



Central Marin Sanitation Agency

INFORMATIONAL ITEMS

For the Board of Commissioners Regular Meeting
of July 11, 2017

- I-1** Online article abstract dated May 12, 2017 by Jeff Kuo and Jason Dow
Re: Biogas Production from Anaerobic Digestion of Food Waste and Relevant Air Quality Implications

- I-2** Letter dated June 12, 2017 to Vince Christian, California Regional Water Quality Control Board
Re: Monthly Self-Monitoring Report (SMR) – May 2017

- I-3** Letter dated June 20, 2017 from Diane Furst, Sanitary District No. 2, to Keene Simonds, Marin Local Agency Formation Commission (LAFCO)
Re: Comments on Central Marin Wastewater Study

- I-4** Letter dated June 27, 2017 from Mary Sylla, RVSD, to Keene Simonds, Marin Local Agency Formation Commission (LAFCO)
Re: Comments on Central Marin Wastewater Study

- I-5** Letter dated June 29, 2017 from Kathy Hartzell and Jason Dow, CMSA, to Keene Simonds, Marin Local Agency Formation Commission (LAFCO)
Re: Comments on the LAFCO Draft Central Marin Wastewater Services Study

- I-6** Letter dated June 30, 2017 from Katie Rice, San Rafael Sanitation District, to Keene Simonds, Marin Local Agency Formation Commission (LAFCO)
Re: Central Marin Wastewater Study, April 2017 Draft Report

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Biogas Production From Anaerobic Digestion of Food Waste and Relevant Air Quality Implications

Jeff Kuo & Jason Dow

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ABSTRACT

Biopower can diversify energy supply and improve energy resiliency. Increases in biopower production from sustainable biomass can provide many economic and environmental benefits. For example, increasing biogas production through anaerobic digestion of food waste would increase the use of renewable fuels throughout California and add to its renewables portfolio. Although a biopower project will produce renewable energy, the process of producing bioenergy should harmonize with the goal of protecting public health. Meeting air emission requirements is paramount to the successful implementation of any biopower project. A case study was conducted by collecting field data from a wastewater treatment plant that employs anaerobic codigestion of fats, oils, and grease (FOG), food waste, and wastewater sludge, and also uses an internal combustion (IC) engine to generate biopower using the biogas. This research project generated scientific information on (a) quality and quantity of biogas from anaerobic codigestion of food waste and municipal wastewater sludge, (b) levels of contaminants in raw biogas that may affect beneficial uses of the biogas, (c) removal of the contaminants by the biogas conditioning systems, (d) emissions of NO_x , SO_2 , CO , CO_2 , and methane, and (e) types and levels of air toxics present in the exhausts of the IC engine fueled by the biogas. The information is valuable to those who consider similar operations (i.e., co-digestion of food waste with municipal wastewater sludge and power generation using the produced biogas) and to support rulemaking decisions with regards to air quality issues for such applications.

Implications: Full-scale operation of anaerobic codigestion of food waste with municipal sludge is viable, but it is still new. There is a lack of readily available scientific information on the quality of raw biogas, as well as on potential emissions from power generation using this biogas. This research developed scientific information with regard to quality and quantity of biogas from anaerobic co-digestion of food waste and municipal wastewater sludge, as well as impacts on air quality from biopower generation using this biogas. The need and performance of conditioning/pretreatment systems for biopower generation were also assessed.

Additional author information

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Jeff Kuo is a professor at the Department of Civil and Environmental Engineering, California State University,

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Jason Dow

Jason Dow is the General Manager of Central Marin Sanitation Agency (CMSA), San Rafael, CA.

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June 12, 2017

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Attention: Vince Christian

Subject: **Monthly Self-Monitoring Report (SMR) – May 2017**

The May 2017 monthly self-monitoring report for the Central Marin Sanitation Agency (CMSA) treatment plant has been submitted using the eSMR /California Integrated Water Quality System (CIWQS). This SMR conforms to CMSA's NPDES Permit, Order #R2-2012-051, that went into effect on August 1, 2012. There are no reportable NPDES Permit violations for this reporting period. The CMSA treatment facility did not exceed the maximum secondary capacity of 30 MGD, resulting in 0 blend events in May.

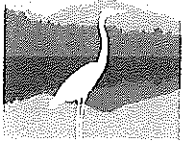
The CMSA Quality Assurance Report dated May 2017 for all regulatory daily, weekly, and monthly quality control calibrations and checks conducted during the month has been uploaded with May's monitoring reports for your review.

If there are any questions please contact me at (415) 459-1455, extension 101. Quality assurance data are available for all test results cited in this report. Values reported are measured values and are each subject to analytical variability. CMSA reserves the right to question data in an enforcement proceeding.

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations (40 CFR 122.22(d)).


Loren C. Finton

Treatment Plant Manager



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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)*

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)*

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.) *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.

- 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.

- 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, i.e. 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.

- 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.

- 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.

- 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.

- 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.

- 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.

- 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.

- 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**".

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.

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, SQVSMD, 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.

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.

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.

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)

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)

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)

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.

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.

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)

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)

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.

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.

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.

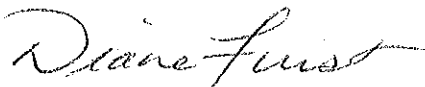
The Town of Corte Madera has only two retirement tiers. The first one is for "classic" employees and is 2.5% at 55 years of age. The second one, for those that are not "classic" employees, aligns with the CA Public Employees' Pension Reform Act (PEPRA) formula which is 2.0% at 62. Discussing Town of Corte Madera retirement formulas does not pertain to SD2 since we do not have employees of our own.

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



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.

Themes

RVSD has the following responses to each theme statement.

- *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.
- *No. 2 Service Areas are Nearing Buildout, Growth Exceeding Earlier Estimates:* RVSD agrees with this statement.
- *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.
- *No. 4. Variation in Civic Engagement; Board Type Matters:* RVSD acknowledges this statement, but does not have a basis for evaluating further.
- *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.
- *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.

- *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.
- *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.
- *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.
- *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.
- *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.
- *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.

- *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.
- *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.
- *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.
- *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.
- *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.
- *No. 9 Septic Systems:* RVSD agrees with this Recommendation.
- *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:

- The analysis of flow data and demand projections should more rigorously separate out municipal wastewater flows from rainfall and tidal-dependent I&I flows.
- 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.
- 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



CENTRAL MARIN SANITATION AGENCY

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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.

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.

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

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."

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.

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.

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.

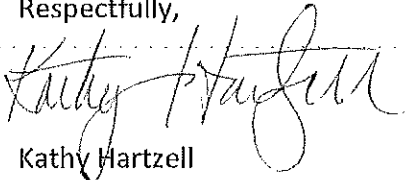
Peak Flow Demand vs. Capacity Graphs: This graph compares the maximum daily volume, in million gallons (MG), received during each year of the study period to CMSA's hydraulic capacity of 125 MG per day. Using only maximum day information represents that CMSA has a significant amount of underutilized 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.

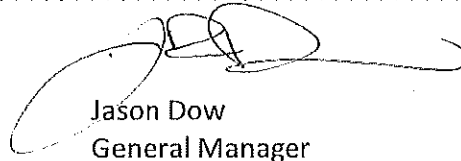
Agency Finances Section: Financial information presented throughout this section is extracted from the Agency's audited financial statements. In several locations, LAFCO states CMSA's expenses exceed revenues resulting in an operating loss. On the basis of cash flow, budgetary, and financial management 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



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Gary O. Phillips, Chairman
Maribeth Bushey, Secretary/Director
Katie Rice, Director

District Manager/District Engineer
Doris Toy, P.E.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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