61
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Fit Diagnostics for avg_Annual Flows



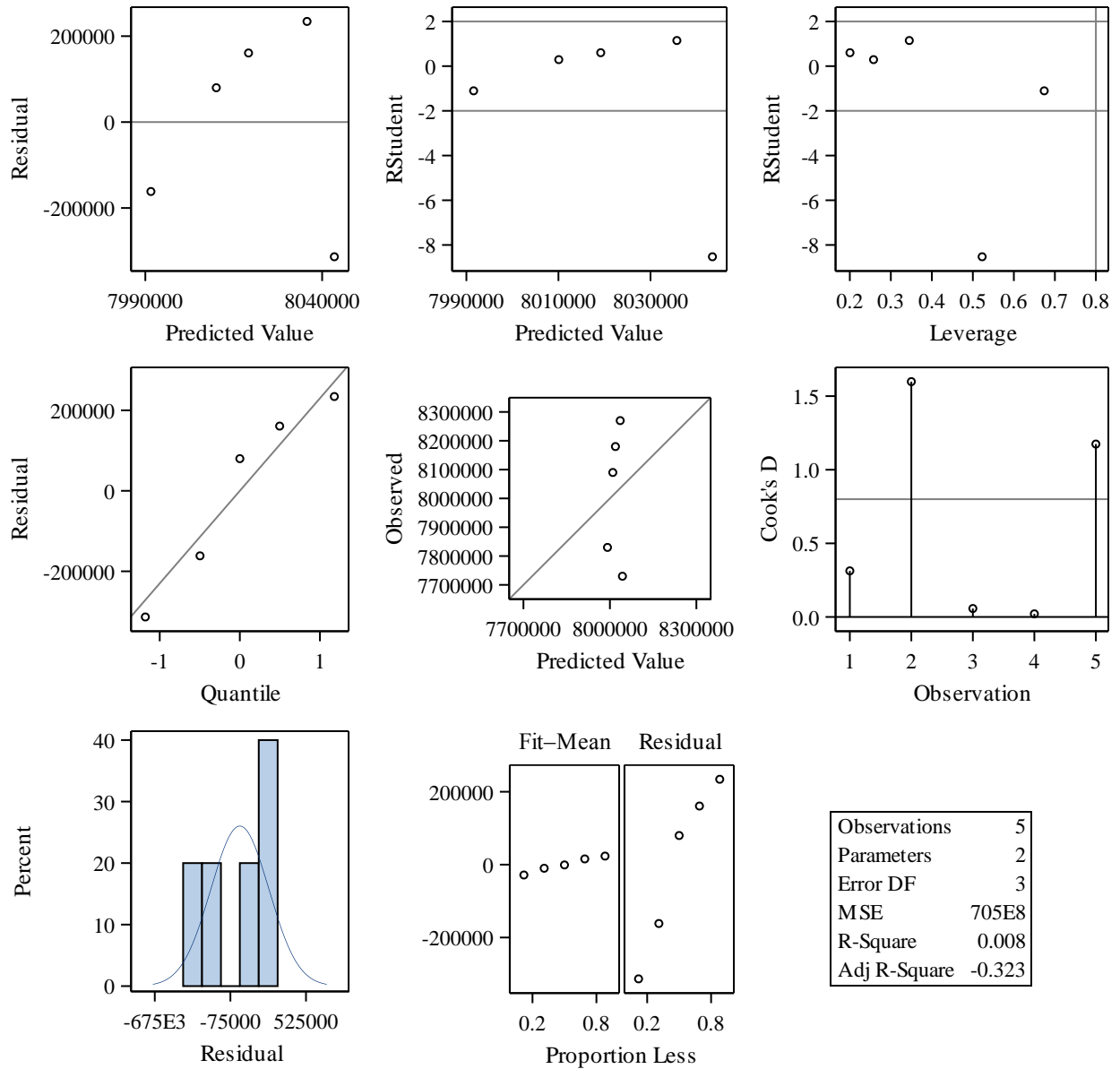
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5	2019	2985847370.2
6	2020	2863914542.1
7	2021	2741238171.7
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Fit Diagnostics for avg_Day_Flows



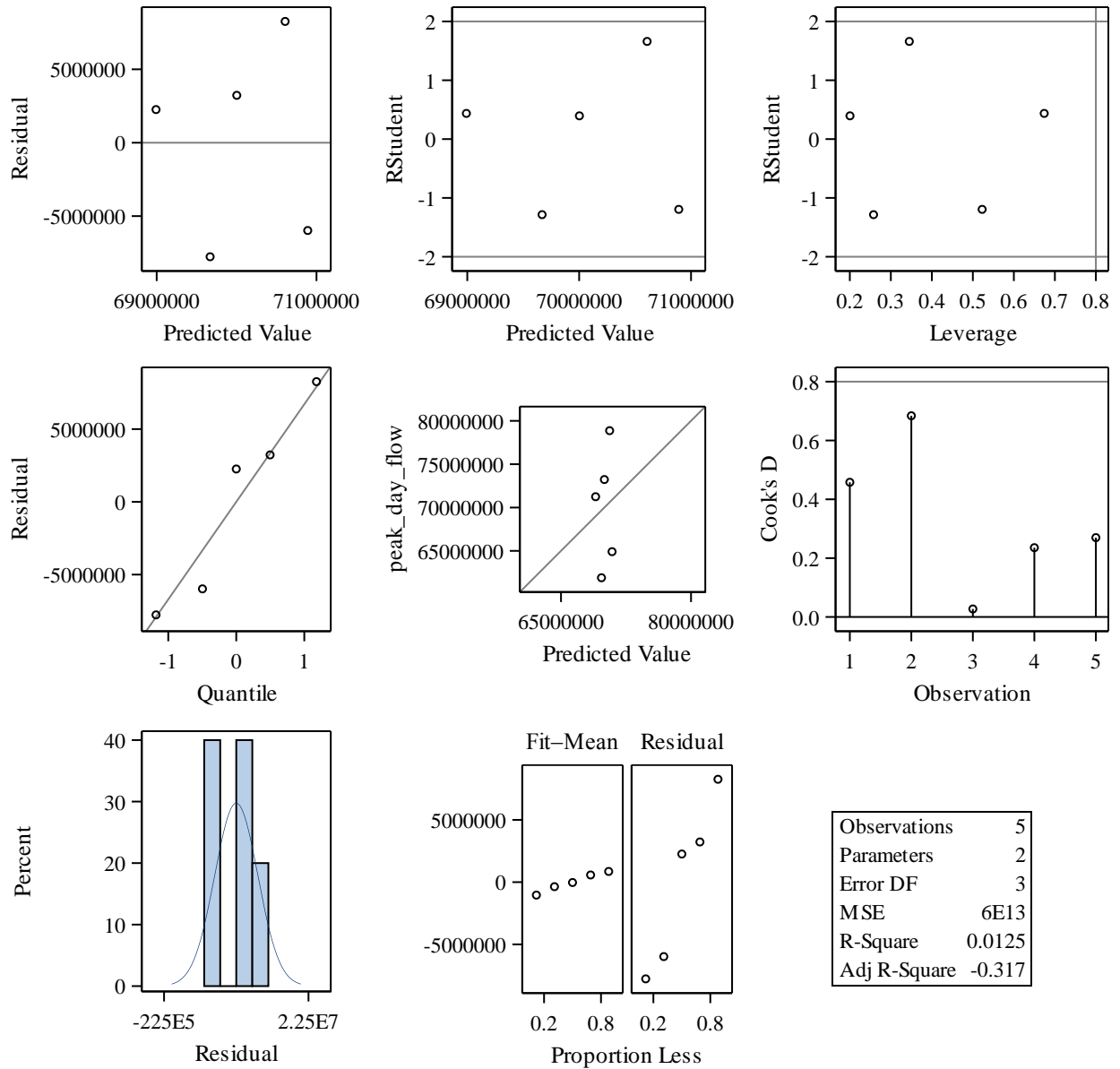
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3	2017	8842461.94
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6	2020	7846341.21
7	2021	7510241.57
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Fit Diagnostics for avg_Dry_Weather_Day_Flows



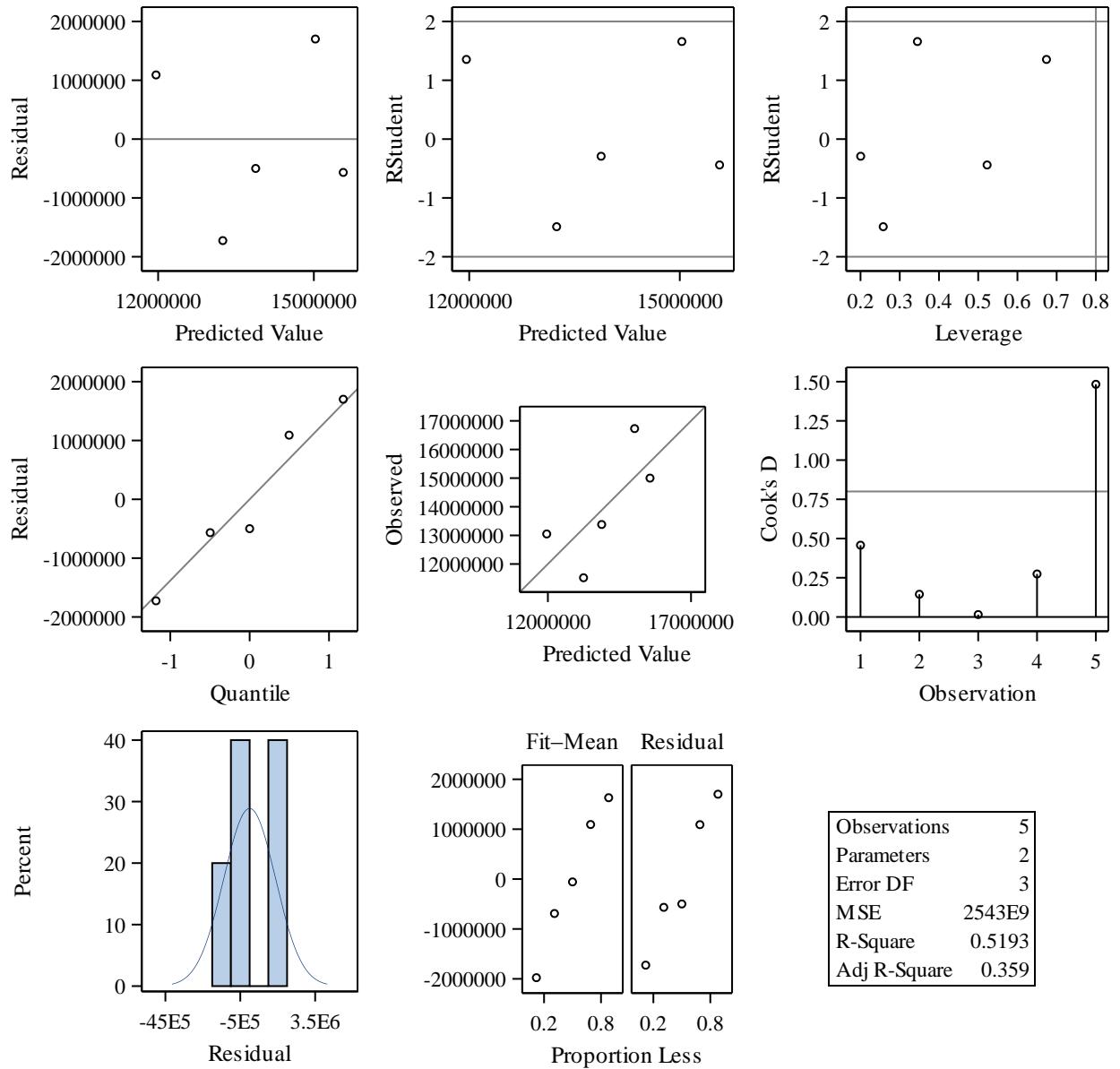
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5	2019	7940669.32
6	2020	7931196.42
7	2021	7921665.75
8	2022	7912077.00
9	2023	7902429.70
10	2024	7892723.53

Fit Diagnostics for peak_day_flow



Obs	Year	predPeak_Day_Flow
1	2015	68494866.21
2	2016	68156582.85
3	2017	67816237.71
4	2018	67473819.26
5	2019	67129310.23
6	2020	66782699.08
7	2021	66433974.32
8	2022	66083124.41
9	2023	65730132.09
10	2024	65374985.83

Fit Diagnostics for avg_Wet_Weather_Day_Flows



Obs	Year	predavg_Wet_Weather_Day_Flows
1	2015	11015051.29
2	2016	10372226.11
3	2017	9725482.99
4	2018	9074800.05
5	2019	8420144.47
6	2020	7761494.34
7	2021	7098827.79
8	2022	6432122.93
9	2023	5761346.92
10	2024	5086477.87

SOURCES

Agency Contacts

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Mark Williams, General Manager

Murray Park Sewer Maintenance District
Eric Steger, Assistant Director Public Works
Betsy Swenerton, Capital Planning and Projects Manager

Ross Valley Sanitary District
Greg Norby, General Manager Drew

San Quentin Sewer Maintenance District
Eric Steger, Assistant Director Public Works
Betsy Swenerton, Capital Planning and Projects Manager

San Rafael Sanitation District
Doris Toy, District Manager

Websites

American Community Survey / Demographic Information
www.census.gov

Association of Bay Area Governments / Population and Housing Information
www.abag.org

Central Marin Sanitation Agency / Service Information
www.cmsa.us

California Coastal Commission / Mapping and Policy Information
www.coastal.ca.gov

California Department of Finance / Population and Demographics
www.dof.ca.gov

California Public Employees Retirement System / Local Agency Pension Information
www.calpers.ca.gov

California State Controller's Office / Special Districts Annual Reports
www.cscoco.ca.gov

City of Larkspur / General Plan Information and Housing Element
www.ci.larkspur.ca.us

City of San Rafael / General Plan Information and Housing Element
www.cityofsanrafael.org

County of Marin / General Plan Information, Community Plans, and Housing Element
www.marincounty.org

County Sanitary District No. 2 / Service Information
www.ci.corte-madera.ca.us/391/Sanitary-District-No-2

Golden Gate National Recreation Area / Service and Mapping Information
www.nps.gov/goga/index.htm

Guide for Estimating Infiltration and Inflow / Wastewater Information
www.epa.gov/region1/sso/toolbox.html

Las Gallinas Valley Sanitary District / Service Information
www.lgvsd.org

MarinMap / Mapping and Parcel Information
www.marinmap.org

Marin Municipal Water District / Recycled Water Information
www.marinwater.org

Murray Park Sewer Maintenance District / Service Information
www.marincounty.org/depts/pw/divisions/capital-projects/sewer-districts

North Marin Water District / Recycled Water Information
www.nmwd.com

Ross Valley Sanitary District / Service Information
www.rvsd.org

San Quentin Sewer Maintenance District / Service Information
www.marincounty.org/depts/pw/divisions/capital-projects/sewer-districts

San Rafael Sanitation District / Service Information
www.cityofsanrafael.org/departments/sanitation-district/

State Water Resources Control Board / Wastewater Disposal Permits and Overflows
www.ciwqs.waterboards.ca.gov

Town of Corte Madera / General Plan Information and Housing Element
www.ci.corte-madera.ca.us

Town of Fairfax / General Plan Information and Housing Element
www.town-of-fairfax.org

Town of Ross / General Plan Information and Housing Element
www.townofross.org

Town of San Anselmo / General Plan Information and Housing Element
www.townofsananselmo.org

Publications / Documents

Association of Metropolitan Water Agencies

American Public Works Association

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National Association of Clean Water Agencies

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Town of Fairfax

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Town of Ross

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Town of San Anselmo

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