Central Marin Sanitation Agency

COMMISSION REGULAR MEETING AGENDA
Tuesday, November 12, 2019
at the Agency Office
7:00 p.m.

Members of the public may directly address the Board on any item appearing on the Agenda.
They may address the Board when the item is called by the Board Chair
and he/she indicates it is the time for the public to speak to the agenda item.
Audio and video recordings will be made of this meeting and will be posted to the Agency website.

1. **7:00 p.m.: Call Meeting to Order/Pledge of Allegiance**

2. **Roll Call**

3. **Open Period for Public Participation**
   Open time for public expression, up to two minutes per speaker, on items within CMSA's jurisdiction and not on the Board of Commissioners' agenda. The Board will not discuss or take action during open time, but Board members may briefly respond to statements made or questions proposed by the public, ask for clarification from staff, refer the matter to staff, or request staff to report back to the body at a subsequent meeting concerning any matter, or take action to direct staff to place a matter of business on a future agenda.

4. **Consent Calendar**
   Matters listed under this item are considered routine and will be enacted by one motion. The consent calendar may include resolutions; therefore, the motion, second, and vote will also be applicable to the resolution and recorded accordingly. There will be no separate discussion of these items unless requested by a member of the Board or the public prior to the time the Board votes on the motion to adopt.

   a) Minutes—Regular Board Meeting—October 8, 2019
   b) Treasurer's Report—Operating Account—October 2019
   c) Schedule of Investments and its Capital Reserve Summary—October 2019
   d) NPDES, Process, and Maintenance Report—October 2019
   e) Performance Metric Report—October 2019
   f) FY20 First Quarter Budget Status Report
   g) FY 19 Capacity Charge Schedule
   h) Revised Safety Incentive Program
   i) New Deferred Compensation Plans

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5. **FY19 Audited Financial Statements**
   Recommendation: Accept the Agency's FY19 audited financial statements, and provide comments or direction to the General Manager, as appropriate.

6. **San Quentin Pump Station Motor Control Center and Control Panel Upgrade Project (CMSA Contract No. 20-01)**
   Recommendation: Award the construction contract for the San Quentin Pump Station Motor Control Center and Control Panel Upgrade Project to Fort Bragg Electric Inc., and authorize the General Manager to execute the contract agreement.

7. **Agency Space Evaluation Findings**
   Recommendation: Receive the ad hoc Space Evaluation Committee's findings, and provide direction to the Committee and/or staff, as appropriate.

8. **Senior Engineer Job Description**
   Recommendation: Approve the Senior Engineer job description and compensation range, and provide direction to the General Manager, as appropriate.

9. **November Informational Items**
   Recommendation: Informational; provide comments or direction to the General Manager as appropriate.

10. **North Bay Watershed Association (NBWA) Report***

11. **Oral Reports by Commissioners/General Manager***

12. **Next Scheduled Meeting**
    Tuesday, December 10, 2019 at 7:00 p.m. at the Agency office.

*Information not furnished with Agenda

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact Central Marin Sanitation Agency at 415-459-1455. For auxiliary aids or services or other reasonable accommodations to be provided by the Agency at or before the meeting, please notify the Agency at least 3 business days in advance of the meeting date (meeting is the second Tuesday of each month). If the Agency does not receive timely notification of your reasonable request, the Agency may not be able to make the necessary arrangements by the time of the meeting.

Central Marin Sanitation Agency

COMMISSION REGULAR MEETING MINUTES
Tuesday, October 8, 2019
at the Agency Office

1. Call Meeting to Order/Pledge of Allegiance

Chair DiGiovanni called the meeting to order at 7:06 p.m. A quorum was present.

2. Roll Call **00:00:28**

Present:	Chair Dean DiGiovanni; Vice-Chair Michael Boorstein; Commissioners Maribeth Bushey and Doug Kelly; and Alternate Commissioner Sloan Bailey *Note: Commissioner Bushey arrived at 7:12 p.m. prior to the Consent Calendar vote.*
Absent:	Eli Beckman, Secretary; Dan Hillmer, Larkspur Alternate Commissioner
Staff present:	Jason Dow, General Manager, and Kate Brouillet, Recording Secretary
Public present:	Larry Leporte, Marin Airporter

3. Open Period for Public Participation **00:00:48**

Mr. Leporte said that on behalf of Marin Airporter and Marin Transit, he would like to thank the CMSA Board and the General Manager for allowing Marin Transit to park their vehicles on site. He said it is working out very well, and the drivers are very pleased.

The Board concurred that they are happy to help a local entity in this way.

Mr. Leporte left the meeting.

4. Consent Calendar **00:04:02**

a) Minutes—Regular Board Meeting—September 10, 2019
b) Treasurer's Report—Operating Account—September 2019
c) Schedule of Investments and its Capital Reserve Summary—September 2019
d) NPDES, Process, and Maintenance Report—September 2019
e) Performance Metric Report—September 2019
f) 2019 General Manager Employment Agreement
g) FY20 Asset Management Program – 1st Quarter Report
h) Accept the Andersen Drive Landslide Repairs Project as Substantially Complete (CMSA Contract No. 19-13)
i) Revised Associate Engineer Job Description

Chair DiGiovanni asked to pull item 4a. Minutes.

<u>Comments from the Public:</u>
There were no comments from members of the public.

ACTION: Commissioner Kelly moved to approve Consent Calendar items #4b through #4i; second, Commissioner DiGiovanni.

VOTE: The vote was passed unanimously.

ABSTAIN: None

Chair DiGiovanni referred to item 4a, Minutes, item #5, and asked that the second to last paragraph be reworded slightly to the following:

> "Chair DiGiovanni agreed that it was somewhat such a decision, but the policy decision to participate in the CalPERS retirement program only, instead of Social Security, was made by the Agency's original Board at the Agency's inception. He said the Agency's financial obligation with participation in the PARS plan is minimal."

Alternate Commissioner Bailey asked Commissioner Kelly if he was satisfied with the September Board meeting minutes, as he did not attend the meeting.

Commissioner Kelly said that he was satisfied that the minutes were accurate.

<u>Comments from the Public:</u>
There were no comments from members of the public.

ACTION: Commissioner Boorstein moved to approve Consent Calendar item #4a with the above edit; second, Commissioner Kelly.

VOTE: The vote was passed unanimously.

ABSTAIN: None

5. Public Hearing for Proposed Fee Ordinance 2019-1 Entitled An Ordinance Relating to Fee Schedules for Capacity Charges, Waste Haulers, and Industrial Monitoring **00:07:25**

GM Dow said that at the September 2019 Board meeting, staff outlined the proposed Fee Ordinance changes, and the Board set the public hearing for the proposed Ordinance for the October 8 Board meeting. He said a notice for the public hearing on the proposed Ordinance was published in the Marin IJ Newspaper on October 1-3. He said that CMSA did not receive any comments from the public and no changes have been made to the proposed Ordinance. He said that if the Board passes the proposed Ordinance, staff will publish the attached summary of the passed Ordinance in the Marin IJ.

Chair DiGiovanni said that he received one comment from a member of the public who asked if there was a conflict with the effective date of the Ordinance and the July 1, 2019 effective date of the capacity charges. He confirmed with the member of the public that there was no conflict.

Chair DiGiovanni opened the public hearing.

<ins>Comments from the Public:</ins>
There were no comments from members of the public.

Chair DiGiovanni closed the public hearing.

ACTION: Commissioner Bushey moved to pass the Ordinance, and authorize publication of a summary of the passed Ordinance in the Marin Independent Journal newspaper; second, Commissioner Boorstein.

VOTE: The vote was passed unanimously.

ABSTAIN: None

6. Alternate Retirement Plan for Temporary and Part Time Employees 00:11:12

GM Dow said that this was a continued discussion from last month's meeting. He said that Mitch Barker, PARS Executive Vice President, attended the September meeting and gave a presentation on the PARS program. He said the Board discussed participation in PARS, and concluded that participation is an extension of the first Board's policy decision in the early 1980's to not participate in Social Security. GM Dow said that subsequent to the meeting, staff contacted several agencies, and they unanimously reported that PARS is a good program and has great customer service, and none of the agencies have experienced any problems or issues with the program.

GM Dow said that he recommends the Board adopt Resolution No. 339 to authorize adoption of the PARS Trust Alternative Retirement Plan, and select the PARS contribution amount and allocation between Agency and employee. He referred to the PARS flyer produced by the City of San Rafael (Attachment 1 to the staff memo), and said that their contribution amount is 7.5%, with an equal split between the City and the employee.

The Board thanked staff for the additional fact-finding on this topic, and had a brief discussion regarding the contribution amount and allocation percentage between the Agency and the employee.

<ins>Comments from the Public:</ins>
There were no comments from members of the public.

ACTION: Commissioner Kelly moved to adopt Resolution No. 339 to authorize adoption of the PARS Trust Alternative Retirement Plan, and to set the PARS contribution amount at 7.5%, with the allocation to be 3.75% for the Agency and 3.75% for the employee; second, Commissioner Bushey.

VOTE: The vote was passed unanimously.

ABSTAIN: None

7. New Cogeneration System Selection and Prepurchase Agreement 00:17:32

Chair DiGiovanni referred to GM Dow's staff memo handout, "Selection of Western Energy Systems to Supply the New Cogeneration System," and said that staff recommends selection of Western Energy Systems as the cogeneration system supplier, and requests authorization to negotiate and sign the final cogeneration system prepurchase agreement.

GM Dow said that proposals were received from two qualified suppliers, Western Energy Systems and Peterson Power Systems. GM Dow said that with the assistance of Carollo Engineers, staff completed a detailed analysis of the proposals. He referred to the chart in the staff memo and reviewed the capital costs and the 20-year net present value of long term maintenance service agreement costs from the two vendors.

The Board asked various questions including the new engine size and efficiency, and how this relates to the recently refurbished existing engine.

GM Dow responded to the Board's questions, and said that the existing engine will be a back up to the new engine, with potential use of both engines simultaneously in the future, if CPUC regulations change.

Alternate Commissioner Bailey asked if the Agency works with an attorney to ensure that proper bid package and contract code procedures are in place.

GM Dow responded that the Agency works with a construction contract attorney who has provided standard forms and contracts, and is engaged to review contracts when appropriate.

Chair DiGiovanni said that staff did a commendable job in getting two competitive bids for the project.

<u>Comments from the Public:</u>
There were no comments from members of the public.

ACTION:	Commissioner Boorstein moved to select Western Energy Systems as the cogeneration system supplier, and authorize the General Manager to negotiate and sign the final cogeneration system prepurchase agreement; second, Commissioner Bushey.
VOTE:	The vote was passed unanimously.
ABSTAIN:	None

8. Accept Completion of the Primary Clarifiers Gates Rehabilitation Project (CMSA Contract No. 19-09) 00:39:00

GM Dow said that the Primary Clarifiers Gates Rehabilitation Project's construction contract was awarded to Bartley Pump PM in April 2019, for the lump sum cost of $419,500. He said that Bartley Pump completed the construction work in accordance with the plans and specifications on October 2, 2019, and the new equipment is operating per design. He said that one Contract Change Order (CCO) was issued during construction for a net savings of $5,000, resulting in a final contract amount of $414,500. He recommends the Board accept the Primary Clarifiers Gates Rehabilitation Project as complete, and authorize him to file the Notice of Completion with Marin County.

The Board briefly discussed the project and commended staff that the project was completed satisfactorily and was under budget by $5,000.

Comments from the Public:
There were no comments from members of the public.

ACTION: Commissioner Bushey moved to accept the Primary Clarifiers Gates Rehabilitation Project as complete, and authorize the General Manager to file the Notice of Completion with Marin County; second, Commissioner Kelly.

VOTE: The vote was passed unanimously.

ABSTAIN: None

9. Organic Waste and Power Delivery Programs Presentation 00:40:52

Alternate Commissioner Bailey asked if the Board would consider, in the interest of time, reviewing the materials in the agenda packet in lieu of viewing the full presentation.

GM Dow said he would be happy to show the presentation to Board members who are interested at a later time.

Commissioner Bushey said that the presentation includes valuable information and suggested that it could be put on the Agency's website.

Commissioner Boorstein asked GM Dow to report on the reaction of the WEFTEC Conference workshop audience in Chicago where the presentation was given a couple of weeks ago.

GM Dow said the audience was impressed that CMSA processes food waste, is nearly energy self-sufficient due to on-site energy generation, and is occasionally delivering power to PG&E.

This item was informational and no action was taken by the Board.

10. October Informational Items 00:47:00

There was no discussion on any items by the Board.

11. North Bay Watershed Association (NBWA) Report 00:47:26

Commissioner Boorstein reported that he attended the October 4, 2019 NBWA Board meeting where the Napa County Resource Conservation District (RCD) provided an update of their re-oaking project. He said the Sonoma RCD gave a tour of their re-oaking property in Kenwood. Commissioner Boorstein described the varieties of oaks and the methods used in the project.

12. Oral Reports by Commissioners/General Manager **00:53:18**

Commissioner Boorstein reported that CMSA, SRSD, RVSD and SD2 coordinated on a three-day cooperative project to remove three of SD2's air relief valves.

Chair DiGiovanni said he reviewed the report entitled *Marin County Local Government Reform of Pensions and Other Post Employment Benefits* coauthored by Larry Chu, Larkspur City Council Member, and has asked staff to bring back a brief report on the Agency's OPEB obligations to a future meeting.

Commissioner Kelly said that RVSD has purchased "GovInvest" software that they are using for OPEB planning.

Chair DiGiovanni said he recently read an article in the Marin IJ about a report by the San Francisco Bay Microplastics Project, and recommended that the Agency provide relevant information to the public on this issue via the Agency's website, and potentially ask a representative of the report's organization to present to the Board.

Commissioner Boorstein said that at the last CASA meeting there was a discussion of PFAS pollution which is in flame retardants and non-stick cookware.

GM Dow referred to his handout and said that he would answer any questions.

The Board accepted the handout and there were were no questions by the Board.

13. Next Scheduled Meeting

Tuesday, November 12, 2019 at 7:00 p.m. at the Agency office.

14. Closed Session was convened at 8:10 p.m.

PUBLIC EMPLOYEE PERFORMANCE EVALUATION
California Government Code Section 54957
Title: General Manager

15. Open Session was reconvened at 8:30 p.m.

Chair DiGiovanni reported that action was taken to approve the General Manager's 2019-20 Work Plan.

Chair DiGiovanni adjourned the meeting at 8:31 p.m.

Respectfully submitted,

______________________________	______________________________
Kate Brouillet, Recording Secretary	Michael Boorstein, Vice-Chair

Central Marin Sanitation Agency
Treasurer's Report - Operating Account
For the Month of October 2019

I. Accounts Summary: Bank & Investment Accounts

Summary of Bank & Money Market Accounts		
Westamerica Bank - Account Activity shown below	$	1,386,847.44
Local Agency Investment Fund (LAIF) - Refer to Schedule of Investments		15,254,235.45
California Asset Management Program (CAMP) - Refer to Schedule of Investments		377,163.38
Total Bank & Investment Accounts: Ending Balance on October 31, 2019	$	17,018,246.27

II. Account Activity for Westamerica Bank

Beginning Balance on October 1, 2019		230,617.09
Cash Receipts (Deposits into Westamerica):		
Transfers from LAIF		850,000.00
JPA Service Charges (FY20 Q2: SD#2, SRSD)		1,522,901.38
Permit and Inspection Fees		270.00
Revenue from Haulers & RVs		5,674.76
Revenue from Organic Waste Programs		18,298.02
SD 2 Operations & Maintenance Contract (FY20: August)		59,223.63
SQSP Wastewater Services Contract (FY20: August & September)		218,758.00
SQ Village Operations & Maintenance Contract (FY20: August)		815.35
Misc Revenue: Action Metal Recycling (scrap metal)		1,240.00
Miscelleneous Reimbursements: Marin Sanitary (refund over-charges) and Chromalox, Inc. (refund faulty digester pilot heaters)		12,292.79
Westamerica Bank deposit adjustment		0.01
Total Cash Receipts	$	2,689,473.94
Cash Disbursements (Withdrawals from WestAmerica):		
October 2019 Operating account disbursements register (see attached)		$1,103,544.57
Regular Payroll paid 10/11/19		153,257.00
Regular Payroll paid 10/25/19		147,961.19
Transfers to EFTPS Federal Payroll Taxes (10/02, 10/15, 10/30)		113,706.49
Final Separation Pay (1)		14,663.67
Bank Fee		110.67
Total Cash Disbursements		$1,533,243.59
Ending Balance on October 31, 2019	$	1,386,847.44

Prepared by:
Kenneth Spray, Administrative Services Manager

Reviewed by:
Jason Dow, General Manager

Central Marin Sanitation Agency
Operating Account Disbursements Register
For the Month of October 2019

Check Number	Date	Vendor/Payee	Amount	Description
19015				Last check # from prior month's register
19016	10/3/2019	Phillip Frye	224.41	Reimbursement for retiree health benefits by check
19017	10/3/2019	James L. Johnson	187.74	Reimbursement for retiree health benefits by check
19018	10/3/2019	Byron Jones	221.44	Reimbursement for retiree health benefits by check
19019	10/7/2019	Aramark Uniform Services	930.00	Uniforms for new hires; replacements
19020	10/7/2019	Caltest Analytical Laboratory	846.28	NPDES permit lab analyses, September 2019 (2 invoices)
19021	10/7/2019	Cropper Accountancy Corp.	8,500.00	Prof Svcs: Auditing services for FY19, progress payment #2
19022	10/7/2019	Evoqua Water Tech LLC	10,503.26	Sodium nitrate (1 delivery); DI water for laboratory (1 delivery)
19023	10/7/2019	Flyers Energy LLC	967.56	Coolant for cogeneration engine (2 invoices)
19024	10/7/2019	Hazen and Sawyer	3,080.83	Prof Svcs: Microscopic analysis, August 2019
19025	10/7/2019	IDEXX Distribution Inc	924.95	Enterococi test packs (2 invoices)
19026	10/7/2019	Lamotte Co.	101.07	Sulfide test solution
19027	10/7/2019	Lystek International LTD	12,680.30	Biosolids beneficial reuse fee, September 2019
19028	10/7/2019	Marin Fencing Company	13,483.00	Gate Modifications for Marin Airporter (50%-Note B)
19029	10/7/2019	Marin Office Supply	547.62	Office supplies, September 2019
19030	10/7/2019	Pipette.com	127.00	Channel pipette tips for laboratory
19031	10/7/2019	Ricoh USA Inc	259.35	Lab printer/copier usage, 09/09-10/08/2019
19032	10/7/2019	RMC	698.03	Admin printer/copier usage, 06/25-9/24/2019
19033	10/7/2019	Sample Traps LLC	397.20	Sample containers for laboratory
19034			-	VOID
19035	10/7/2019	Thomas Fish Company	145.75	Rainbow trout for monthly bioassay test, September 2019
19036	10/7/2019	Thatcher Company of	7,627.76	Ferric chloride (1 delivery)
19037	10/7/2019	The Cary Company	231.78	Bottles for laboratory
19038	10/7/2019	Toyota Material Handling	45.73	Agency cart parts
19039	10/7/2019	Univar USA Inc	9,791.34	Sodium bisulfite (1 delivery); Sodium hypochlorite (1 delivery)
19040	10/8/2019	Bartley Pump Inc	157,700.00	Primary Clarifiers Gates Rehabilitation Project, payment #3, September 2019
19041	10/8/2019	Env. Lab Accreditation Program	7,373.00	ELAP laboratory certification
19042	10/8/2019	IEDA, Inc.	837.00	Labor relations consulting, October 2019
19043	10/8/2019	Marin Forum	58.75	Pro-rated membership fee (October-December 2019)
19044	10/8/2019	Marin Independent Journal	161.00	Public Notice: SQPS Motor Control Center Controls Replacement bid notice
19045	10/8/2019	S&S Trucking	10,646.37	Biosolids hauling fee, September 2019
19046	10/11/2019	California Public Employee	3,584.00	Contribution to Retiree Health Benefits Trust Fund, October 2019 (Note C)
19047	10/11/2019	California State Disbursement	250.50	EE Garnishment, PPE 10/05/2019 (Note A)
19048	10/11/2019	ICMA Retirement Trust-457	2,400.00	Deferred compensation contributions, PPE 10/05/2019 (Note A)
19049	10/11/2019	Navia Benefit Solutions	969.01	Flexible spending account, PPE 10/05/2019
19050	10/11/2019	SEIU Local 1021	1,058.63	Union dues, PPE 10/05/2019
19051	10/16/2019	Amazing Solutions, Inc.	450.00	Finance software support, September 2019

Central Marin Sanitation Agency
Operating Account Disbursements Register
For the Month of October 2019

Check Number	Date	Vendor/Payee	Amount	Description
19052	10/16/2019	Aquadyne Associates	796.36	Float switches
19053	10/16/2019	Aramark Uniform Services	913.50	Uniform service, September 2019
19054	10/16/2019	AT&T Dataplan	387.41	Fax and emergency phone service, 10/02-11/01/2019
19055	10/16/2019	Brandon Tire	522.11	Replacement tires for Agency carts
19056	10/16/2019	Katherine Brouillet	86.78	Employee expense reimb: Break room and meeting supplies
19057	10/16/2019	Cal Steam	869.20	Parts for Digester Pilot Study; gaskets for cogeneration engine
19058	10/16/2019	Comcast	193.38	Internet service, 10/04-11/03/2019
19059	10/16/2019	California Special District	1,446.00	Annual membership renewal, 01/01-12/31/2020
19060	10/16/2019	Evoqua Water Tech LLC	40,131.04	Sodium nitrate (3 deliveries); hydrogen peroxide (1 delivery)
19061	10/16/2019	Fastenal Company	563.33	Maintenance vending machine supply replenishment, September 2019
19062	10/16/2019	Fisher Scientific	1,032.01	Gloves, pH buffers, vials, and chemicals for laboratory, September 2019 (7 invoices)
19063	10/16/2019	Flyers Energy LLC	1,285.02	Coolant for cogeneration engine (2 invoices)
19064	10/16/2019	Hach Company	3,121.33	Laboratory consumable supplies for COD and volatile acid analysis, September 2019 (5 invoices)
19065	10/16/2019	Hagel Supply Co.	883.54	Janitorial supplies,September 2019 (5 invoices)
19066	10/16/2019	Harrington Industrial Plastics	421.04	SBS pump valve
19067	10/16/2019	Home Depot Credit Services	1,127.67	Landscaping and maintenance supplies, September 2019
19068	10/16/2019	Horizon Dist. Inc	166.97	Groundskeeping supplies, September 2019 (3 invoices)
19069	10/16/2019	Kaman Industrial Technologies	12,105.16	Grit pump equipment and scum skimmer drives (4 invoices)
19070	10/16/2019	Ken Grady Co., Inc.	667.23	Communications equipment
19071	10/16/2019	Koff & Associates, Inc.	5,250.00	Prof Svcs: OIT recruitment, Phase IV payment; Associate Engineer recruitment, Phase I payment
19072	10/16/2019	Kone Inc	147.64	Elevator maintenance, October 2019
19073	10/16/2019	Marin Color Service	178.11	Painting supplies, September 2019
19074	10/16/2019	McMaster-Carr Supply Co.	6,163.72	Secondary flow meter parts, suction hose, pipe fittings, valves, pressure gauge, strut channels, enclosures and fittings, and misc. electrical supplies (12 invoices)
19075	10/16/2019	Medical Center of Marin	63.00	Audiometric testing (one employee)
19076	10/16/2019	Navia Benefit Solutions	50.00	Monthly fee, September 2019
19077	10/16/2019	Nexgen Utility Management	7,250.00	Annual license and support renewal fee
19078	10/16/2019	OCCUMETRIC	275.00	OIT Recruitment: Pre-hire medical evaluation
19079	10/16/2019	Ongaro & Sons	684.68	Backflow repair
19080	10/16/2019	Pace Supply Corp.	215.17	Threading die set
19081	10/16/2019	P.G.& E.	73,105.38	Electricity service, 08/16-09/16/2019 (3 invoices)
19082	10/16/2019	Platt	4,361.77	Materials for gate actuators and misc. supplies, September 2019 (5 invoices)
19083	10/16/2019	Praxair Distribution, Inc.	163.18	Oxygen tank refill
19084	10/16/2019	Ricoh USA Inc	317.99	Admin printer/copier lease, 09/23-10/22/2019
19085	10/16/2019	Calmat Co./Shamrock Materials	79.66	Propane
19086	10/16/2019	Skalar Inc	430.91	Lab equipment

Central Marin Sanitation Agency
Operating Account Disbursements Register
For the Month of October 2019

Check Number	Date	Vendor/Payee	Amount	Description
19087	10/16/2019	Toyota Material Handling	538.96	Agency vehicle brake calipers
19088	10/16/2019	Univar USA Inc	3,682.38	Sodium hypochlorite (1 delivery)
19089	10/16/2019	Van Bebber Bros., Inc.	385.73	SBS pump mount
19090	10/16/2019	Khavarian Enterprises Inc	2,203.69	Radio telemetry repeater
19091	10/16/2019	VWR International	224.64	Lab supplies and chemicals, September 2019 (3 invoices)
19092	10/16/2019	Waste Management	2,035.67	Biosolids hauling fee, September 2019
19093	10/16/2019	Water Components & Bldg. Supp.	46.18	Pump parts
19094	10/16/2019	Western Exterminator Co.,Inc.	188.50	Pest control service
19095	10/16/2019	Woodland Center Auto Supply	193.17	Agency vehicle maintenance (9 invoices)
19096	10/24/2019	Atmospheric Analysis	1,751.00	Digester and Organic Waste Receiving Facility gas analyses
19097	10/24/2019	Allied Fluid Products Corp	56.10	Gasket for cogeneration engine
19098	10/24/2019	Amazon	2,223.41	Process chemicals, radio chargers, fire equipment, network equipment, and office supplies
19099	10/24/2019	Automation Direct Co., Inc.	1,084.59	Relays, contact block, and fuses; September-October 2019
19100	10/24/2019	Bailey, Sloan	225.00	Stipend for 10/08/2019 Board Meeting
19101	10/24/2019	Caltest Analytical Laboratory	588.57	NPDES permit lab analyses, September-October 2019 (5 invoices)
19102	10/24/2019	CWEA TCP	104.00	Certification renewal (one employee)
19103	10/24/2019	Dickson Company	9,923.30	Wireless temperature monitoring system for laboratory
19104	10/24/2019	Departmt of Ind Relations	675.00	Elevator inspection fee
19105	10/24/2019	ERA, A Waters Company	246.15	Laboratory testing chemicals
19106	10/24/2019	Examinetics, Inc.	1,475.00	Audiometric testing for NSD (Note B)
19107	10/24/2019	Five Thousand Forms Inc	4,733.22	Pub Ed Program: Promotional items (3 invoices) (Note B)
19108	10/24/2019	Flyers Energy LLC	5,169.50	Centrifuge, cogeneration engine, and headworks lubricants (5 invoices)
19109	10/24/2019	Kaman Industrial Technologies	16,429.84	Primary clarifiers scum skimmer drives (3 invoices)
19110	10/24/2019	Marin Sanitary Service	6,000.59	Landfill and rag bin disposal, September 2019 (2 invoices)
19111	10/24/2019	Marin Resource Recovery Center	199.00	Yard waste and trash disposal, September 2019 (2 invoices)
19112	10/24/2019	McInerney & Dillon, P.C.	1,771.00	Legal services, construction/contract law, September 2019
19113	10/24/2019	North Bay Watershed Assoc.	5,560.46	Overhead and General Benefits fee for FY19-20
19114	10/24/2019	RMC	485.14	Lab printer/copier usage, 07/09-10/08/2019
19115	10/24/2019	Rockwell Solutions	23,967.42	Organic Waste Receiving Facility mixing pumps (2 invoices)
19116	10/24/2019	Super Bright Leds, Inc	430.53	Lamps for Headworks grit tank room
19117	10/24/2019	California State Disbursement	250.50	EE Garnishment, PPE 10/19/2019 (Note A)
19118	10/24/2019	ICMA Retirement Trust-457	2,400.00	Deferred compensation contributions, PPE 10/19/2019 (Note A)
19119	10/24/2019	Navia Benefit Solutions	969.01	Flexible spending account, PPE 10/19/2019
19120	10/24/2019	SEIU Local 1021	1,017.30	Union dues, PPE 10/19/2019

Central Marin Sanitation Agency
Operating Account Disbursements Register
For the Month of October 2019

Check Number	Date	Vendor/Payee	Amount	Description

Payments by Automatic Clearing House:

Date	Vendor/Payee	Amount	Description
10/1/2019	CalPERS	39,845.89	Retirement pension contribution: Agency and employees, PPE 09/21/2019 (Note C)
10/15/2019	CalPERS	38,652.06	Retirement pension contribution: Agency and employees, PPE 10/05/2019 (Note C)
10/28/2019	CalPERS	37,976.02	Retirement pension contribution: Agency and employees, PPE 10/19/2019 (Note C)
10/1/2019	CalPERS Medical ins	65,547.39	Medical insurance, September 2019
10/9/2019	Carollo Engineers, Inc.	44,588.20	Prof Svcs: Design-New Cogeneration System Installation Project, August 2019
10/17/2019	Carollo Engineers, Inc.	33,805.00	Prof Svcs: Design-New Cogeneration System Installation Project, September 2019
10/17/2019	CF Contracting Inc	84,810.00	Andersen Drive Landslide Repairs project, payment #3
10/2/2019	EDD	12,630.54	State & SDI taxes, PPE 09/21/2019
10/15/2019	EDD	17,284.19	State & SDI taxes, PPE 10/05/2019
10/29/2019	EDD	13,548.92	State & SDI taxes, PPE 10/19/2019
10/17/2019	ERA, A Waters Company	185.65	Laboratory testing chemicals
10/17/2019	Kraft Power Corporation	150,660.52	Refurbished cogeneration engine
10/1/2019	Lincoln Life Ins	2,497.17	Life insurance, October 2019
10/9/2019	Nitel Inc	9,372.56	Primary telephone and internet service, May-October 2019
10/11/2019	NRS/PEHP-3 and Z	9,797.20	Deferred compensation and MARA contribution, PPE 10/05/2019
10/28/2019	NRS/PEHP-3 and Z	7,774.86	Deferred compensation and MARA contribution, PPE 10/19/2019
10/2/2019	Payments to 26 retirees	7,535.32	Reimbursement for retiree health benefits
10/9/2019	Synagro West, Inc.	4,272.45	Biosolids land application fee, August 2019
10/1/2019	Vision Service Plan -(CA)	935.13	Vision insurance, September 2019
10/21/2019	Dean DiGiovanni	225.00	Stipend for 10/08/2019 Board Meeting
10/21/2019	Douglas T Kelly	225.00	Stipend for 10/08/2019 Board Meeting
10/21/2019	Maribeth Bushey	225.00	Stipend for 10/08/2019 Board Meeting
10/21/2019	Michael Owen Boorstein	450.00	Stipend for 10/08/2019 Board meeting and October NBWA Board meeting
	Grand Total	**1,103,544.57**	

Notes:
A: Not an Agency Expense. Expense funded through Payroll deduction.
B: Not an Agency Expense. CMSA will be reimbursed for this expense.
C: CMSA is partially reimbursed for this expense per Employee Labor Agreements.

CENTRAL MARIN SANITATION AGENCY
SCHEDULE OF INVESTMENTS
As of the Month Ended October 31, 2019

Description		Book Value		Market Value (1)	% Portfolio		Projected Year End
I. Pooled Investments with California Asset Management Program (CAMP)							
Money Market Funds (< 1 year in maturity)							
CAMP Cash Reserve Pool: 2.05% at 10/31/19							
b1. Operating Reserve (Unrestricted) (2)	$	27,163.38	$	27,163.38			Sum b1. Below
b2. Emergency Reserve (Unrestricted)		250,000.00		250,000.00		$	250,000
b3. Insurance Reserve (Unrestricted)		100,000.00		100,000.00		$	100,000
Total with CAMP	**$**	**377,163.38**	**$**	**377,163.38**	**2.4%**		
II. Pooled Investments with Local Agency Investment Fund (LAIF)							
Money Market Funds (< 1 year in maturity)							
Local Agency Investment Fund (LAIF): 2.28% at 9/30/19							
a1. Current Operating Fund	$	1,666,505.83	$	1,666,505.83			
b1. Operating Reserve (Unrestricted) (2)	$	3,115,311.62	$	3,115,311.62		$	3,142,475
c1. Capital Reserves (Restricted) (3)	$	993,302.00	$	993,302.00		$	991,834
c2. Capital Reserves (Unrestricted) (4)	$	9,479,116.00	$	9,479,116.00		$	7,778,603
Total with LAIF	**$**	**15,254,235.45**	**$**	**15,254,235.45**	**97.6%**		
TOTAL INVESTMENTS	**$**	**15,631,398.83**	**$**	**15,631,398.83**	**100.0%**		

NOTES:
(1) Market values are per the fiscal agent's respective monthly statements
(2) Operating reserves calculated at 25% operating budget
(3) Includes capacity charges and debt service coverage
(4) Includes capital fee charges

Statement of Compliance

The above portfolio of investments is in compliance with the Agency's investments policy, adopted annually, and California Government Code Section 53601, authorized investments, and 53646, investments policy. In addition, the Agency does have the financial ability to meet its cash flow requirements for the next six months.

Kenneth Spray, CPA
Administrative Services Manager

CENTRAL MARIN SANITATION AGENCY
CAPITAL RESERVES SUMMARY FOR THE SCHEDULE OF INVESTMENTS
Year-to-Date as of the Month Ended October 31, 2019

Restricted Capital Reserves Sources and Uses	Monthly Amounts Received (Used)	YTD Amounts Received (Used)
Capacity charges revenue	$ -	$ 20,568
Debt coverage collection revenue	-	799,782
Total restricted capital reserve funding sources	-	820,350
Capacity charges usage for capital (1st)	-	(20,568)
Debt coverage usage for capital (2nd)	(240,489)	(799,782)
Total restricted capital reserve uses	(240,489)	(820,350)
Net change		0
Balance - beg of year		993,302
Balance - end of year		$ 993,302
Unrestricted Capital Reserves Sources and Uses		
Capital fee revenue	$ 255,250	$ 510,500
Unrestricted operating-reserve-transfer-in	-	-
SRF/FEMA cost reimb proceeds received	-	106,758
Total unrestricted capital reserve funding sources	255,250	617,258
Capital fee usage to fund CIP (3rd)	(397,262)	(397,262)
Unrestricted capital reserve draw (4th)	-	-
Total unrestricted capital reserve uses	(397,262)	(397,262)
Net change		219,996
Balance - beg of year		9,259,120
Balance - end of year		$ 9,479,116
Total capital reserve balances		$ 10,472,418
Total approved CIP budget		$ 3,900,626
Total CIP funded from capital reserve sources		(1,217,612)
Total approved capital budget remaining		$ 2,683,014

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Chris Finton, Treatment Plant Manager

Approved: Jason Dow, General Manager

Subject: October 2019 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report

Recommendation: Accept the October 2019 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report.

I. NPDES Permit Compliance

Our NPDES permit testing for October showed that the CMSA treatment plant effluent was in compliance with all permit limits. The Monthly Compliance Summary Table shows the results by permitted parameter, the sample's frequency, the sample results, and the permit limit. We successfully passed the October 96-hour flow through bioassay test. CMSA's NPDES permit specifies quarterly monitoring for enterococcus bacteria and for each wet-weather blend event to verify compliance with established effluent limits. The enterococcus geometric mean this past quarter was 12.2 MPN, well below our monthly limit of 35 MPN.

II. Influent Flow

October in central Marin County was marked by periods of high winds, high heat, and public safety power shutoffs (PSPS). It remained very dry with no precipitation recorded by the Agency's rain gauge. The treatment plant's average daily influent flow was 8.3 MGD.

The CMSA treatment plant and each satellite collection agency's daily average and total monthly influent flows are shown in the table below:

October Monthly Influent Flows	**San Rafael (SRSD)**	**Ross Valley (RVSD)**	**San Quentin (SQSP)**	**Corte Madera (SD#2)**	**CMSA Plant Total**
Average Daily (MGD)	3.0 MGD	4.0 MGD	0.47 MGD	0.87 MGD	8.3 MGD
Total for Month (MG)	93.6 MG	122.9 MG	13.4 MG	26.9 MG	256.8 MG
Percent of Flow	36.4 %	48.0 %	5.2 %	10.4 %	100 %

III. <u>Treatment Process</u>

A period of annual and corrective maintenance this past month created several opportunities to train new Agency operators (two Operators-in-Training and one Grade I) on removing and restoring process equipment, lock-out tag-out procedures, and SCADA system functionality. Staff tested the recently installed 400-gallon per-hour dechlorination pump for leaks and general operability. The pumps speed was calibrated and its control strategy has been incorporated into the facility's process control system. In preparation for facility wet weather operations, staff spent the majority of the month verifying that all process equipment (chemical and process pumps, process tank internal apparatus and valves) was in working order and ready for use as needed. Recent PSPS outages created several process issues that had to be immediately addressed, as the facility's NPDES permit limits must be met at all times regardless of the situation or season. The loss of power also meant that automated systems, communication, and instrumentation was compromised and processes had to be physically observed and manipulated. Just before the October 26 power shutoff, staff diverted facility flow to the effluent storage pond, and once the standby generator was up and running (47.5 hours total) staff reestablished flow to the facility's outfall and ultimately to SF Bay. This process was repeated, again without incident, on October 28 when utility power to CMSA was established.

The Mixed Liquor Suspended Solids (MLSS) inventory averaged 816 mg/l in October, a 9.4% decrease in inventory from last month. This reduction in biomass is in alignment with our target Mean Cell Residence Time (MCRT) of 3.2 days.

Graph No. 3 shows the coliform most probable number (MPN), which represents the effectiveness of the disinfection process. All thirteen coliform samples collected in October were below our monthly KPI of 30 MPN, and well below our daily permit limit of 10,000 MPN. The total coliform monthly geometric mean for October was 1.6 MPN, well below our permit's monthly limit of 240 MPN.

Graph No. 4 shows the Total Suspended Solids (TSS), which is a good indicator of the effluent quality. The TSS monthly average in October was 4.7 mg/l, which is 31.3% of our Key Performance Indicator (KPI) of 15 mg/l, and is 15.6% of our permit's monthly average limit of 30 mg/l.

IV. <u>Maintenance Activities</u>

The cogeneration system was returned to service on September 11 and received its 500 hour break-in service on October 2. The service included a thorough inspection of the cogeneration engine and generator, an oil change and replacement of the sparkplugs, oil and air filters, and coil wires. As indicated on graph 8, the cogeneration engine operated the majority of the month producing 92.3% of the facility's power needs; the Cummins standby generator produced facility power during scheduled PSPS's; and MCE supplied the remaining amount of energy.

The majority of October's work activities were spent performing annual process equipment preventative maintenance. In addition, technicians rebuilt a reclaimed water booster pump, replaced the hose and glycerin in a hose pump at the Organic Waste Receiving Facility, and replaced the check valve on grit pump No. 5. Staff also supported SD2 early in the month with emergency air release valve (ARV) removal work, and spent October 24 through October 29 preparing for and operating standby equipment during scheduled PSPS at SQ Prison, SQ Village, and SD2 pump stations.

Attachment:

- October 2019 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report

NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report

October 2019

New 400-gallons per-hour sodium bisulfite (SBS) pump system. This pump will do the work of two smaller pumps, and will be utilized for dechlorinating disinfected secondary effluent during wet weather events.

Monthly Compliance Summary Table

Central Marin Sanitation Agency

October, 2019

Final Effluent Monitoring

Parameter	Frequency	Units	Results	Limit
Carbonaceous BOD Highest Weekly Average	Weekly	mg/L	5.0	Maximum 40
Carbonaceous BOD Monthly Average	Monthly	mg/L	4.7	Maximum 25
Carbonaceous BOD Monthly Removal Rate	Monthly	%	98.6	Minimum 85
Total Suspended Solids Highest Weekly Average	Weekly	mg/L	5.3	Maximum 45
Total Suspended Solids Monthly Average	Monthly	mg/L	4.7	Maximum 30
Total Suspended Solids Monthly Removal Rate	Monthly	%	99.0	Minimum 85
Chlorine Residual Instant Limit	Instant	mg/L	ND	Maximum 0.0
Ammonia Monthly Average	Monthly	mg/L	39.6	Maximum 60
Ammonia Maximum Daily	Daily	mg/L	41.4	Maximum 120
pH Lower Limit	Continuous	SU	6.8	Minimum 6
pH Upper Limit	Continuous	SU	7.2	Maximum 9
Bacteriological Analysis				
Total Coliform Monthly Geometric Mean	3 X Week	MPN/100mL	1.6	Maximum 240
Total Coliform Daily Maximum	3 X Week	MPN/100mL	13.0	Maximum 10,000
Enterococcus Quarterly Geometric Mean	Quarterly	MPN/100mL	12.2	Maximum 35
Flow Through Bioassay				
Acute Toxicity 11 Sample 90th Percentile	Monthly	% survival	100	Minimum 70
Acute Toxicity 11 Sample Median	Monthly	% survival	100	Minimum 90
Metals Analysis				
Copper Daily Limit	Monthly	ug/L	5.9	Maximum 85
Copper Monthly Average	Monthly	ug/L	5.9	Maximum 49
Cyanide Daily Limit	Monthly	ug/L	J2.6	Maximum 41
Cyanide Monthly Average	Monthly	ug/L	J2.6	Maximum 21
Mercury Weekly Average	Weekly	ug/L	0.0031	Maximum 0.072
Mercury Monthly Average	Monthly	ug/L	0.0031	Maximum 0.066
Mercury Monthly Loading	Monthly	kg/mo	0.00233	
Mercury Annual Loading (watershed permit)	Jan-Dec	kg/yr	0.08350	Maximum 0.11
Permit Analysis				
Dioxin - Total Equivalents (TEQ) Daily Maximum	1/Permit Cycle	ug/L	*	Maximum 2.8E-08
Dioxin - Total Equivalents (TEQ) Monthly Average	1/Permit Cycle	ug/L	*	Maximum 1.4E-08
Polychlorinated Biphenyls (PCBs) Daily Limit	1/Permit Cycle	ug/L	*	Maximum 0.017
Polychlorinated Biphenyls (PCBs) Monthly Limit	1/Permit Cycle	ug/L	*	Maximum 0.012
Semiannual and Quarterly Analysis				
Oil and Grease Daily Limit	Semiannual	mg/L	ND	Maximum 20
Oil and Grease Monthly Average	Semiannual	mg/L	ND	Maximum 10
Chronic Bioassay Toxicity	Quarterly	Tuc	ND	Maximum 20
Chronic Bioassay Toxicity (3 sample median)	Quarterly	Tuc	ND	Maximum 10
Flow Analysis	**Daily Max**	**Hourly Max**	**5 minute Max**	**Monthly Average**
Effluent Flow	7.2	12.5	17.6	6.4
Influent Flow	9.2	19.9	18.5	8.3
# Days Blended				0

* Monitoring Not Required This Month   ND = None Detected   X = Data not available at report time   J = Detected but not Quantified

Glossary of Terms
NPDES Permit Compliance Summary Table

- **Ammonia**: CMSA's NPDES permit requires that we analyze the final effluent for ammonia due to its toxicity to aquatic organisms and potential for providing nutrients to algae in the San Francisco Bay. The permit has a maximum daily limit of 120 mg/L and a monthly average limit of 60 mg/L. The maximum daily limit is the number that cannot be exceeded on any sample and the monthly average applies to all samples collected in any month (although typically we are required to take only one sample).

- **Biochemical Oxygen Demand (BOD)**: The amount of dissolved oxygen needed by microorganisms (biomass) to stabilize organic material in the effluent. The permit limits for our effluent require that removal of 85% influent BOD, and meet a weekly average of less than 40 mg/L and a monthly average of less than 25 mg/L BOD.

- **Chlorine Residual:** The secondary effluent is disinfected with hypochlorite (chlorine "bleach"), and then the residual chlorine is neutralized with sodium bisulfite to protect the Bay environment. The final effluent chlorine residual limit is 0.0 mg/l, which is monitored continuously.

- **Bacteria:** Coliform and enterococcus bacteria are the indicator organisms for the determination of the effectiveness of the disinfection process.

- **Dioxin - Total Equivalents:** These are 17 dioxin-like compounds that we analyze for twice per year which have permit limits.

- **Oils and Grease:** We are required to monitor our effluent for Oils and Grease quarterly.

- **Flow Through Bioassay:** A 96-hour test in which we test the toxicity of our effluent to young rainbow trout (15-30 days old) in a flow-through tank to determine their survivability under continuous exposure to CMSA effluent. The permit requires that we maintain a 90^{th} percentile survival of at least 70% and an 11-sample median survival of at least 90%. In layman's terms, this means that out of the last 11 samples, only one bioassay may fall below 70% survival, and the middle value—when all 11 samples are placed in numerical order—must be at least 90%.

- **Metals Analysis:** Our permit requires that we analyze our effluent for many different metals on a monthly basis. We have permit limits for three of the metals. The limits are stated as a maximum daily limit and a monthly average limit.

- **pH:** pH is a measurement of acidity, with pH 7.0 being neutral and higher pH values being basic and lower pH values being acidic. Our permit effluent pH must stay within the range of 6.0 to 9.0, which we monitor continuously.

- **Total Suspended Solids (TSS):** Measurement of suspended solids in the effluent. Our permit requires that we remove at least 85% of the influent TSS and that the effluent limit is less than 45 mg/L as a weekly average and less than 30 mg/L as a monthly average.

EXECUTIVE SUMMARY PROCESS PERFORMANCE DATA
October 2019

The removal efficiencies shown are based on the monthly average of the following treatment processes that were in service.

Expected removal efficiencies as outlined in Metcalf & Eddy Wastewater Engineering Manual.

PRIMARY CLARIFIER PERFORMANCE

Average Total Suspended Solids (TSS) in:	603.6	mg/l	
Average TSS out:	185.6	mg/l	
Average Percent Removal Achieved:	64.7	%	**Design 50-70% Removal**
Average Total Carbonaceous Biochemical Oxygen Demand (CBOD) in:	355.4	mg/l	
Average CBOD out:	138.1	mg/l	
Average Percent Removal Achieved:	59.2	%	**Design 25-40% Removal**
Average Plant Influent Flows:	8.3	MGD	

BIOTOWER PERFORMANCE

Average TSS out:	130.9	mg/l	
Average CBOD out:	56.0	mg/l	
Average Percent CBOD Removal Achieved:	59.1	%	**Design 25-30% Removal**

AERATION TANKS/ACTIVATED SLUDGE

Dissolved Oxygen set point:	2.24	mg/l
Average MLSS:	816.0	mg/l
Average MCRT:	3.21	Days
Average SVI:	148	

SECONDARY CLARIFIERS

Average WAS concentration:	5,685	mg/l
Average TSS out:	6.7	mg/l

FINAL EFFLUENT

Average Effluent TSS for the month:	4.7	mg/l	(Maximum Limit: 30mg/l)
Week #1 weekly average	4.3	mg/l	(Maximum Limit: 45mg/l)
Week #2 weekly average	4.3	mg/l	"
Week #3 weekly average	5.3	mg/l	"
Week #4 weekly average	4.3	mg/l	"
Week #5 weekly average	N/A	mg/l	"
Monthly average TSS removal efficiency through the plant:	99.0	%	(Minimum Limit: 85%)

Average Effluent CBOD:	4.7	mg/l	(Maximum Limit: 25mg/l)
Week #1 weekly average	4.0	mg/l	(Maximum Limit: 40mg/l)
Week #2 weekly average	5.0	mg/l	"
Week #3 weekly average	5.0	mg/l	"
Week #4 weekly average	4.0	mg/l	
Week #5 weekly average	N/A	mg/l	"
Monthly average CBOD removal efficiency through the plant:	98.6	%	(Minimum Limit: 85%)

Disinfection Dosing Rate:		3.0	mg/l	monthly average
Total Coliform Monthly Geometric Mean:		1.6	MPN	(Maximum 240)
The Daily Maximum Total Coliform Count for the month:		13.0	MPN	(Maximum 10,000)
Enterococcus Monthly Geometric Mean:		N/A	MPN	(Maximum 35 MPN)
Effluent pH for the month was:	Min	6.6	MPN	(Min 6.0)
	Max	7.4	MPN	(Max 9.0)

DIGESTER TREATMENT

Average Thickened Waste Concentration from the RDT:	6.87	%
Average percent of Volatile Solids destroyed:	85.0	%
Cubic feet of biogas produced:	7,916,870 (Total)	255,383 (Daily Average)
Average temperature of the digester:	102.0	degrees Fahrenheit

EXECUTIVE SUMMARY PROCESS PERFORMANCE DATA

October 2019

The removal efficiencies shown are based on the monthly average of the following treatment processes that were in service.

DEWATERING

Average Centrifuge Feed concentration:	2.7	%
Average Biosolids concentration:	26.0	%
Average TSS of the Centrate:	206	mg/l
Solids capture of the Centrifuge:	99.3	%
Polymer use per Dry ton of biosolids:	12.17	#/dry ton
Average polymer feed rate per run:	3.76	gpm
Average concentration of the polymer batches:	0.328	%
Average sludge feed rate per run:	57.7	gpm

Comments:

The treatment plant has been running well with final effluent being of very good quality.

Graph #1:

Depicts the total influent flow (from all collection agencies) entering the treatment plant.

The red graph line represents total influent flows; and the black graph line depicts the CMSA rain gauge recordings for the month.

Graph #2:

Depicts individual collection agency flows.

The Y-axis is in the dry weather flow range of 0-12 MGD.

Graph #3:

Depicts the coliform most probable number (MPN) results which are an indication of the performance of the disinfection system.

The monthly Total Coliform Geometric Mean was 1.6 MPN through October, which is less than our KPI median of 30 MPN and permit limit of 240 MPN.

Graph #4:

Depicts the total suspended solids in the effluent.

Our monthly average was 4.7 mg/l versus our KPI of 15 mg/l and permit monthly average limit of 30 mg/l.

Graph #5:

Depicts the effluent CBOD which measures the oxygen demand of the wastewater.

The October effluent CBOD average was 4.7 mg/l, well below our NPDES limits of 40 mg/l weekly and 25 mg/l for the month.

Graph #6:

Depicts the degree to which the biosolids have been dewatered.

Our biosolids % concentration exceeded our KPI of 25% for thirty (30) days in October. The lower than normal sample number on October 14 is attributed to training new staff on how to operate the dewatering equipment.

Graph #7:

Depicts the amount of biogas that is produced in the digesters, measured by a flow meter, and then used to produce electricity.

Biogas production in October averaged 255,383 cubic feet per day, which exceeded our monthly KPI of 200,000 cubic feet per day. The mid-month variances in biogas production, as depicted on Graph 7, were the result of receiving fewer organic waste deliveries.

Graph #8:

This graph depicts the amount of energy produced through cogeneration versus the energy purchased from MCE for Agency operations.

The drop in power production on 10/26 was a result of a county-wide planned Public Safety Power Shutoff (PSPS). Power for Agency operations during this time period was supplied by the facility's standby generator.

Glossary of Terms
Process Performance Data Sheet

- **Aeration Tanks:** A biological process that takes place after the biotowers, where biomass (microorganisms) is mixed with the wastewater to feed on dissolved and suspended organic material. High speed blowers are used to provide compressed air to mix the tank contents.

- **Anaerobic Digesters:** In the anaerobic digestion process, organic material removed in the primary and secondary clarifiers is digested by anaerobic bacteria. The end products are methane, carbon dioxide, water, stabilized organic matter, and some inorganic material.

- **Biosolids:** Anaerobically digested solids that are removed from the two digesters, dewatered, and then beneficially reused. Beneficial reuse may include landfill alternate daily cover (ADC), land application in the summer as a soil amendment and fertilizer, or converted into a liquid fertilizer for agricultural applications.

- **Biotower:** A biological treatment process, occurring after the primary clarifiers and before the aeration tanks, in which the wastewater trickles over a biomass-covered media. The biomass feeds on the dissolved and suspended solids in the wastewater.

- **Centrifuge:** Process equipment used to dewater biosolids prior to beneficial reuse.

- **Cogeneration System:** A system comprised of a dual-fuel engine coupled to an electric generator that is used to produce energy to power the Agency facilities. Fuels the system uses are methane biogas produced in the anaerobic digesters and, when biogas is not available, purchased natural gas. As well as generating electricity, the system supplies heat for plant processes and building heating.

- **Chlorine Contact Tanks (CCTs):** The final treatment process is disinfection and de-chlorination. The CCTs allow contact time for injected chlorine solution to disinfect the wastewater. Sodium bisulfite, the de-chlorination chemical, is introduced at the end of the CCTs to neutralize any residual chlorine to protect the San Francisco Bay environment.

- **Rotary Drum Thickener (RDT):** Waste activated sludge removed from the secondary clarifiers is thickened in rotary drum thickeners before being transported to the anaerobic digesters. Thickening removes some of the sludge's water content, to decrease hydraulic loading to the digesters.

- **Final Effluent:** After all the treatment processes are completed, the final effluent is discharged into to central San Francisco Bay through a 10,000-foot-long deep-water outfall.

- **Mean Cell Residence Time (MCRT):** An expression of the average time that a microorganism will spend in the secondary treatment system.

- **Mixed Liquor Suspended Solids (MLSS):** The liquid in the aeration tanks is called MLSS and is a combination of water, solids, and microbes. Suspended solids in the MLSS measured in milligrams per liter (mg/l).

- **Most Probable Number (MPN):** Concentrations, or number of colonies, of total coliform bacteria are reported as the "most probable number." The MPN is not the absolute count of the bacteria but a statistical estimate of their concentration.

- **Polymer:** Polymer is added to digested sludge prior to dewatering to improve solids coagulation and water separation.

- **Primary Clarifier:** A physical (as opposed to biological) treatment process where solids that settle or float are removed and sent to the digesters for further processing.

- **Return Activated Sludge (RAS):** The purpose of returning activated sludge (biomass) to the aeration tanks is to maintain a sufficient concentration of microbes to consume the wastewater's dissolved solids.

- **Secondary Clarifiers:** Provides settling for the biomass after aeration. Most of the settled biomass is returned to the aeration tank as return activated sludge (RAS) and some is sent to the RDT unit as waste activated sludge.

- **Sludge Volume Index (SVI):** This is a calculation used to indicate the settling ability of the biomass in the secondary clarifiers.

- **Thickened Waste Activated Sludge (TWAS):** Waste activated sludge is thickened in the RDTs, and then the TWAS product is pumped to the digester for processing.

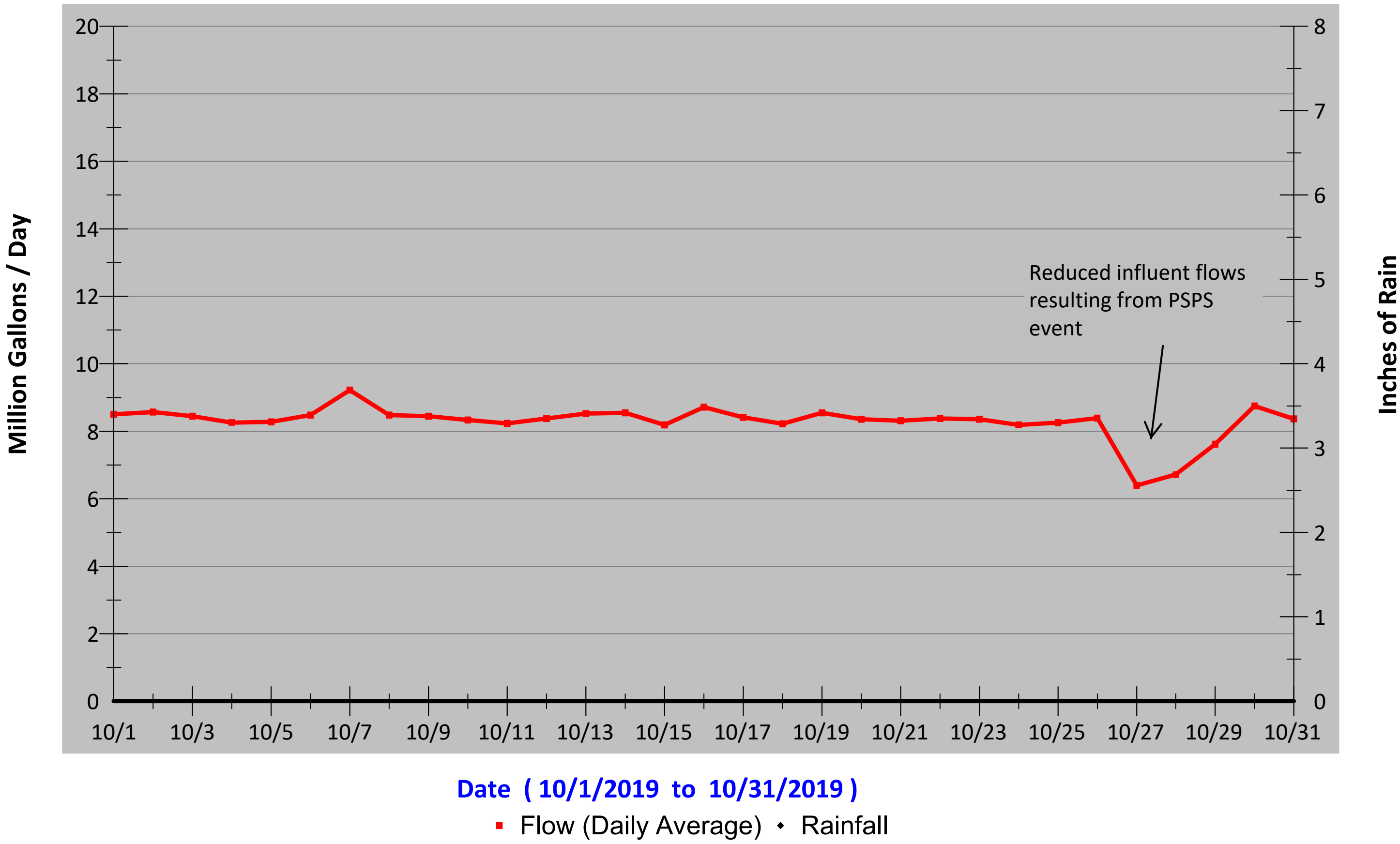
- **Volatile Solids:** Organic content of the wastewater suspended solids.

- **Waste Activated Sludge (WAS):** Biomass that is removed from the secondary clarifiers pumped to the RDTs for thickening.

Units of Measurement

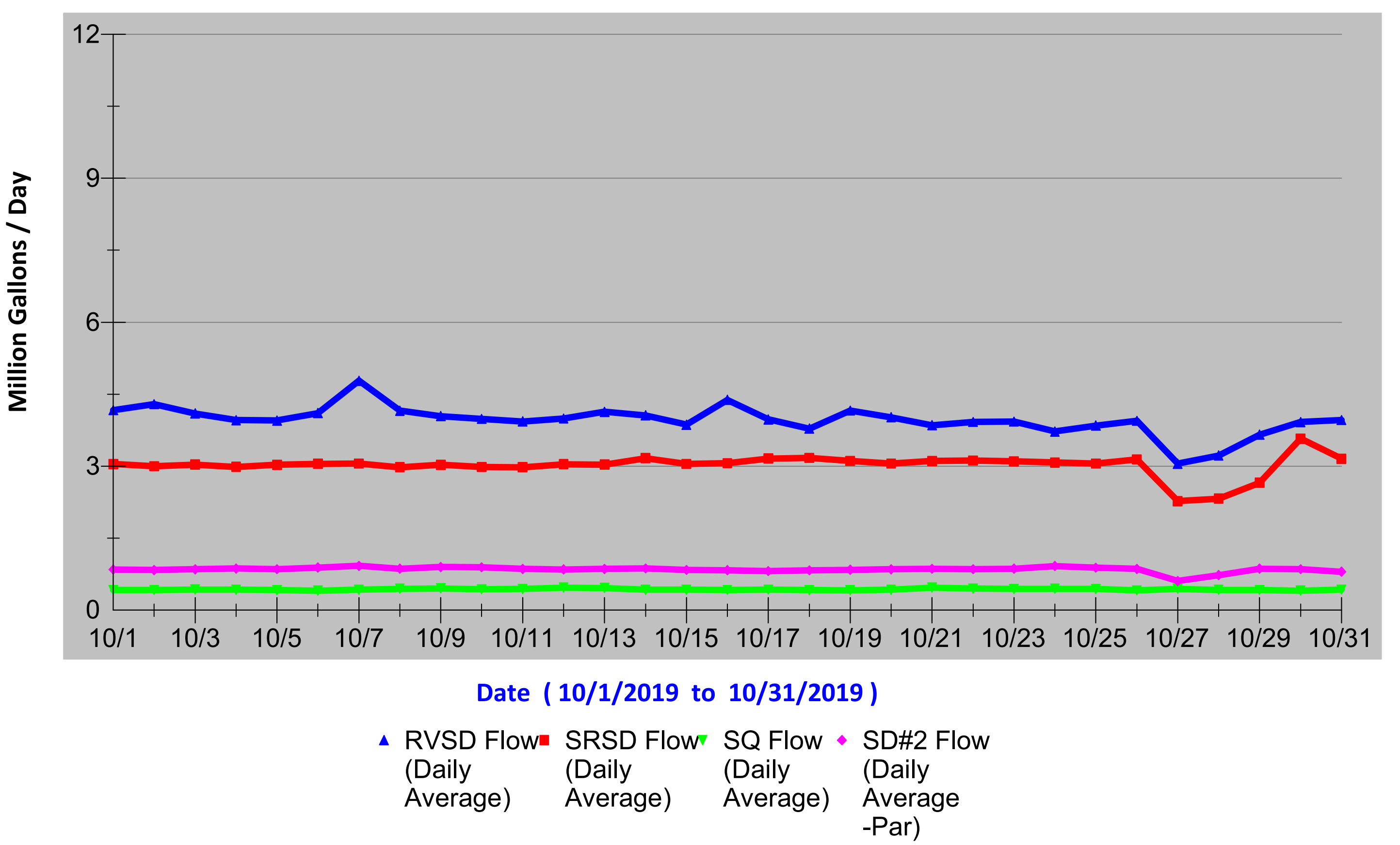
- kg/month (Kilograms per Month): 1 kilogram = 2.205 lbs.
- KPI (Key Performance Indicators): The Agency's process performance goals.
- Kwh (Kilowatt Hours): A unit of electric power equal to using 1 Kw for 1 hour.
- Milligrams per Liter (mg/L): A measure of the concentration by weight of a substance per unit volume. For practical purposes, one mg/L is equal to one part per million (ppm).
- MPN/100mL (Most Probable Number per 100 milliliters): Statistical estimate of a number per 100 milliliters of a given solution.
- Percent by Mass (% by mass): A measure of the combined mass of a solute + solvent.
- Percent by Volume (% by vol): A measure of the volume of a solution.
- ug/L (Micrograms per Liter of Solution): Mass per unit volume.

Graph #1: CMSA Influent Flow



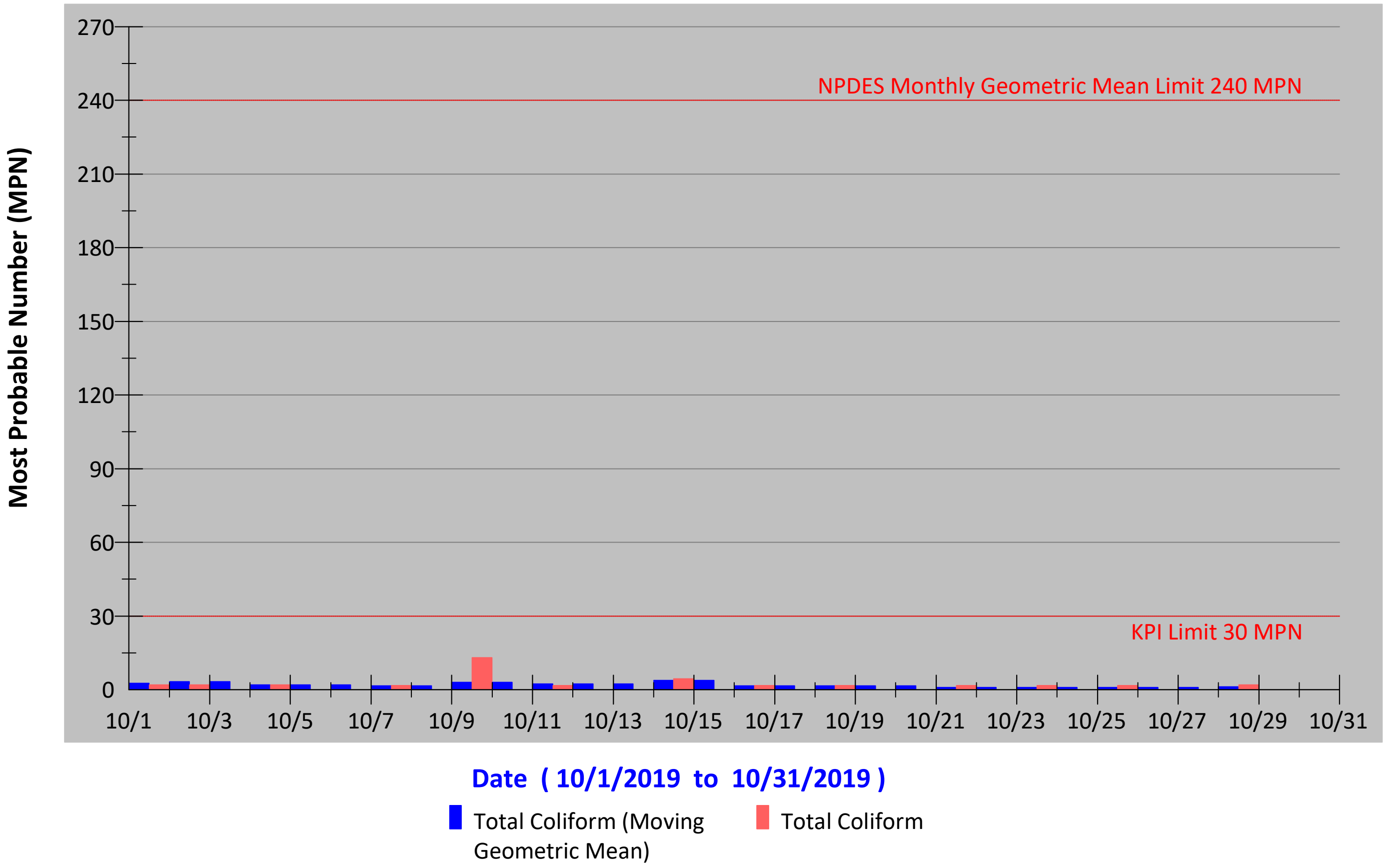
(#1) CMSA Influent Flow

Graph #2: Collection System Influent Flows



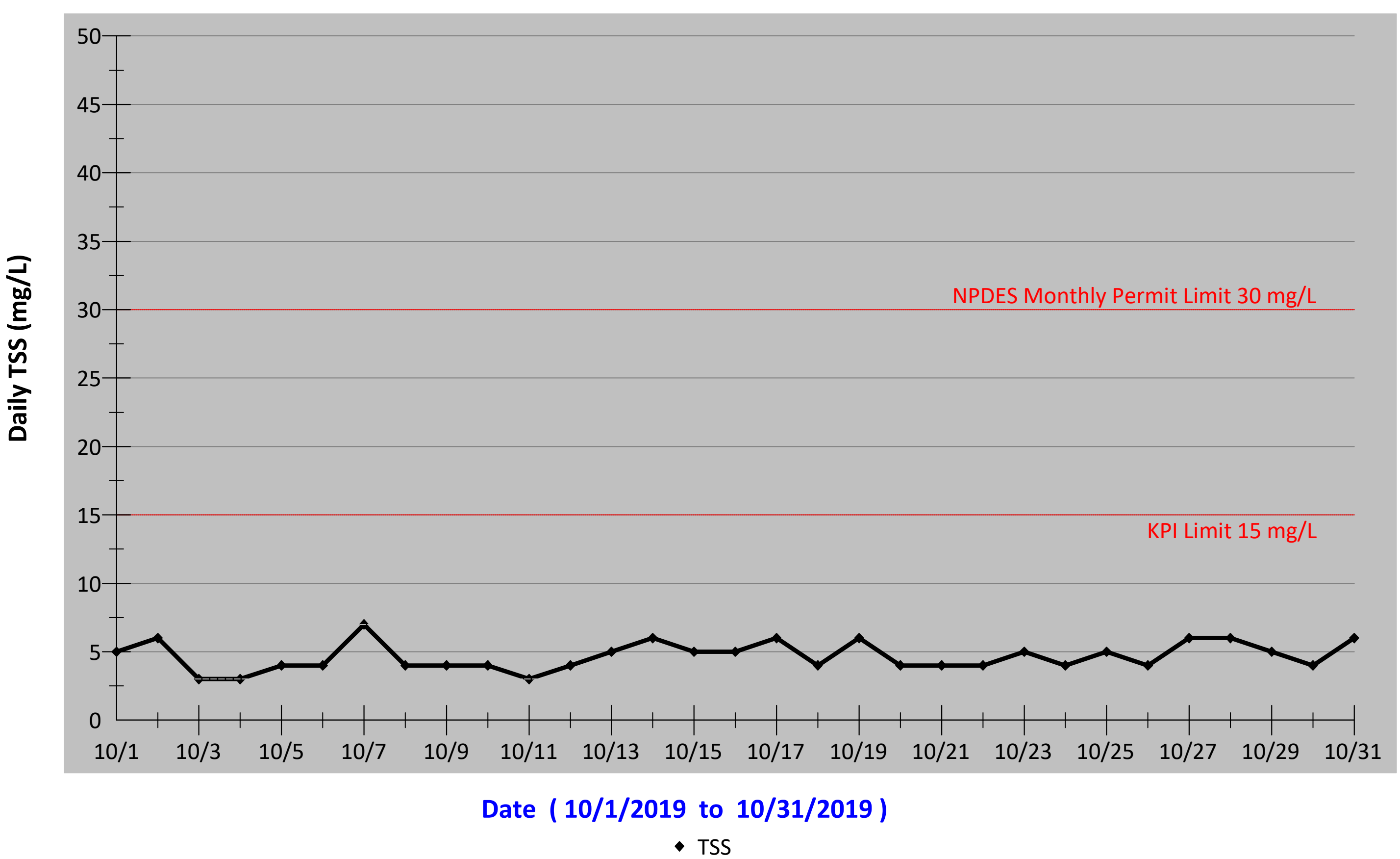
(#2) Collection System Influent Flows

Graph #3: Total Coliform & Monthly Geometric Mean



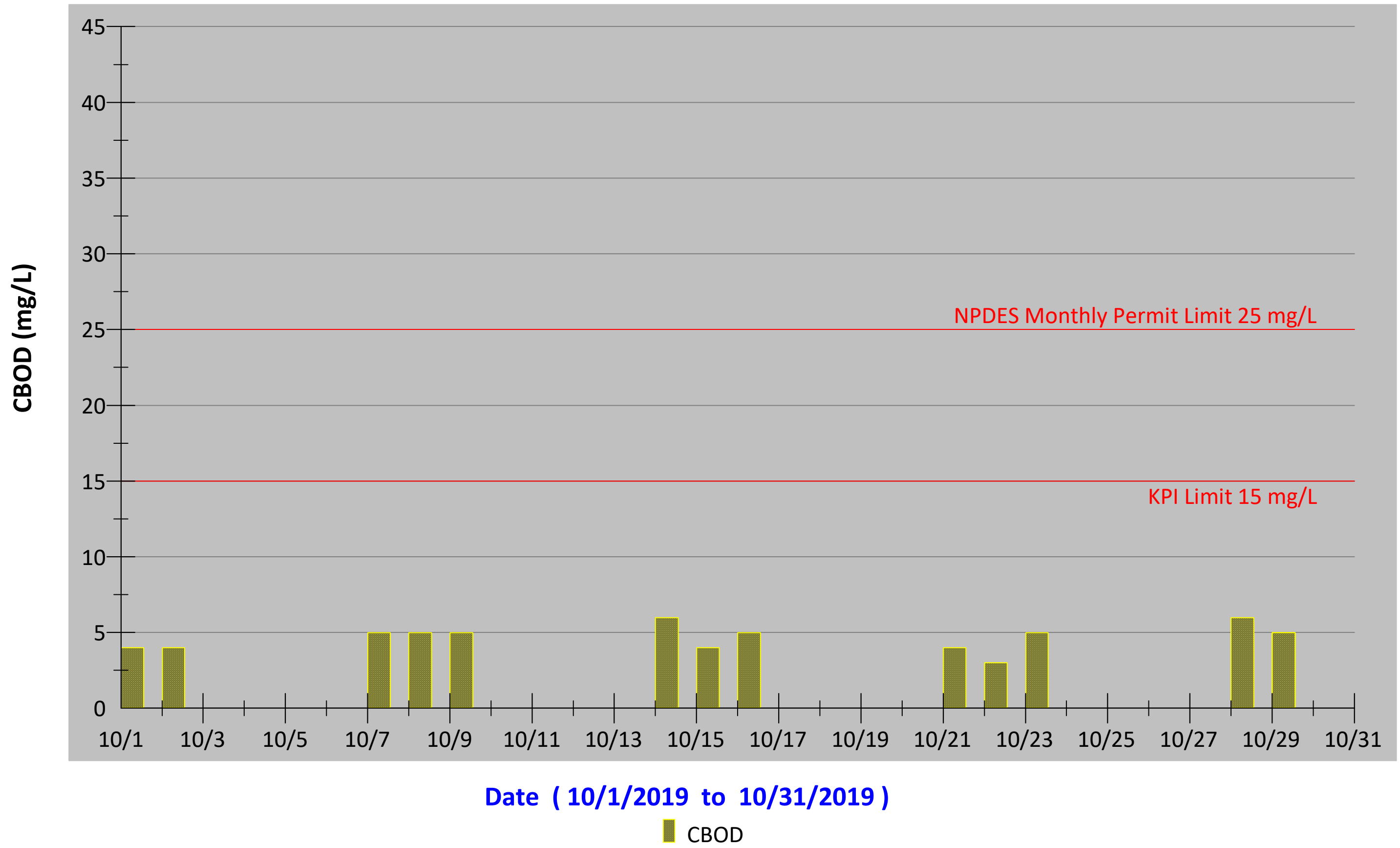
(#3) Total Coliform & Monthly Geometric Mean

Graph #4: Effluent Total Suspended Solids (TSS)



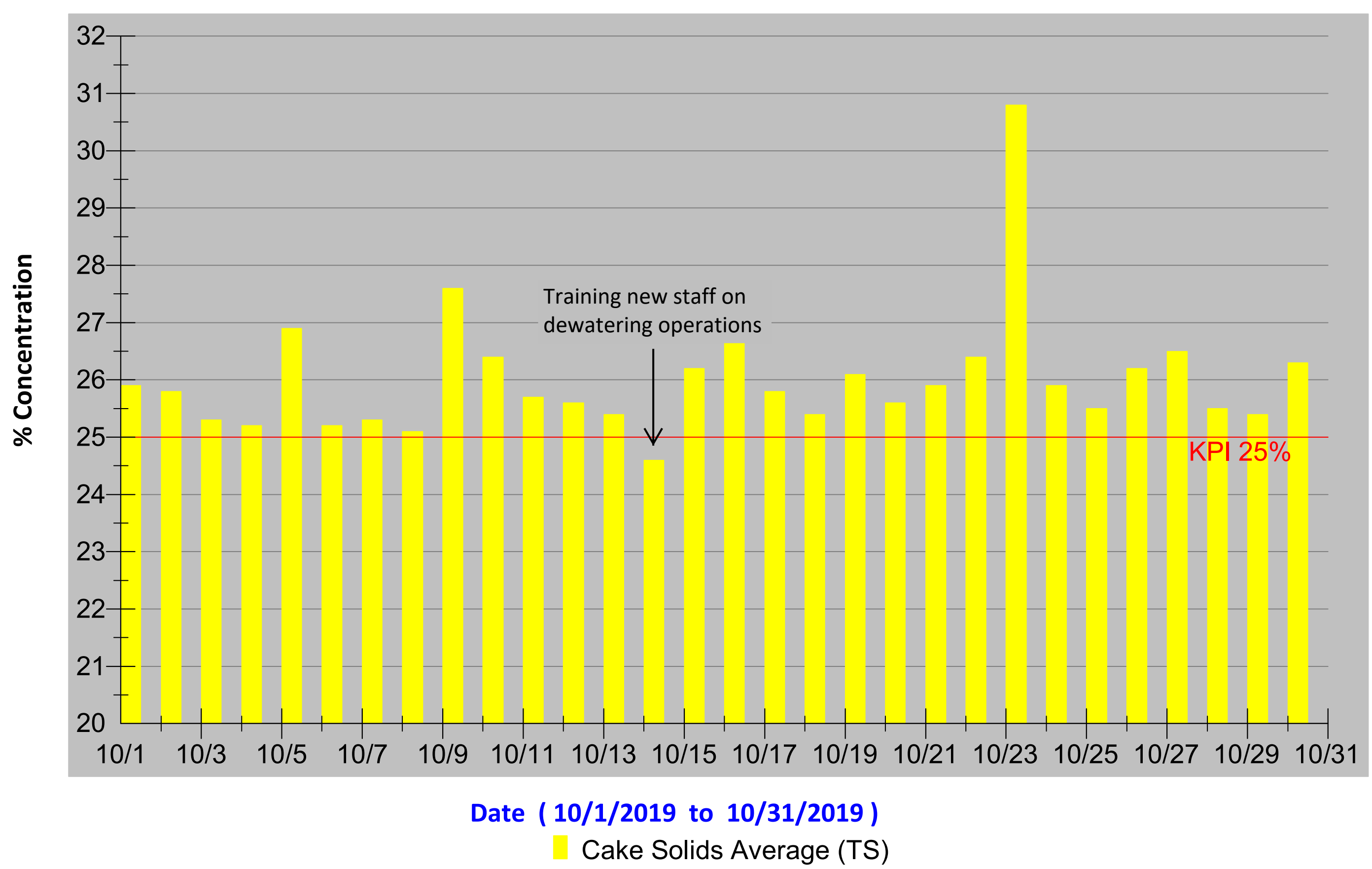
(#4) Effluent Total Suspended Solids (TSS)

Graph #5: Effluent Carbonaceous Biological Oxygen Demand (CBOD)



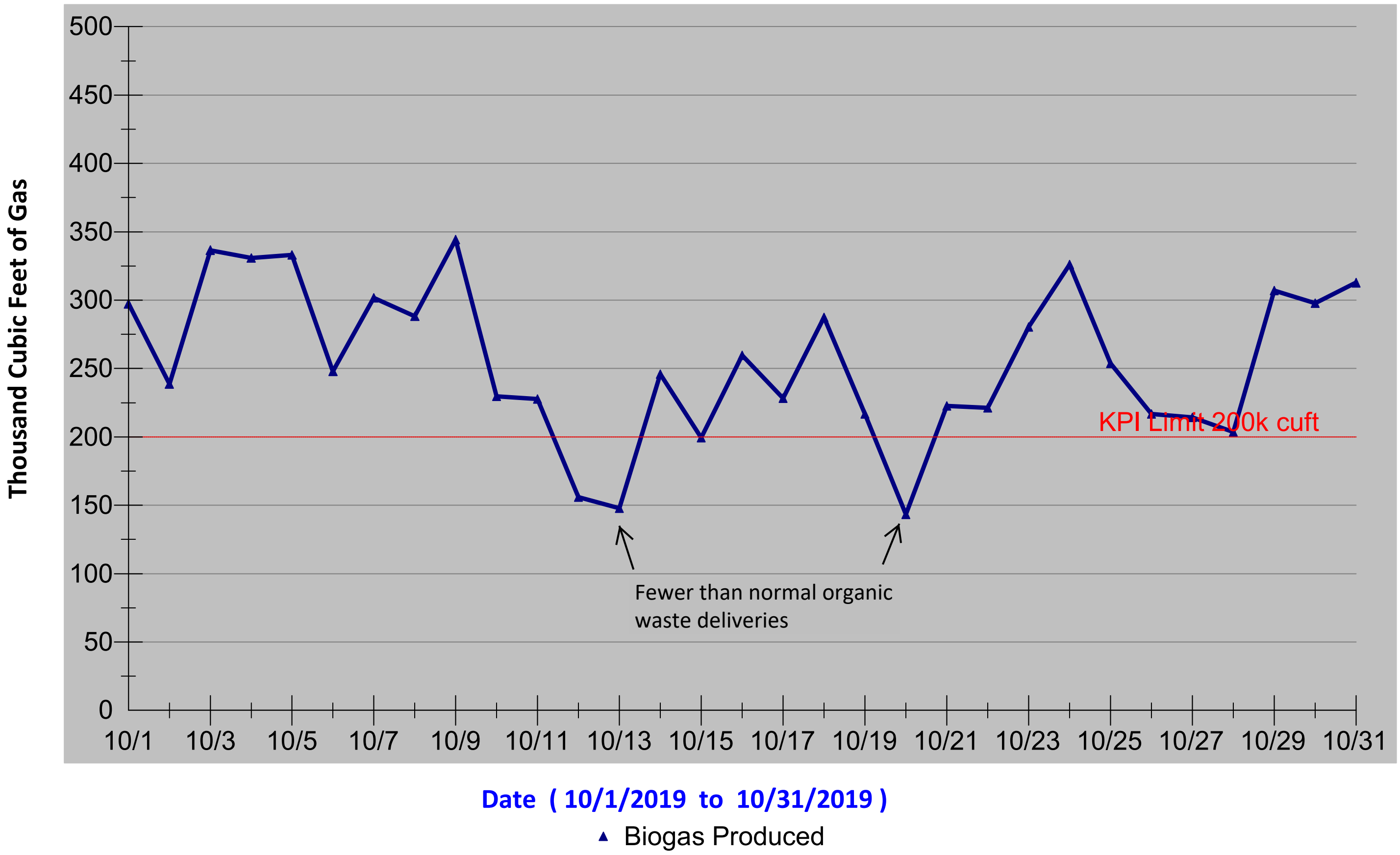
(#5) Effluent Carbonaceous Biological Oxygen Demand (C

Graph #6: Biosolids Concentration



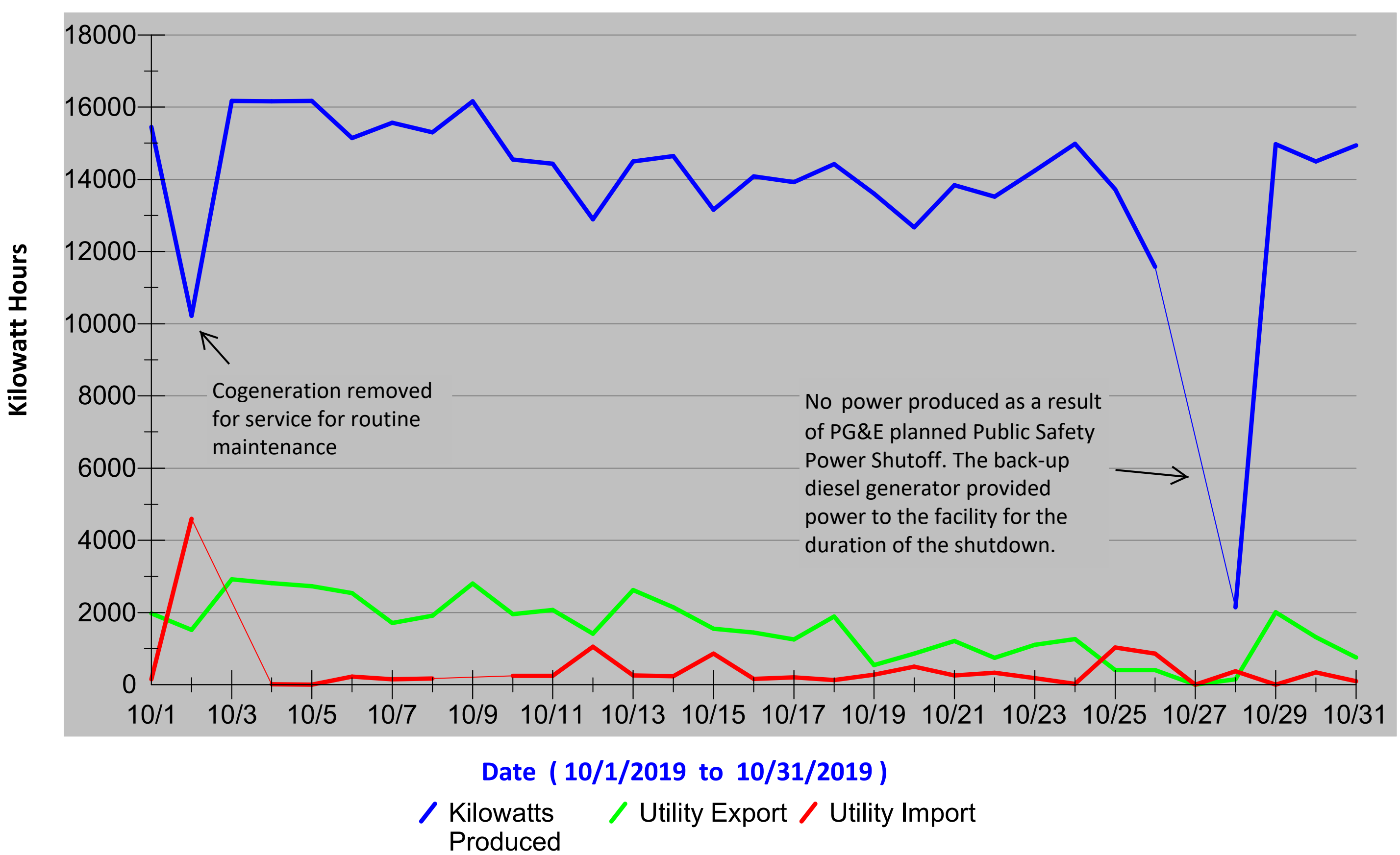
(#6) Biosolids Concentration

Graph #7: Biogas Production (Measured Use)



(#7) Biogas Production

Graph #8: kW/hr Purchased vs. kW/hr Produced vs. kW/hr Exported



(#8) Kilowatt Hours Purchased vs. Kilowatts Producec

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager

Subject: Performance Metric Report – October 2019

Recommendation: Accept the October 2019 Performance Metric Report.

Performance Summary: The Agency's performance in operations and maintenance activities, regulatory and environmental compliance, and public education and outreach met or exceeded our metric goals/targets. Noteworthy metrics or variances are described below.

Table I – Treatment/Process Metrics
Effluent flows remained approximately the same as the prior two months, and most of the dewatered biosolids was used as soil amendment and fertilizer by Synagro and Lystek in Solano county land application sites. Final effluent quality continues to exceed our performance targets, and the cogeneration system occasionally delivered small quantities of renewable power to the utility grid for sale to MCE. A new metric has been added to Item 6 – Energy Produced, to indicate the amount of power delivered.

Table II – Employee Metrics
On-site training included web based Ethics training for selected staff, Personal Protective Equipment (PPE) safety training for all staff, wet weather driving for selected staff, and classification specific development training.

Several field staff attended the CWEA Northern Safety Day in Woodland, and several supervisory staff attended a Liebert Cassidy Whitmore employment law seminar in Rohnert Park.

Table III - Environmental and Regulatory Compliance Metrics
There weren't any NPDES final effluent permit exceedances October, and all regulatory reports were submitted on schedule. Source control staff completed 123 inspections in the CMSA and contract agency service areas, and will begin inspection of dental offices in the CMSA, Las Gallinas Valley Sanitary District, and Novato Sanitary District service areas in November.

Table IV - Public Outreach
There were two odor alerts posted to the website over the past month, and the Agency did not

receive any public odor complaints. Alerts were posted for taking a primary clarifier out of service and the monthly cleaning of the chlorine contact tanks.

Monthly public education events may include staff attendance at public outreach events, school classroom and/or juggler show presentations, and Agency tours. Events over the past month are presented below with the event date and number of attendees.

Public Outreach Events

Date	Event	Attendees
10/23	Marin County Senior Fair in San Rafael	275
10/25	Trunk or Treat Event in Mill Valley	581
10/26	Scream on the Green event in Novato	430

School Events – Juggler Show Presentations and Classroom Events

Date	School	Attendees
10/11	Vallecito Elementary in San Rafael	250
10/18	Strawberry Point School in Mill Valley	280

CMSA Tours

Date	Group	Attendees
10/28	Bay Area Air Quality Management District	5

Attachment:
- October 2019 Performance Metric Report

CMSA CY19 PERFORMANCE METRICS – October 2019

TABLE I - TREATMENT/PROCESS METRICS

Metric	Definition	Measurement	Range/Target/Goal
1) Wastewater Treated	Volume of wastewater influent treated and disposed, in million gallons (Mg)	256.8 Mg	165 – 820 Mg
2) Biosolids Reuse	Alternate Daily Cover (ADC) at the Redwood Landfill, in wet tons (wt) Fertilizer and soil amendment at land application sites, in wet tons (wt) Bio-Fertilizer production at the Lystek facility, in wet tons (wt)	192.5 wt 87.5 wt 175.0 wt	360 – 665 wt
3) Conventional Pollutant Removal	Removal of the conventional NPDES pollutants - Total Suspended Solids (TSS) and Biological Oxygen Demand (BOD) a. tons of TSS removed; % TSS removal b. tons of organics removed (BOD); % BOD removal	 628.2 tons; 99.0% 368.9 tons; 98.6%	 > 85% > 85%
4) Priority Pollutants Removal	Diversion of priority NPDES metals from discharge to the S.F. Bay: a. % Mercury b. % Copper	 98.5% 93.2%	 88 – 99% 84 – 98%
5) Biogas Production	Biogas generated in our anaerobic digesters, in million cubic feet (Mft^3) Natural gas (methane) equivalent of the biogas, in million cubic feet (Mft^3)	7.91 Mft^3 5.06 Mft^3	6.0 to 9.5 Mft^3 3.8 to 6.1 Mft^3
6) Power Produced	Power produced from cogeneration of generated biogas and purchased natural gas - in kilowatt hours. Power produced from cogeneration of generated biogas and exported to grid Cogeneration system runtime on biogas *, in hours (hrs.); % time during month* Biogas value (natural gas cost equivalent).	417,614 kWh 47,979 kWh 546 hrs; 73.4% $25,611	380 to 480,000 kWh TBD 558 hrs.; 75% $7,000 to $24,000
7) Efficiency	The cost to operate and maintain the treatment plant per million gallons of wastewater treated, in dollars per million gallons. Energy used, kilowatt hours, per million gallons treated.	$1,401 /Mg 1,677 kWh/Mg	$451-$1,830/Mg (wet - dry) 670 - 2,400 kWh/Mg

Table II – EMPLOYEE METRICS

Metric	Definition	Measurement	Target/Goal
1) Employee Training	Hours of internal training – safety, web-based, project, vendor, etc. Hours of external training – employment law, technical, regulatory, etc.	Internal = 132.5 External = 46	variable
2) Work Orders	Preventative maintenance (PM) labor hours Planned corrective maintenance (CM) labor hours; % of CM+UCM hrs. Unplanned corrective maintenance (UCM) labor hours; % of CM+PM hrs. Ratio of PM to total corrective maintenance (CM + UCM);	482 hrs 592 hrs (80.0%) 136 hrs (20.0%) 0.66	300 – 500 hrs ≥ 70% total CM hrs ≤ 30% total hours ≥ 0.45
3) Overtime Worked	Monthly hours of OT worked; *Year to date hours of OT (YTD)* % of normal hours worked; *% Year to date (YTD)*	0.0%; *(0.0%)*	< 5%

CMSA CY19 PERFORMANCE METRICS – October 2019

Table III - ENVIRONMENTAL AND REGULATORY COMPLIANCE METRICS

Metric	Definition	Measurement	Range/Target/Goal
1) Permit Exceedances	# of NPDES permit exceedances	0	0
2) Regulatory Analyses	# of analyses by the CMSA laboratory for NPDES, Stormwater, and Biosolids regulatory compliance monitoring and reporting	451	150-750
3) Process Control Analyses	# of analyses by the CMSA laboratory for process control monitoring	1,112	400-1,250
4) Contract Laboratory Analyses	# of analyses by contract laboratories for regulatory compliance reporting	45	0-50
5) Quality Control Testing	# of CMSA performed laboratory analyses for QA/QC purposes	384	100-300
6) Water Quality Sample Analyses	# of ammonia, coliform (total and fecal), enterococcus, and/or sulfide analyses performed for the CMSA member agencies (SSOs, etc.)	117	as-needed
7) Pollution Prevention Inspections	Inspections of industrial and commercial businesses in the Agency's pretreatment and pollution prevention programs and Novato Sanitary District's Mercury Reduction Program – 255 businesses regulated	111	variable
8) FOG Program Inspections	Inspections of food service establishments (FSEs) in the Almonte, TCSD, SD2, RVSD, SRSD, and LGVSD service areas – approx. 316 FSEs are regulated and 63 FSEs have waivers.	8	20 – 50
9) Permits Issued/Renewed	Permits issued for the pretreatment, pollution prevention, and FOG source control programs, and for groundwater discharge	4	variable

Table IV- PUBLIC OUTREACH

Metric	Definition	Measurement	Target/Goal
1) Public Education Events	Attendance at public education outreach events; # of booth visitors; *(YTD)*	1,286; *(4,138)*	3,000/year
2) School Events	Participation or sponsorship in school outreach events; attendees; *(YTD)*	530; *(2,638)*	variable
3) Agency Tours	Tours given to students and the public; # of people, *(YTD)*	5; *(233)*	variable
4) Odor Notifications	Number of odor alerts posted to the Agency website	2	1-10
5) Odor Complaints	Number of odor complaints received from the public	0	0

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Kenneth Spray, Administrative Services Manager

Approved: Jason Dow, General Manager

Subject: FY20 First Quarter Budget Status Report

Recommendation: Review and accept the First Quarter Budget Status Report for the FY20.

Discussion: We are pleased to present the budget status report for the first quarter ended September 30, 2019. Tables for revenues by source, expenses by function, and CIP by major classes of capital projects are reflected below with analytical information for each.

Highlights for the first quarter ended September 30, 2019 are as follows:

- Revenues are tracking well in total at 39.2% for the first quarter.
- Sewer service charges for the first quarter are at 25% as billed.
- Debt service contributions are at approximately 75% as of the first quarter, which includes the annual debt principal as well as the first interest installment.
- Debt service contributions include 25% revenue coverage required by bond indenture provisions and used for capital program funding.
- Other non-operating revenues include the final state revolving fund loan reimbursement in connection with the Renewable Energy Expansion Project.
- Total expenses incurred are at approximately 30% of budget.
- Employee benefits and insurance are accounted for in the Administration department.

Description	FY20 Budget	YTD	Amount Remaining	Percent Collected /Spent
Total Revenues	$ 19,139,161	$ 7,499,355	$ 11,608,934	39.2%
Total Expenses	$ 12,673,100	$ 3,830,679	$ 8,842,421	30.2%
Total Debt Service	$ 3,967,331	$ 3,199,128	$ 768,203	80.6%
Total Capital	$ 3,900,626	$ 1,122,992	$ 2,777,634	28.8%

Revenues by Source

Description	FY20 Budget	YTD Actual	Open Invoices	Total Revenue	Budget Remaining	Actual %	Total %
Sewer Service Charges	12,015,001	3,003,750	-	3,003,750	9,011,251	25.0%	25.0%
Contributions for Debt Service	4,959,162	3,722,980	63,605	3,786,585	1,172,577	75.1%	76.4%
Contract Services	1,322,478	100,046	258,020	358,066	964,412	7.6%	27.1%
Program Revenues	107,348	30,177	11,908	42,085	65,263	28.1%	39.2%
Haulers, Permits & Inspection Fees	274,550	37,421	42,712	80,133	194,417	13.6%	29.2%
Other Non-Operating Revenues	20,000	106,758	14,732	121,490	(101,490)	533.8%	607.5%
Interest Income	409,750	107,246	-	107,246	302,504	26.2%	26.2%
Capacity Charges	30,872	-	-	-	-	0.0%	0.0%
TOTAL REVENUE	**19,139,161**	**7,108,378**	**390,977**	**7,499,355**	**11,608,934**	**37.1%**	**39.2%**

Sewer Service Charges: Revenues are billed to JPA members on a quarterly basis and are due upon receipt. Sewer service charges are billed in advance at the beginning of each quarter for operating and capital funding. Sewer service charges are the largest revenue source.

Contributions for Debt Service: Debt service contributions are billed as each debt service payment is needed and includes payment for debt service coverage.

Contract Services and Program Revenues: These revenues have separate tables and analytical information for each. See below.

Haulers, Permits, and Inspection Fees: This revenue type represents septic receiving facility use charges, organic waste disposal tipping fees, industrial waste discharge permit fees, reimbursement of costs for source control program permits, and other services.

Other Non-Operating Revenues: Other non-operating revenues are budgeted at $20K as a placeholder for miscellaneous and infrequent items. The Agency has received the final payment from a SRF Loan for the Renewable Energy Expansion Program.

Interest Income: CAMP posts interest monthly currently at 2.22% and LAIF posts interest quarterly currently at 2.341% of applicable account balances.

Capacity Charges: Budgeted capacity charges are a placeholder for five residential new connections from members. Actual capacity charges received represent both new connections and additional fixture units from exiting connections. There were no capacity charges received for the first quarter.

Contract Services Revenues

Contract Services	FY20 Budget	YTD Actual	Open Invoices	Total Revenue	Actual Expenses	Invoice Frequency
SQSP Wastewater Services	601,545	67,917	135,833	203,750	203,750	Monthly
SQ Village Wastewater Services	71,686	787	1,540	2,327	1,906	Monthly
SQSP Pump Station Maintenance	115,921	31,342	-	31,342	28,024	Monthly
SD2 Pump Stations	446,475	-	101,656	101,656	84,153	Monthly
LGVSD - FOG & Pollution Prevention	19,565	-	8,643	8,643	7,408	Quarterly
RVSD – FOG	23,100	-	2,796	2,796	2,544	Quarterly
SRSD – FOG	30,900	-	5,045	5,045	4,594	Quarterly
TCSD – FOG	1,584	-	522	522	429	Quarterly
SD2 – FOG	7,640	-	1,676	1,676	1,528	Quarterly
Almonte SD-FOG	630	-	308	308	253	Quarterly
NSD - Dental Amalgam	3,432	-	-	-	-	Quarterly
TOTAL CONTRACT SERVICES REVENUE	**1,322,478**	**100,046**	**258,020**	**358,066**	**334,588**	

Contract Services: The Agency provides services to sanitary districts and other government entities for wastewater treatment, collection system operations and maintenance, pump station operation, and source control program administrative services. Contract service revenues in total are at 27% of budget consistent with amounts for the first quarter. The Agency contracts with San Quentin State Prison (SQSP) for wastewater treatment services and pump station operation & maintenance, to San Quentin Village (SQV) for collection system operation & maintenance, and to SD2 for pump station and force main operation & maintenance. FOG inspections have resumed regularly from a prior downturn resulting in the FOG revenues reported above at 22% for the first quarter. Inspections for all FOG customers are scheduled prospectively.

Contract service revenues are billed to participating entities for the direct costs of materials, total compensation for employee staff time, and overhead. Overhead rates are in accordance with contract provisions and range from 10%-22% depending upon the contract. Wastewater treatment services for SQSP are based on flow and strength as a proportion of the total cost of CMSA operation plus capital, and the SQSP pump station contract adjusts annually by CPI.

Program Revenues

Program Name	FY20 Budget	YTD Actual	Open Invoices	Total Revenue	Actual Expenses	Invoice Frequency
Revenue for Health & Safety Program	72,100	20,522	11,908	32,430	31,037	Quarterly
Countywide Education Program	35,248	9,655	-	9,655	8,396	Recognized quarterly
TOTAL PROGRAM REVENUE	**107,348**	**30,177**	**11,908**	**42,085**	**39,433**	

Program Revenues: The Agency administers joint venture programs for Health & Safety (H&S) with the Novato Sanitary District (NSD), and a Countywide Education Program (CWP) with five participating wastewater agencies in Marin County. Costs of the H&S program are allocated between the Agency and NSD for salary and benefits, incidental program expenses, and outside safety training costs. The Agency administratively manages the H&S program and charges an administrative fee to NSD, accordingly. Revenue for the H&S program is high at 45% due to the second quarter billing being issued in September.

CWP participants plan their programs as a group and pay their annual share of program costs based upon percentages established in the Cooperative Public Education Program agreement at the beginning of each fiscal year, and are given credit at the end of each fiscal year for unexpended funds. For the CWP, the Agency recognizes revenue for reimbursed expenditures plus an administrative fee. Special projects of the CWP can occur at any time during the year, and material purchases generally occur in the spring and not equally throughout the year

Expenses by Function

Description	FY20 Budget	Budget Transfers	Adjusted FY20 Budget	Budget (25%)	Actual Expenses	Budget Remaining	% Spent
Salaries & Wages	5,797,000	-	5,797,000	1,449,250	1,266,261	4,530,739	21.8%
Benefits	2,872,800	-	2,872,800	718,200	1,152,805	1,719,995	40.1%
Chemicals & Fuel	1,289,800	-	1,289,800	322,450	383,413	906,387	29.7%
Biosolids Management	418,500	-	418,500	104,625	84,688	333,812	20.2%
Permit Testing & Monitoring	143,800	-	143,800	35,950	28,736	115,064	20.0%
Repairs & Maintenance	364,700	-	364,700	91,175	73,990	290,710	20.3%
Insurance	384,500	-	384,500	96,125	447,805	(63,305)	116.5 %
Utilities	486,600	-	486,600	121,650	242,732	243,868	49.9%
General & Administration	915,400	-	915,400	228,850	150,250	765,150	16.4%
TOTAL EXPENSES	**12,673,100**	**-**	**12,673,100**	**3,168,275**	**3,830,679**	**8,842,421**	**30.2%**

Expenses by Department

Description	FY20 Budget	Budget Transfers	Adjusted FY20 Budget	Budget (25%)	Actual Expenses	Budget Remaining	% Spent
Administration	5,098,400	-	5,098,400	1,274,600	1,997,385	3,101,015	39.2%
Maintenance	2,066,900	-	2,066,900	516,72	454,228	1,612,672	22.0%
Operations	3,525,000	-	3,525,000	881,250	1,005,643	2,519,357	28.5%
Technical Services	1,982,800	-	1,982,800	495,700	373,423	1,609,377	18.8%
TOTAL EXPENSES	**12,673,100**	**-**	**12,673,100**	**3,168,275**	**3,830,679**	**8,842,421**	**30.2%**

Salary & Wages and Benefits: Salary expense includes six of 26 payrolls and is 22% spent at first quarter due to savings from unfilled positions pending open recruitments. Benefit expenses were higher at approximately 40% due to a lump sum amount paid for the CalPERS unfunded liability employer cost in the first quarter of the year that will balance out as of fiscal year end. The lump sum payment option saved the Agency approximately $26K when compared to the monthly remittance option. All other benefit expenses without the lump sum payment amount to 20% spent at first quarter.

General Purchasing Information: Expenses and capital disbursements follow purchasing procedures established by policy to ensure protection of public assets, fairness in the purchasing process, and transparency to the public. Purchases are recognized as expenses or additions to capital projects when the goods are received or the services performed.

General & Administration (G&A): Expenditures are tracking well at approximately 16% of budget. The G&A expense category includes professional services (legal, financial, regulatory, etc.); operating permits; memberships in local, state, and national wastewater organizations; employee certifications, conferences, and training; and telephone, internet, and office expenses.

Insurance: Insurance is at 116% spent for the first quarter reflecting premiums that are largely paid at the beginning of the fiscal year. General liability is the only premium that is paid on a calendar year basis. The below schedule provides the payment status for insurance coverage. Insurance premiums are paid when policies are renewed and the expenses are prorated between fiscal years based on the policy's coverage time period. Workers' Compensation insurance is high due to an $86K retroactive adjustment that was made for two long-term claims liabilities for previous employees. The base premium is consistent with budget at $260K.

Description	FY20 Premium	Status
Property Insurance	75,622	FY20 paid in full
General Liability & Auto	26,142	FY20 July-Sept prepaid FY19
Pollution Liability	-	
Employee/Commissioners Bond	146	Pending receipt of bill
Commercial Crime Insurance	1,425	FY20 paid in full
Workers' Compensation	344,470	FY20 paid in full

Repairs & Maintenance: Expenditures for repairs and maintenance are at approximately 20% of the year's budget. Expenditures alone do not necessarily reflect the quality or quantity of repair and maintenance activities taking place. For example, periods of high expenditures reflect the purchasing of materials and supplies to prepare for upcoming planned maintenance, while periods of low expenditures can relate to staff performing planned maintenance utilizing available parts inventory. Parts inventory is extensive at approximately $1.8M total value.

Chemicals & Fuel: Chemicals and fuel are tracking close to expected budget at 30%. Chemical usage varies throughout the year depending upon differing weather conditions. Chemical deliveries received for the first quarter include 19 for ferric and nitrate, 11 for hydrogen peroxide and sodium bisulfite, and 11 for sodium hypochlorite. Fuel is used generally equally throughout the year for vehicles.

Chemicals	Expenditures as % of Budget	Comments
Ferric Chloride	23%	4 deliveries through September 2019
Polymer-Cationic	34%	1 delivery through July 2019
Odor Control	35%	2 deliveries through August 2019
Nitrate	67%	15 deliveries through September 2019
Hydrogen Peroxide	23%	6 deliveries through September 2019
Sodium Hypochlorite	19%	11 deliveries through September 2019
Sodium Bisulfite	12%	5 deliveries through September 2019

Biosolids Management: Expenditures were at 20% of budget for the first quarter. Management expenses vary, and are primarily dependent upon seasonal weather-related circumstances: (1) land application during the months of May to November results in lower reuse tipping fee costs when compared to alternate daily cover at the Redwood Landfill, and (2) the volume for disposal is lower during the warmer weather spring and summer months.

Permit Testing & Monitoring: Expenditures are tracking near budget at 20% for NPDES permit sampling and other contract laboratory analyses costs. Expenditures for this category vary; sampling costs can range widely from $150 to $3,000 each based on the type and frequency of analyses performed. Billing delays often occur during the wet weather season when it takes longer to receive test analyses due to a work back-log at the contracting labs. When the outside laboratory does not provide test analyses in the timeframe specified in the contract, a fee reduction is received for the tests performed.

Utilities: Expenditures for utilities are at approximately 50% of budget for electricity purchased from PG&E due to the failure of the cogeneration engine. The engine failed in May 2019 and went back online in September 2019. The Agency exclusively purchased electricity from PG&E during this time. Thanks to the diligent efforts of Operations, Maintenance, and Technical Services staff, a refurbished engine was identified, shipped here, installed, and began operation in a relatively short period of time. The cogeneration engine replacement project is complete and once again the Agency operates using green cogenerated electricity versus electricity purchased.

Debt Service Expenditure

Description	FY20 Budget	YTD Actual Spent	Amount Remaining	% Spent	Invoice For Debt Collection
Principal	2,395,000	2,395,000	-	100.0%	JPA: Annual SQSP: Monthly
Interest	1,572,331	804,128	768,203	51.1%	JPA: Biannual SQSP: Monthly
TOTAL DEBT SERVICE	**4,959,164**	**3,199,128**	**768,203**	**80.6%**	

The annual debt service payment for principal and interest shown above represents the standard scheduled payment for the 2015 refunding revenue bonds. The annual amount is paid in two installments consisting of principal and interest due September 1 of each year, and interest-only due March 1 of each year. Debt service amounts are invoiced to the JPA members approximately one month in advance of when the debt service payments are due. San Quentin Prison is invoiced monthly for its proportionate share.

Capital Improvement Program

Description	FY20 Budget	Budget Transfers	Adjusted FY20 Budget	Actual	Budget Remaining	% Spent
Salaries & Benefits	189,200	-	189,200	23,757	165,443	12.6%
Facility Improvements	477,600	-	477,600	274,158	203,442	57.4%
General Equipment	736,000	-	736,000	42,270	693,730	5.7%
Liquids Treatment Equipment & Systems	1,349,400	-	1,349,400	437,843	911,557	32.4%
Solids Treatment & Energy Generation Equipment & Systems	1,148,426	-	1,148,426	344,964	803,462	30.0%
TOTAL	**3,900,626**	**-**	**3,900,626**	**1,122,992**	**2,777,634**	**28.8%**

Total capital program expenditures amount to approximately $1.1M as of the first quarter. There are payments made for numerous projects with each of the capital improvement program categories of (1) Facility Improvements, (2) General Equipment, (3) Liquids, Treatment Equipment and Systems, and (4) Solids Treatment and Energy Generation Equipment and Systems. Specific projects and their status can be viewed on the attached Monthly Budget to Actual Project Report. Salaries and benefits for staff are generally charged at year-end and allocated between certain projects.

Attachment:

- Monthly Budget-to-Actual CIP Project Report

Central Marin Sanitation Agency
Capital Improvement Program

Monthly Budget to Actual Project Report
For Period 03 Ending September 30, 2019 25% of FY 2019-20

Project Title	PM	Annual Budget Amount	Annual Budget (w/Transfers)	YTD Project Payments	Annual (Over) Under	Annual % Spent	Total Contract(s) Remaining	Comments: Reflecting Project Status as of November 7, 2019 for bills paid through September 30th.
Facility Improvements								
Industrial Coat/Concrete ReHab	**TSM**	**209,100**	**209,100**	**-**	**209,100**	**0.00%**	**37,555**	**A maintenance contract was issued to a contractor to repair the coating on the CCTs 5-6 pipes, valves, and gates as well as seal the leaking ceiling in Gallery A. The work was completed by the end of October.**
Outfall Inspection & Repairs	TSM	80,000	80,000	-	80,000	0.00%	42,850	A diver survey of the outfall diffusers was performed in June and a maintenance contract was issued to a Tidal Marin to install riser extensions and new numbering tags for the outfall. The work was completed by the end of October.
Facility Improvements	TSM	35,000	35,000	-	35,000	0.00%	-	No work planned for this month.
Facility Paving/Site Work TSM	TSM	45,000	45,000	3,477	41,523	7.73%	13	Minor stripping was added in the road and parking lot areas near the main gate.
Hillside Slope Stabilization	**TSM**	**25,000**	**25,000**	**270,681**	**(245,681)**	**1082.73%**	**49,753**	The Board accepted the project as substantially complete at the October meeting and the final punch list work was completed on 11/5, and the FEMA reimbursement application is being submitted. A budget transfer will need to be completed after the FEMA reimbursement process is completed.
Facility Roofs Rehab	**TSM**	**68,500**	**68,500**	**-**	**68,500**	**0.00%**	**5,000**	Staff is evaluating options to permanently repair the skylight in the Administration Building. An inspection of the skylight/roof damaged areas was completed and the water intrusion was stopped with a temporary fix for the next rainy season.
SHB Elevator Control Replacmnt	**TSM**	**15,000**	**15,000**	**-**	**15,000**	**0.00%**	-	No work planned for this month.
Subtotal		**$ 477,600**	**$ 477,600**	**$ 274,158**	**$ 203,442**	**57.40%**	**$ 135,170**	
General Equipment								
Process Control	ISA	44,600	44,600	3,405	41,195	7.63%	-	Modbus gateways were installed for secondary system valves, control related equipment for new SBS pump purchased and installed.
Security/Fire Systems	TSM/ISA	10,500	10,500	-	10,500	0.00%	1,425	The quarterly and annual fire sprinkler system inspection was completed in October.
IT Hrdwr/Communication Equip	ISA	209,900	209,900	5,830	204,070	2.78%	-	Annex network connectivity equipment installed, used network inventory replenished, parts received to consolidate Admin network rack, portable radios received for replacements of broken units and new staff.
Agency Vehicle Replacement	MS	40,000	40,000	-	40,000	0.00%	-	Working with vendors to secure quotes for two vehicles, one to replace an aging fleet vehicle and the other will be a dedicated SQ pump station vehicle.
Laboratory Equipment	RCM	108,000	108,000	2,177	105,823	2.02%	-	In-line temperature monitors for all equipment in laboratory required under ELAP have been installed and invoice is being processed. The bioassay room relocation work is in the planning stage and will be completed in early 2020.
Electrical Equipment	MS	120,000	120,000	6,306	113,694	5.26%	-	Quotes for five Hypochlorite storage tanks isolation valves and actuators have been received, and staff is now working to procure these items as there is a long lead time from the manufacturing facility.
Plant Lighting	MS	14,000	14,000	1,988	12,012	14.20%	-	A majority of the FY20 purchases have been received into inventory and staff will schedule installations in the near future.
Process Instrumentation	MS	79,000	79,000	20,629	58,371	26.11%	-	A replacement secondary flow meter has been procured and installed.
Electrical Distribution Rehab	**MS**	**110,000**	**110,000**	**1,934**	**108,066**	**1.76%**	**42,697**	Lee & Ro was hired to assist with completing a condition assessment of the main plant switchgear and the planning work for this effort is underway.
Subtotal		**$ 736,000**	**$ 736,000**	**$ 42,270**	**$ 693,730**	**5.74%**	**$ 44,122**	
Liquids Treatment Equipment and Systems								
Plant Pumps	MS	80,000	80,000	158	79,842	0.20%	-	Currently working with vendors and suppliers to obtain quotes for three Carrier Water pumps.
Chemical Pumps	MS	77,600	77,600	1,057	76,543	1.36%	-	In the selection phase of this maintenance project. Staff is looking at the various metering pump options for this particular application, and soon will select and procure new pumps.
Gates Rehabilitation	**MS**	**474,500**	**474,500**	**418,505**	**55,995**	**88.20%**	**-**	Contractor replaced the primary clarifier gate hydraulic system with motor electric operators. The project waas accepted as complete at the October Board meeting.
Headworks Equipment	**MS**	**28,900**	**28,900**	**874**	**28,026**	**3.02%**	**-**	Miscellaneous parts ordered for bar screens .
Odor Control System Improvemnt	**TSM**	**20,000**	**20,000**	**-**	**20,000**	**0.00%**	**-**	No work planned for this month.
Process Tank Maintenance	MS	60,000	60,000	253	59,747	0.42%	-	Staff is working to procure materials needed for the repair and replacement of reclaimed water piping.
Primary Clarifier Rehab	**TSM/MS**	**35,000**	**35,000**	**11,098**	**23,902**	**31.71%**	**-**	The gear boxes for five primary clarifier scum skimmers were received, installed, and tested.

Monthly Budget to Actual Project Report
For Period 03 Ending September 30, 2019 25% of FY 2019-20

Project Title	PM	Annual Budget Amount	Annual Budget (w/Transfers)	YTD Project Payments	Annual (Over) Under	Annual % Spent	Total Contract(s) Remaining	Comments: Reflecting Project Status as of November 7, 2019 for bills paid through September 30th.
Secondary Clarifiers Rehab	**MS**	**185,000**	**185,000**	**-**	**185,000**	**0.00%**	**-**	The design engineer's scope is being finalized and a professional services agreement will be executed in November.
Aeration System Rehabilitation	TPM	20,000	20,000	4,664	15,336	23.32%	-	This project is complete, the core on the no. 2 blower has been rehabilitated and reinstalled.
Process Pipe Inspect'n/Repairs	**TSM**	**220,000**	**220,000**	**-**	**220,000**	**0.00%**	**-**	Staff is identifying the critical pipes requiring inspection and repairs. Work may be postponed pending the new engineering recruitment.
Chemical Tanks	MS	65,100	65,100	-	65,100	0.00%	-	No activity to date. Staff is planning to procure and replace one Nitrate solution and one Hypochlorite bulk chemical storage tank.
Piping-Valves-Operators	MS	58,300	58,300	1,234	57,066	2.12%	-	A majority of the process piping expansion joints have been received. Staff will be scheduling installations in the near future.
Influent Flow Meter Replacemnt	TSM	25,000	25,000	-	25,000	0.00%	-	No work planned for this month pending the new engineering recruitment.
Subtotal		**$ 1,349,400**	**$ 1,349,400**	**$ 437,843**	**$ 911,557**	**32.45%**	**$ -**	
<u>Solids Treatment and Energy Generation Equipment and Systems</u>								
Cogeneration Maintenance	**MS**	**400,000**	**400,000**	**150,661**	**249,339**	**37.67%**	**60,492**	The cogeneration engine was installed and coupled to its generator, and is currently producing green power. This project is complete.
New Cogeneration System	**TSM**	**598,226**	**598,226**	**154,386**	**443,840**	**25.81%**	**419,721**	Carollo is continuing with the final design. Jenbacher has been selected, and the cogen system prepurchase agreement terms are being negotiated.
Hot Water Systems	MS	29,000	29,000	-	29,000	0.00%	-	No activity to date, soon technicial services will assist with developing the scope of work for this project.
Boilers & Gas Processing Equip	MS	13,000	13,000	-	13,000	0.00%	-	No activity.
Sludge Recirc Pump Grinders	MS	19,400	19,400	-	19,400	0.00%	-	This project is complete, a new grinder cartridge has been installed.
Biosolids Hoppers-Maintenance	MS	9,300	9,300	-	9,300	0.00%	-	No activity to date.
Organic Waste Facility Equip	MS	54,500	54,500	31,678	22,822	58.12%	-	Mixing pumps have been received and one of two units has been installed and is operating as normal.
PG&E Inter-Connection Agrmnt	TSM	25,000	25,000	8,239	16,761	32.96%	59,474	Staff received the final deliverable from Mike Brown Engineers (CEC Renewable Certification). Staff executed a new contract with MBE to assist with the PG&E Interconnection Agreement Modifications for the new engine. A budget transfer will need to be completed to cover this account depending on the final cost of MBE's work.
Subtotal		**$ 1,148,426**	**$ 1,148,426**	**$ 344,964**	**$ 803,462**	**30.04%**	**$ 539,687**	
TOTAL CIP COST (excluding staff costs)		**$ 3,711,426**	**$ 3,711,426**	**1,099,235**	**$ 2,612,191**	**29.62%**	**$ 718,979**	
CMSA CIP STAFF COSTS		189,200	189,200	23,757	165,443	**12.56%**		
ANNUAL TOTAL		**$ 3,900,626**	**$ 3,900,626**	**$ 1,122,992**	**$ 2,777,634**	**28.79%**	**$ 718,979**	

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Kenneth Spray, Administrative Services Manager
Jason Dow, General Manager

Subject: FY19 Capacity Charge Schedule

Recommendation: Approve the FY19 Capacity Charge Schedule.

Discussion: CMSA and the JPA member agencies charge a fee to property owners for new connections or expansion of existing connections to the wastewater system. The intent of the fee is to ensure that all users pay their fair share of the wastewater collection and treatment system costs, and is based on the idea that wastewater services and capacity are available on a first-come-first-serve basis. Each member agency charges a collection system connection fee and CMSA charges a separate fee for treatment plant capacity. The total fee is collected by the member agencies, with the capacity charge portion of the fee being forwarded to CMSA.

In FY19, the CMSA residential capacity charge was $6,094.28, commercial facilities was $380.89 per fixture unit, and high strength fixtures were $891.29 per unit. The Agency received $671,769 in capacity charges from its member agencies. There were a total of 75 new residential connections, 52 at a discount rate and 23 at standard rate, 756 additional fixtures in the service area, and 190 high strength fixtures.

The California Government Code requires CMSA to disclose the amount of capacity charges collected within 180 days after each fiscal year end and to identify the public improvements or projects that were funded by the capacity charges. The FY19 Schedule of Capacity Charges is attached for Board review and approval.

Attachment:
- FY19 Capacity Charge Schedule

Central Marin Sanitation Agency
Schedule of Capacity Charges
Fiscal Year Ended June 30, 2019

The California Government Code requires certain disclosures regarding capacity charges. The Code requires separate accounting of capacity charges and the application of interest to outstanding balances. Central Marin Sanitation Agency's practice is to utilize capacity charges received on a first-in-first-out basis to finance FY19 capital program initiatives. Accordingly, no interest was posted to capacity charges and there was no outstanding balance of capacity charges at fiscal year-end.

Other required disclosures for the fiscal year ended June 30, 2019 are as follows:

- Total amount of capacity charges collected $671,769

- Listing of FY19 Maintenance and Capital Projects for which capacity charges were applied:

○ Industrial Coating and Concrete Rehabilitation	$220,364
○ Agency Facilities Master Plan	25,505
○ Facility Paving and Sitework	290,128
○ Pumps and Wastewater Treatment Equipment	135,772
	$671,769

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager

Subject: **Revised Safety Incentive Program**

Recommendation: Approve the revised Safety Incentive Program, and provide direction to the General Manager, as appropriate.

Discussion: Safety is a core value at CMSA, and one component of our sound safety culture is the Safety Incentive Program (Program) that was designed to acknowledge employee contributions by recognizing their safety communications, hazard identification, and training. Since its inception, the Program has been periodically revised to enhance its overall effectiveness and increase employee participation. The Agency's Safety Officer, in collaboration with the Safety Committee, completed a review of the current Program and proposes the following revisions that are supported by senior management.

1) Incorporating Wellness criteria into the Program in support of the Agency's FY20 Business Plan objective to enhance employee work culture by expanding the Agency Wellness Program.

2) Change the Program period from annually to every six months, with commensurate reductions in the six-month award point totals and monetary award amounts.

3) The Safety Officer is not eligible to participate.

4) Create a lower award tier to motivate some employees to participate.

Background: In July 2014, the Board adopted the Program to replace the Agency's long standing Safety Holiday Benefit, where all employees received 8-hours of paid time off if there were no reportable lost time incidents during a six month period. A primary reason for the Program adoption was that Federal OSHA stated using lost-time criteria could dissuade employees from reporting injuries, is discriminatory, and violates the OSHA Act. Elimination of the Safety Holiday Benefit was negotiated with Agency's union and staff collaborated with the Board's Finance Committee to design the original Program.

Attachment: Revised Safety Incentive Program

POLICY/PROCEDURE #:	**93**
SECTION:	**ADMINISTRATIVE – SAFETY AND SECURITY**
SUBJECT:	**Safety and Wellness Incentive Program**
DATE:	**11/12/2019** *(Board Adopted)*

PURPOSE

To enhance the overall Safety and Wellness Programs by encouraging employee's active participation. The Incentive Program strives to achieve this by acknowledging employee contributions in several of the key aspects of a sound safety and wellness culture such as hazard identification, safety communication, safety and wellness training, and personal wellness practices.

GOALS

- Prompt identification and correction of safety hazards;
- Increased leadership and participation in safety training;
- Consistent demonstration of safe work practices;
- Improved personal health and well-being; and
- Zero injuries.

AWARD CRITERIA

The Safety Incentive Program will recognize employee safety program contributions towards the stated goals by awarding points for participation in specific safety activities as identified in the Safety and Wellness Award Criteria (Table #2) below. The point criteria will be reviewed and revised as appropriate to ensure continued emphasis on the appropriate components of the Safety and Wellness Program.

PROCEDURE

I. The Safety and Wellness Incentive Program functions on a 6-month basis (July 1 through December 31, and January 1 through June 30) with awards provided to employees at the end of each 6-month period.

II. Points are earned and accumulated on an individual basis and expire at the end of each period.

III. All employees (except temporary, contract, and the Safety Officer) are eligible to earn points toward awards, providing they lead at least one qualifying department tailgate during the period.

IV. For each 6-month period, eligible employees will have the opportunity to earn monetary rewards for participation as shown in Table #1 below.

Table #1 – Six-Month Award Levels

Award Level	Total Points	Total Cash Award
Tier 1	75	$ 25
Tier 2	100	$ 50
Tier 3	125	$ 75
Tier 4	150	$150
Tier 5	225	$225

V. Points will be awarded in the following four categories:

A. Safety Hazard Alert or Near Miss

A valid hazard alert or near miss is a situation that poses a probable unacceptable risk of substantial employee injury for which we may control outcomes. It must be associated with hazards not previously identified or currently being addressed. Additionally, the identified hazard or near miss must not be associated with an employee violation of a policy or procedure.

1) A Safety Hazard Alert or Near Miss is to be submitted by the employee to the Safety Officer using the Injury and Illness Prevention Program (IIPP) Health and Safety Communication Form, found on the shared drive.

2) The Safety Officer then evaluates, logs, scans, and forwards the Health and Safety form to the Safety Coordinator for action or further evaluation. The Safety Officer retains the authority to act immediately on any severe hazards identified.

3) A copy of the form, with the evaluation, recommended action, and the status indicated (accepted or denied) is then forwarded to the appropriate party for completion.

4) When an action item is completed or a work order has been written for completion, it shall be so designated on the form and the form forwarded back to the Safety Officer for final scanning and filing as per the IIPP, with a copy returned to the submitting employee.

5) Employees have the option to appeal the “accept/deny” decision to the General Manager.

B. Safety Hazard Alert/Near Miss with a Suggested Solution

A suggested safety solution to a valid safety hazard/near miss represents a substantial improvement to a genuine risk or problem whether actually implemented or not. It must be a solution not previously identified. A valid safety hazard alert/near miss and its suggested solution receive points for both.

Submittal of the hazard and solution can utilize the same process and forms as noted above in item A.

C. Leading Tailgates

Leading a tailgate session encourages employees to actively participate in preparing and conducting qualified departmental tailgates. They are conducted and documented at the department level.

1) To qualify, a tailgate session must be safety-related and provide training, training reminders, discuss a hazard, or review a safety procedure.

2) The material presented must be accurately conveyed and involve active discussion or a presentation.

3) Tailgate sessions must be properly documented by the department including attendance and the details of the information presented using the IIPP Health and Safety Meeting form, found on the shared drive.

4) The Tailgate Leader completes the IIPP Health and Safety Meeting form, and the attending manager signs the form certifying the information and attendance as being correct.

5) The completed Health and Safety Meeting form is then submitted to the Safety Officer for logging, scanning, and filing.

D. Outside Safety Training Participation

Outside Safety Training Participation involves successful completion of seminars or webinars, or conference attendance provided by outside training organizations such as CWEA or CSRMA. These trainings are above and beyond those required for the general employee population.

1) To qualify for incentive award points, the activity must be safety-related and pre-approved by the Safety Officer as a qualifying safety training activity. The employee request shall include an agenda, program, or outline of the event.

2) If there is a cost involved, the employee seeking outside training must complete the appropriate paperwork and obtain the department manager's authorization.

3) Upon successful completion of the outside training event, the employee submits the certificate, receipt, or evidence of successful completion to the Safety Officer for logging, scanning, and filing.

4) For webinars where multiple employees may participate simultaneously, such as in the conference room, an attendance sheet (certified by a manager) and certificate, receipt, or evidence of completion shall be acceptable.

E. Attend Wellness Training/Wellness Webinar

Wellness training participation involves successful completion of seminars or webinars, or conference attendance provided by an outside training organization such as CSRMA, the Employee Assistance Program administrator, or another entity, as approved by CMSA (e.g., personal well-being, health-related or nutrition course).

1) To qualify for incentive award points, the activity must be wellness-related and approved by the Safety Officer as a qualifying wellness training activity. Pre-approval or post-approval may be obtained by the employee providing to the Safety Officer a course agenda, web link or pamphlet describing the event.

2) If the activity will be performed during work hours, (such as completion of a wellness-related webinar available on Target Solutions) the employee seeking the outside training must obtain his or her supervisor's advance authorization, and provide proof of that authorization to the Safety Officer.

3) Upon successful completion of the outside training event, the employee submits the certificate, receipt, or evidence of successful completion to the Safety Officer for logging, scanning, and filing.

4) For webinars where multiple employees may participate simultaneously, such as in the conference room, an attendance sheet (certified by a manager) and certificate, receipt, or evidence of completion shall be acceptable.

F. Annual Physical, Dental Checkup or Vaccination

Participation in this incentive requires getting preventive care medical checks or vaccinations and bringing back proof of completion. Incentive points will be awarded, up to a maximum one event for each 6-month period, for completion of one or more of the following:

1) One well-visit physical per year, as performed by the employee's personal physician. Proof of the physician visit must be provided to the Agency.

2) One dental checkup per year, as performed by the employee's personal dentist. Proof of the dental visit must be provided to the Agency.

3) One vaccination per year by the employee. Proof of the vaccination visit must be provided to the Agency.

VI. Specific activities and their maximum 6-month point values are identified on Table #2 below.

Table #2: Safety Award Criteria

Action / Activity	Points Awarded	Maximum Available Points Per Period	Validated or Certified by	Tracked by
Valid Safety Hazard Alert or Near-Miss	50/Each	100	Safety Officer	Safety Committee
Valid Safety Hazard Alert with Suggested Solution	100/Each	200	Safety Officer	Safety Committee
Lead Qualifying Safety Tailgate	50/Each	100	Dept Manager	Safety Officer
Attend Outside Safety Training/Safety Webinar	50/Each	100	Safety Officer	Safety Officer
Attend Wellness Training/Wellness Webinar	25/Each	25	Safety Officer	Safety Officer
Get Annual Physical, Annual Dental Checkup, or Vaccination	25/Each	25	Safety Officer	Safety Officer

VII. Award Tabulation

A. The employee is responsible for submitting the appropriate completed documentation to the Safety Officer for logging within 10 working days of completion of an Action/Activity to be considered for point awards.

B. Within 30 days of the end of the 6-month award period, the Safety Officer shall ensure all Action/Activity point tallies are submitted to the Administrative Assistant for final tabulation and submittal to the General Manager for approval/distribution of awards.

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Kenneth Spray, Administrative Services Manager

Approved: Jason Dow, General Manager

Subject: New Deferred Compensation Plans

Recommendation: Adopt the Resolutions to join the CalPERS Supplemental Income 457 Plan and the Nationwide 401(a) retirement plan, and provide comments or direction to the General Manager, as appropriate.

Summary: In response to employee interest in expanding the Agency's existing deferred compensation plans, staff has identified a CalPERS 457 plan and a Nationwide 401(a) plan as viable investment options for staff. Expanding these deferred compensation alternatives is a FY20 Business Plan initiative, and participating in both carries no cost to the Agency and would benefit employee participants.

Discussion: During the market compensation labor negotiations completed in spring 2019, both represented and unrepresented employee groups requested to enhance the Agency's deferred compensation plans. The initiative to add viable plans was memorialized in Goal 5, Objective 5.2 d of the FY20 Business Plan. Goal 5 of the Plan is to "…attract and retain high quality employees by providing a work environment that motivates staff, fosters professional development, values diversity, and promotes a culture of safety." There are no employer fees of the plans for either enrollment or ongoing participation, and the plans offer increased benefits to participants. The Agency currently has two 457 plans available with ICMA and Nationwide. The proposed CalPERS plan would be the third 457 plan available, and administrative staff anticipates employee participation will decrease over time due to its higher management fees. A number of employees have expressed interest in transferring from ICMA to CalPERS or Nationwide.

Offerings for the CalPERS plan include the CalPERS suite of funds with many target-retirement-date-funds available. Fees vary per fund and are paid from employee accounts on a percentage or per $1,000 basis. CalPERS also offers a self-managed account option, a ROTH option, and a loan provision. The ROTH option provides the opportunity to make contributions on an after-tax basis with no tax on the growth, and plan distributions are not taxed. The maximum annual contribution for 457 with or without ROTH currently is $19,000, and this amount usually increases each calendar year. The CalPERS 457 plan will be available to all employees, and CalPERS offers extensive customer service and online account access.

The 401(a) plan is not readily open to all employees but rather requires a plan amendment to accept new enrollees. Contributions to the plan are on a percentage basis of base wages, currently set at 5%, with the same percentage applying to all plan participants. Once enrolled, contributions to the plan are irrevocable just as the percentage withholding is not changeable except by plan amendment. The 401(a) is a special type of plan that allows contributions in excess of the 457 maximum limit of $19,000. The 401(a) allows an additional $56,000 for a total deferral of $75,000 per year. This plan may not be for everyone, but is for those employees who want to defer more than the 457 limit allows and are willing to accept the rules of the plan. Several employees have interest in this plan. The 401(a) uses the Nationwide suite of funds for investment options. Just as with CalPERS, all plan fees are the responsibility of the employee and are paid directly from the employee's account. Participants can contribute to the standard lineup of funds for passive investing, can opt for a self-directed brokerage account, or can opt for managed account services. Nationwide offers extensive customer service by telephone, website, or interactive voice response.

The plan year for the CalPERS plan and the Nationwide 401(a) plan is on a calendar year basis, and if participation is approved by the Board both will begin January 1, 2020. Per the enrollment materials, plan setup is relatively quick for both plans once the completed documents are submitted. The CalPERS 457 plan and the Nationwide 401(a) plan each require a Board Resolution to adopt that are attached. Once adopted, the General Manager will be the administrator of the plans who may delegate managing the plans to a designee.

Attachments:

1) Resolution No. 340 – Approving Adoption of CalPERS Supplemental Income 457 Plan
2) Resolution No. 341 – Approving Adoption of Nationwide Financial Services, Inc. 401(a) Plan

Note: The above resolutions state that the plan documents are attached, however due to their length, the documents are available at the Agency office for review by the Board and the public.

CMSA Resolution No. 340

RESOLUTION OF CENTRAL MARIN SANITATION AGENCY APPROVING ADOPTION OF CALPERS SUPPLEMENTAL INCOME 457 PLAN

WHEREAS, Central Marin Sanitation Agency (CMSA) desires to establish an additional deferred compensation plan for the benefit of its employees; and

WHEREAS, the Board of Administration (the "Board") of the California Public Employees' Retirement System ("CalPERS") has established the CalPERS Supplemental Income 457 Plan (the "CalPERS 457 Plan") which may be adopted by a governmental employer the employees of which are public employees; and

WHEREAS, CMSA believes that the CalPERS 457 Plan and the investment options available thereunder will provide valuable benefits to its employees; and

WHEREAS, the Board has appointed Voya Financial® (the Plan Recordkeeper) to perform recordkeeping and administrative services under the CalPERS 457 Plan and to act as the Board's agent in all matters relating to the administration of the CalPERS 457 Plan;

NOW, THEREFORE, BE IT RESOLVED that CMSA adopts the CalPERS 457 Plan for the benefit of its employees and authorizes and directs the General Manager to execute the attached adoption agreement on behalf of CMSA and to provide CalPERS or any successor agent duly appointed by the Board with such information and cooperation as may be needed on an ongoing basis in the administration of the CalPERS 457 Plan. A copy of this resolution, the agreement, and any attachments thereto shall be on file in the office of CMSA.

PASSED AND ADOPTED as a resolution at the meeting of the Central Marin Sanitation Agency Commissioners, County of Marin, State of California, on November 12, 2019, by the following vote.

AYES:

NAYS:

ABSTAIN:

ABSENT:

____

Michael Boorstein, Commission Vice-Chair

ATTEST:

By________________________________

Eli Beckman, Commission Secretary

CMSA Resolution No. 341

RESOLUTION OF CENTRAL MARIN SANITATION AGENCY APPROVING ADOPTION OF NATIONWIDE FINANCIAL SERVICES, INC. GOVERNMENT VOLUME SUBMITTER 401(a) PLAN

WHEREAS, Central Marin Sanitation Agency (CMSA) desires to establish an additional deferred compensation plan for the benefit of its employees; and

WHEREAS, CMSA believes that the Nationwide Financial Services, Inc. Government Volume Submitter 401(a) plan and the investment options available thereunder will provide valuable benefits to its employees;

NOW, THEREFORE, BE IT RESOLVED that that the form of Plan and Trust effective January 1, 2020, presented at this meeting is hereby approved and adopted and that the General Manager is hereby authorized and directed to execute and deliver to the Administrator of the Plan one or more counterparts of the Plan.

The undersigned further certifies that attached hereto are true copies of Central Marin Sanitation Agency 401(a) Plan, and the Summary of Plan Provisions, which are hereby approved and adopted.

PASSED AND ADOPTED as a resolution at the meeting of the Central Marin Sanitation Agency Commissioners, County of Marin, State of California, on November 12, 2019, by the following vote.

AYES:

NAYS:

ABSTAIN:

ABSENT:

____

Michael Boorstein, Commission Vice-Chair

ATTEST:

By______________________________

Eli Beckman, Commission Secretary

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Kenneth Spray, Administrative Services Manager

Approved: Jason Dow, General Manager

Subject: FY19 Audited Financial Statements

Recommendation: Accept the Agency's FY19 audited financial statements, and provide comments or direction to the General Manager, as appropriate.

Summary: The Agency's audited financial statements for the FY19 are enclosed for your review. The report contains four sections, Management's Discussion and Analysis, Basic Financial Statements, Required Supplementary Information, and the Independent Auditor's Report on Internal Control and Compliance with Other Matters. The auditor, Mr. John Cropper of Cropper Accountancy Corporation, will provide a brief overview of the audit report and its contents and answer any questions you may have. The report is also available on the Agency's website at http://www.cmsa.us/finance. The audit received a clean opinion and there were no management letter comments or findings.

Discussion: The annual audit was performed in two phases. The first is preliminary fieldwork with emphasis on internal controls, and the second is known as final work with emphasis on analysis of account balances. Both portions of the audit went well, were smooth, and were timely. The Agency received a clean opinion and there were no findings of items not in conformance with policy or procedures. The audited financial statements will be incorporated into the Agency's Comprehensive Annual Financial Report (CAFR) and it will be submitted to the Government Finance Officers Association (GFOA) for an award. Information from the audited financial statement will be summarized and included in the Popular Annual Financial Report (PAFR), which will also to be submitted to the GFOA for an award.

As described in the Management's Discussion and Analysis (MD&A) section of the audit report, there was an increase in the FY19 net position in the amount of $1,425,428 that arose from an increase in interest income in the amount of $192,137, non-operating revenues increase of $402,155 for State Water Resource Control Board (SWRCB) and FEMA reimbursements, the non-cash provision for pension expense (GASB 68) decreased $730,592 thereby adding income, and we received $671,769 in capacity charges. The current year increase in net position in the amount of $1,425,428 is after non-cash depreciation and amortization of $4,110,575, and reflects a healthy increase for FY19. The balance sheet contains unfunded liabilities for pension and OPEB in the amounts of $11,101,158 and $2,067,791 that are being amortized in accordance with amortization schedules set by CalPERS and CMSA, respectively. Pension and OPEB liabilities management will be discussed in a separate report in December 2019. Footnotes to the financial statements disclose extensive information for pension and OPEB for such things as plan descriptions, actuarial assumptions, description of assets, changes in liability in relation to the measurement data, and additional required supplementary information.

Operating income was up overall in the amount of approximately $555,000 due to a scheduled 3.5% service charge increase, interest income nearly doubling for a second consecutive year, and the previously mentioned reimbursements. Contract maintenance revenues were down due to less flow/strength derived revenue from San Quentin State Prison, and other operating revenues were slightly up due to increased activity with FOG (Fats, Oil, & Grease) program revenues.

Operating expenses were up overall approximately $86,000. Salaries increased 3% for a cost of living adjustment together with PERS pension costs increasing 17% overall (not including the non-cash provision) due primarily to unfunded liability increases. Medical costs increased 4% and workers compensation insurance increased due to long term claim liabilities that have closed. There is consistency for most all other benefit accounts. Repairs and maintenance expenses are up, but entirely for non-cash expenses for inventory changes and studies not capitalized. Utilities are up for increased electricity procurement in connection with the out-of-service cogeneration engine. General and administrative expenses are up mainly for consultant fees for the asset management project. Bond interest expense decreases annually due to the declining principal balance. There were no new claim liabilities arising for FY19.

As of the fiscal year end June 30, 2019, the Agency had a strong cash position in the amount of approximately $17,219,000.

Attachments:
1) Central Marin Sanitation Agency Financial Statements – June 30, 2019
2) FY19 Audit Presentation from Cropper Accountancy

Attachment

CROPPER
an accountancy corporation
CERTIFIED PUBLIC ACCOUNTANTS

CENTRAL MARIN SANITATION AGENCY

FINANCIAL STATEMENTS

JUNE 30, 2019

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CROPPER
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INDEPENDENT AUDITORS' REPORT

To the Board of Commissioners
Central Marin Sanitation Agency
San Rafael, California

We have audited the accompanying financial statements of the business-type activities of Central Marin Sanitation Agency as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Agency's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

District management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities of Central Marin Sanitation Agency, as of June 30, 2019, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (pages 3 – 10), schedule of the District's proportionate share of the net pension liability and Schedule of Contributions (page 40), Schedule of Changes in the Net OPEB Liability and Related Ratios (page 41) and Schedule of OPEB Contributions (page 42) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Central Marin Sanitation Agency's basic financial statements. The introductory section, combining and individual nonmajor fund financial statements, and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplementary information is the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Cropper Accountancy Corporation

CROPPER ACCOUNTANCY CORPORATION
Walnut Creek, California
October 19, 2019

This section of the Agency's Independent Audit Report presents management's discussion and analysis of the Agency's financial performance during the fiscal year ended June 30, 2019. It is intended to serve as an overview to the Agency's required financial statements. Please read it in conjunction with Agency's financial statements and accompanying notes, which follow this section.

ORGANIZATION AND BUSINESS

Central Marin Sanitation Agency (CMSA) is a regional wastewater treatment agency that serves central Marin County residents, businesses, and governmental institutions including San Quentin State Prison (SQSP). The area served by CMSA includes portions of the City of San Rafael, the City of Larkspur, the Towns of Corte Madera, Fairfax, Ross, San Anselmo and the unincorporated areas of Ross Valley. For the Fiscal Year 2018-19 reporting period, the Agency provided services to 48,279 equivalent dwelling units (EDUs) with an approximate population of 105,000 in the service area. An additional 4005 EDUs have been assigned to SQSP.

In the 1970's, central Marin County had four small wastewater treatment plants whose operations were not able to meet the stringent new requirements of the 1972 Clean Water Act. Accordingly, the four local agencies that provided wastewater services, San Rafael Sanitation District (SRSD), Sanitary District No. 1 of Marin County (SD1), Sanitary District No. 2 of Marin County (SD2), and the City of Larkspur, entered into a joint powers agreement (JPA) in October 1979 to create a separate governmental entity, the Central Marin Sanitation Agency (CMSA), to oversee the construction and operation of a regional wastewater treatment facility. The SQSP chose not to join the JPA. The Agency's facilities were constructed at a cost of approximately $84 million and funded by federal (75%) and state (12.5%) clean water grants, as well as local shares (12.5%) from the four local agencies and SQSP.

The CMSA wastewater treatment facility became operational in January 1985. The treated wastewater discharged into central San Francisco Bay as clean effluent consistently meets and exceeds all federal, state, and regional regulatory requirements. Since that time, CMSA has successfully carried out its mission of protecting public health and the environment through the planning, administration, and coordination of wastewater services throughout central Marin County. CMSA also provides other services that benefit its customers and the environment through 1) participating in federal pretreatment and regional pollution prevention programs, 2) serving as the lead agency for administering a comprehensive safety program with another wastewater agency in the county, 3) managing a countywide public educational program, and 4) providing collection system maintenance, source control, and other services under contract to several local agencies in the county.

The Agency's governing body, a Board of Commissioners (Board), comprises individuals appointed by the JPA agencies. San Rafael Sanitation District and Sanitary District No. 1 of Marin County each have two members on the Commission while the City of Larkspur and Sanitary District No. 2 of Marin County each have one member. The six-member Board sets policy for the Agency. The Board appoints the General Manager and Treasurer/Controller who serve at the pleasure of the Board. The General Manager is the chief administrative officer responsible for Agency operations and long-term planning in accordance with the Board's policies and approved budget. The Treasurer/Controller is charged with overall financial responsibility in accordance with established Agency policies.

OVERVIEW OF THE FINANCIAL STATEMENTS

This financial report includes the Management's Discussion and Analysis report, the Independent Auditors' report and the Basic Financial Statements of the Agency. The financial statements also include notes that explain the information in the financial statements in more detail.

BASIC FINANCIAL STATEMENTS

The Financial Statements of the Agency report information about the Agency's accounting methods which is similar to those used by private sector companies. These statements have been prepared and audited using generally acceptable accounting standards. These required statements offer short-term and long-term financial information about the Agency's activities and are often used to assess the financial position and health of the organization.

The Statement of Net Position includes all of the Agency's assets, deferred outflow of resources, liabilities, and deferred inflow of resources, and provides information about the nature and amounts of investments in resources and obligations to creditors. It also provides the basis for evaluating the capital structure of the Agency.

The Statement of Revenues, Expenses and Changes in Net Position accounts for all revenues and expenses during the reporting period. This statement reflects the result of Agency operations over the past year as well as non-operating revenues, expenses, and contributed capital.

The Statement of Cash Flows provides information on the Agency's cash receipts and cash payments during the reporting period. The statement reports cash receipts, cash payments, and net changes in cash resulting from operational, capital, and investing activities. It also identifies the sources and uses for the cash and changes in the cash balances.

FINANCIAL ANALYSIS OF THE AGENCY

One of the most important questions asked about the Agency's finances is whether or not the Agency's overall financial position has improved or deteriorated. The Statement of Net Position and the Statement of Revenues, Expenses and Changes in Net Position report information about the Agency's activities in a way that will help answer this question. These two statements report the net position of the Agency as well as related changes. The difference between assets, deferred outflows of resources, liabilities, and deferred inflows of resources (net position) is one way to measure financial health or financial position. Over time, increases or decreases in the Agency's net position is one of many indicators to ascertain if its financial health is improving or deteriorating. Other factors to consider include changes in economic conditions, population growth, and new or changed legislation.

During the FY 2017-18 audit, prior period adjustments were recorded which affected the prior year financial statement numbers shown below. There were no prior period adjustments for the current fiscal year 2018-19. The adjustments have been reflected in the tables below which were used for the comparison data throughout this management discussion and analysis.

NET POSITION STATEMENT ANALYSIS

Table 1 – Summary of Net Position

Description	Fiscal Year Ended June 30, 2019	Fiscal Year Ended June 30, 2018	Amount Increase (Decrease)	Percent Increase (Decrease)
Current and other assets	$19,607,469	$17,753,712	$1,853,757	10.4%
Capital assets – net	78,845,782	81,337,573	(2,491,791)	(3.1)
Total assets	98,453,251	99,091,285	(638,034)	(0.6)
Deferred outflows of resources	6,329,394	7,332,920	(1,003,526)	(13.7)
Current liabilities	3,879,363	3,780,431	98,932	2.6
Noncurrent liabilities	55,467,490	58,367,168	(2,899,678)	(5.0)
Total liabilities	59,346,853	62,147,599	(2,800,746)	(4.5)
Deferred inflows of resources	1,790,731	2,056,973	(266,242)	(12.9)%
Net position –				
Net investment in capital assets	36,596,279	36,596,025	254	0.0
Unrestricted	7,048,782	5,623,608	1,425,174	25.3
Total net position	$43,645,061	$42,219,633	$1,425,428	3.4%

Net position increased by $1,425,428 to $43,645,061 from FY 2017-18 to FY 2018-19 as described below:

- Total assets decreased by $(638,033). Current assets increased by $1,853,757 due mainly to an increase in cash in the amount of approximately $1,587,000, the addition of inventory in the amount of $218,000, and $33,000 deposit for self-insured dental benefits (see Note 4 – Self Insured Dental Deposit), with the remaining current asset items very consistent between years. Capital assets – net decreased by $(2,491,791) because of minor asset retirements as well as the excess of the provision for accumulated depreciation on capital assets, a contra-asset, over current year capital asset additions.

- Deferred outflow amounts decreased for both pension and OPEB over the prior year in the amount of $(1,003,526).

- Current liabilities (obligations due within 12 months) increased by $98,932. The net increase was due primarily to an increase in accounts payable, $96,000, offset by a decrease in accrued salaries, $(66,000), and increase in current portion of long-term debt, $65,000.

- Non-current (long-term) liabilities decreased by $(2,899,678) as a result of a decrease in net pension liability of $174,000 and a decrease in the net OPEB liability in the amount of $52,000. Long-term liabilities are reduced each year as each series on the outstanding Refunding Revenue Bonds Series 2015 reach maturity and the principal amount is paid to the bondholders, approximately $2,500,000 for FY19. Additional information on the Agency's non-current liabilities can be found in Note #6-Long-Term Obligations.

- Deferred inflows of resources decreased by $266,000 for decreases in both pension and OPEB obligations.

By far the largest portion of the Agency's net position reflects its investment in capital assets (e.g. land, buildings, machinery, equipment, and vehicles) less any related debt used to acquire those assets that is still outstanding. The Agency uses these capital assets to provide treatment services for the residents and businesses in its service area. Consequently, these assets are not available for future spending. Although the Agency's investment in its capital assets is reported net of debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used or sold to liquidate Agency liabilities. The remaining balance of the net position is unrestricted and may be used to meet the Agency's ongoing obligations to its customers and creditors.

REVENUES, EXPENSES, AND CHANGE IN NET POSITION STATEMENT ANALYSIS

Table 2 – Change in Net Position

Description	Fiscal Year Ended June 30, 2019	Fiscal Year Ended June 30, 2018	Amount Increase (Decrease)	Percent Increase (Decrease)
Service charges	$16,400,143	$15,845,548	$554,595	3.5%
Contract maintenance revenues	1,067,515	1,114,680	(47,165)	(4.2)
Other operating revenues	434,012	393,738	40,274	10.2
Interest and investment income	410,653	218,516	192,137	87.9
Other non-operating revenues	452,833	85,212	367,621	431.4
Total revenues	18,765,156	17,657,694	1,107,462	6.3
Salaries and benefits	8,486,703	8,877,307	(390,604)	(4.4)
Operations supplies and services	1,436,895	1,366,871	70,024	5.1
Repairs and maintenance	1,034,818	886,312	148,506	16.8
Permit testing and monitoring	144,968	149,815	(4,847)	(3.2)
Depreciation and amortization	4,110,575	3,995,080	115,495	2.9
Insurance	111,545	95,517	16,028	16.8
Utilities and telephone	454,082	311,191	142,891	45.9
General and administrative	774,050	669,900	104,150	15.5
Interest expense	1,457,861	1,527,361	(69,500)	(4.6)
Total expenses	18,011,497	17,879,354	132,143	0.7
Income (loss) before cap contrib	753,659	(221,660)	975,319	440.0
Add: capacity charges revenue	671,769	197,753	474,016	239.7
Increase (decrease) in net position	1,425,428	(23,907)	1,449,336	6,062.4
Net position – beg	42,219,633	42,619,360	(399,727)	(0.9)
Prior period adjustments - net	-	(375,820)	375,820	-
Net position – beg as restated	42,219,633	42,243,540	(23,907)	(0.1)
Net position – end	$43,645,061	$42,219,633	$1,425,428	3.4%

See comments under Financial Analysis of the Agency regarding prior period adjustments made to the FY 2017-18 numbers presented above.

The statement of revenues, expenses, and changes in net position reflects the Agency's operating and non-operating revenues by major sources, operating and non-operating expenses by categories, and capital contributions. The Agency's increase in net position was $1,425,428 during FY 2018-19 as follows:

- Total revenues (operating and non-operating) increased by $1,107,462 from FY 2017-18 to $18.8 million in FY 2018-19. The increase in revenues was from a scheduled 3.5% increase in billed charges to members that includes base service charges, a capital fee, the debt service charge, and the debt service coverage charge. Contract maintenance revenues decreased approximately $47,000 mainly due to changes in flow volume and strength for waste services between CMSA and SQSP. Other operating revenues increased by approximately $40,000 due to increases in program revenues for FOG (Fats, Oils & Grease) and COOP programs, and permit and inspection fees.

- Interest and investment income increased nearly $200,000 due to increases in interest rates. The increase in other non-operating revenues is due primarily to proceeds received from federal programs, FEMA and State Revolving Fund, for landslide repairs and cogeneration system upgrades to sell excess power through a new PG&E Interconnection Agreement and power sale agreement with Marin Clean Energy.

- Total expenses (operating and non-operating) increased by $132,000 from FY 2017-18 to FY 2018-19. Salaries and benefits are down from the prior year due to an approximate cost of living adjustment increase of $170,000 offset by a decrease in pension and OPEB accruals in the amount of approximately $560,000. Operations supplies and services increased approximately $70,000 due mainly to more usage and certain chemical price increases. Repairs and maintenance expenses are up due mainly to changes in inventory levels and CIP studies not capitalized. Utilities are up due to a cogeneration engine failure resulting in purchasing power rather than generating power. General and administrative expenses include consultant costs for the asset management program and the pilot digester study. Interest expense is down due to declining principal balances.

- Capital contributions for capacity charges for FY 2018-19 increased by $474,000 to approximately $672,000 due to substantial new construction activity during the year. Member agencies collect and remit capacity charges to the Agency.

CAPITAL ASSETS

The Agency's investment in capital assets as of June 30, 2019 totaled $78,845,782 net of accumulated depreciation. This investment in capital assets includes land and land improvements, wastewater treatment facilities, wastewater disposal facilities, general plant and administrative facilities, and construction-in-progress. During FY 2018-19, the Agency acquired/constructed $2.2 million and depreciated approximately $4 million in capital assets. The Agency also had a prior period adjustment to beginning accumulated depreciation of approximately $268,000 to correct accumulated depreciation during FY 2017-18. The total net decrease in the Agency's investment in capital assets was $2,491,791 or (3.1)%.

Table 3 – Summary of Net Investment in Capital Assets

Description	Fiscal Year Ended June 30, 2019	Fiscal Year Ended June 30, 2018	Amount Increase (Decrease)	Percent Increase (Decrease)
Land and land improvements	$4,857,321	$4,857,321		0.0%
Construction in progress	1,118,263	1,363,564	($245,301)	(18.0)
Wastewater treatment facilities	65,580,231	67,789,514	(2,209,283)	(3.3)
Wastewater disposal facilities	3,059,419	3,380,347	(320,928)	(9.5)
General, plant, & admin facilities	4,230,548	3,946,827	283,721	7.2
Capital assets – net	$78,845,782	$81,337,573	($2,491,791)	(3.1)

See comments under Financial Analysis of the Agency regarding prior period adjustments made to the FY 2017-18 numbers presented above.

Construction-in-progress decreased by approximately $250,000 and there were approximately $1,034,000 in completed project transfers during the year. Major capital asset completed project transfers and new acquisitions and amounts for the FY 2018-19 include the following:

- Completed work on Odor Control System and Improvements ($480,254)
- Completed work on industrial coating and concrete rehabilitation ($220,364)
- Completed work on facility paving / sitework ($290,128)
- Purchased and placed in service various pumps and wastewater equipment ($594,492)
- Purchased and placed in service various hardware, software, and lab equipment ($275,932)
- Purchased and placed in service various vehicles ($95,553)

Additional information about the Agency's capital assets can be found in Note 5-Plant and Facilities.

DEBT ADMINISTRATION

As of June 30, 2019, the Agency had $40,440,000 in outstanding debt from the Refunding Revenue Bonds Series 2015, not including a premium in the amount of $3,891,953 that is amortized over the life of the bonds.

The Agency continues to expand, upgrade, and improve the quality of its treatment systems to meet current environmental regulations, manage wet weather flows, and to serve the needs of its customers. The Refunding Revenue Bonds Series 2015 were issued at a premium during FY 2014-15 to refund the 2006 Revenue Bonds originally used to expand the hydraulic and/or process capacity of the Agency's treatment, storage, and disposal facilities, and to implement other Board of Commissioners' approved capital improvement projects.

Additional information on the Agency's outstanding debt can be found in Note 6-Long-Term Obligations.

Table 4 – Summary of Long Term Debt

Description	Fiscal Year Ended June 30, 2019	Fiscal Year Ended June 30, 2018	Amount Increase (Decrease)	Percent Increase (Decrease)
2015 Revenue bonds, net	$44,331,953	$47,010,486	($2,678,533)	(5.7)%
Long-term debt – net	$44,331,953	$47,010,486	($2,678,533)	(5.7)%

ECONOMIC FACTORS

The Agency is governed in part by provisions of the State Water Resources Control Board which specifies that rate-based revenues must at a minimum cover the costs of operation, maintenance and recurring capital replacement (OM&R). The Agency is not directly subject to general economic conditions as the main source of its sewer service revenues is received directly from three JPA member agencies (SRSD, SD1 and SD2) and not from rate payers within the service area served. The Agency does not receive property tax revenue. Accordingly, the Agency sets its charges to JPA member agencies and the State of California for SQSP to cover the costs of OM&R and debt financed capital improvements plus any increments for known or anticipated changes in program costs.

The Agency's Board of Commissioners adopts a bi-annual budget which serves as the Agency's approved financial plan. The Board sets all fees and charges required to fund the Agency's operations and capital programs. The approved budget is used as a key control device that 1) establishes amounts by line-item accounts, identifies projects for operations and capital activities and 2) monitors expenses to ensure that approved spending levels have not been exceeded.

CONTACTING THE AGENCY

This financial report is designed to provide our joint-power members and creditors with a general overview of the Agency's finances and demonstrate the Agency's accountability for the money it receives. If you have any questions about this report or need additional financial information, please contact:

Administrative Services Manager
Central Marin Sanitation Agency
1301 Andersen Drive
San Rafael, CA 94901
(415) 459-1455

FINANCIAL STATEMENTS

CENTRAL MARIN SANITATION AGENCY
Statement of Net Position
June 30, 2019

Assets	
Current Assets	
Cash and cash equivalents	$ 17,219,093
Accounts receivable	300,991
Accrued interest receivable	106,822
Prepaid expenses	76,113
Deposits (self-insured dental)	33,250
Inventory - parts and fuel	1,833,482
Other current assets	2,345
Total Current Assets	19,572,096
Noncurrent Assets	
Bond discount and prepaid insurance, net	35,373
Capital assets, net of accumulated depreciation (Note 4)	78,845,782
Total Noncurrent Assets	78,881,155
Total Assets	98,453,251
Deferred Outflows of Resources	
Loss on early retirement of long-term debt	2,082,450
Relating to pension	4,022,418
Relating to OPEB	224,526
Total Deferred Outflows of Resources	6,329,394
Liabilities	
Current Liabilities	
Accounts payable	427,366
Accrued salaries and employee benefits	202,386
Interest payable on revenue bonds	536,085
Current portion of compensated absences payable	318,526
Current portion of revenue bonds payable	2,395,000
Total Current Liabilities	3,879,363
Noncurrent Liabilities:	
Compensated absences payable, net of current portions	361,588
Revenue bonds payable, net of premium	41,936,953
Net pension liability	11,101,158
Net OPEB liability	2,067,791
Total Noncurrent Liabilities	55,467,490
Total Liabilities	59,346,853
Deferred Outflows of Resources	
Pension adjustments	1,736,663
Other post-employment benefits	54,068
Total Deferred Inflows of Resources	1,790,731
Net Position	
Net investment in capital assets	36,596,279
Unrestricted	7,048,782
Total Net Position	$ 43,645,061

The accompanying notes are an integral part of the financial statements

CENTRAL MARIN SANITATION AGENCY
Statement of Revenues, Expenses and Changes in Net Position
Year Ended June 30, 2019

Operating Revenues:	
Service charges	$ 16,400,143
Contract maintenance revenues	1,067,515
Other operating revenues	434,012
Total operating revenue	17,901,670
Operating Expenses:	
Salaries and benefits	8,486,703
Operations supplies and services	1,436,895
Repairs and maintenance	1,034,818
Permit testing and monitoring	144,968
Insurance	111,545
Utilities and telephone	454,082
General and administrative	774,050
Depreciation and amortization	4,110,575
Total operating expenses	16,553,636
Operating Income (Loss)	1,348,034
Nonoperating Revenues (Expenses):	
Interest and investment income	410,653
Interest expense	(1,457,861)
Other non-operating revenues (expenses)	452,833
Total non-operating revenues (expenses)	(594,375)
Income before contributions	753,659
Capital contributions - capacity fees	671,769
Change in Net Position	1,425,428
Net Position - Beginning of Year, as previously stated	42,219,633
Net Position - Ending	$ 43,645,061

The accompanying notes are an integral part of the financial statements

CENTRAL MARIN SANITATION AGENCY
Statement of Cash Flows
Year Ended June 30, 2019

Cash Flows from Operating Activities:	
Receipts from customers and users	$ 17,948,135
Payments to suppliers	(3,562,191)
Payments to employees and related benefits	(8,124,854)
Other non-operating revenue	28,132
Net cash provided by operating activities	6,289,222
Cash Flows from Capital and Related Financing Activities:	
Capacity charges	671,769
Grants for capital projects	402,155
Acquisition and construction of capital assets	(2,185,309)
Sales of assets	22,800
Principal payments on long-term debt	(2,330,000)
Interest on long-term debt	(1,643,206)
Net cash used in capital and related financing activities	(5,061,791)
Cash Flows from Investing Activities	
Investment income	370,651
Net cash provided by investing activities	370,651
Net increase in cash and cash equivalents	1,598,082
Cash and cash equivalents, July 1	15,621,011
Cash and Cash equivalents, June 30	$ 17,219,093
Reconciliation of Operating Income to Net Cash Provided by Operating Activities	
Operating income (loss)	1,348,034
Adjustments to reconcile operating income to net cash used in operating activities:	
Depreciation expense	4,110,575
Other non-operating income	28,132
(Increase) decrease in:	
Accounts receivable	46,609
Inventory	(217,885)
Prepaid expenses	(12,781)
Other current assets	(34,784)
CIP projects not capitalized	569,439
Deferred outflows	817,038
Increase (decrease) in:	
Accounts payable	90,178
Accrued salaries and benefits	(60,138)
Unearned revenue	(144)
Accrued compensated absences	97,037
Net Pension Liability	(174,213)
Net OPEB Obligation	(51,633)
Deferred inflows	(266,242)
Net cash provided by operating activities	$ 6,289,222

The accompanying notes are an integral part of the financial statements

NOTES TO THE FINANCIAL STATEMENTS

NOTE 1 - NATURE OF ORGANIZATION

Central Marin Sanitation Agency (CMSA) is a regional wastewater treatment agency that serves the residents, businesses and governmental institutions including the large San Quentin State Prison in central Marin County. In the 1970's, central Marin County had four small wastewater treatment plants whose operations were not able to meet the stringent new requirements of the 1972 Clean Water Act and its amendments. Accordingly, the four local wastewater agencies, San Rafael Sanitation District, Sanitary District No. 1 of Marin County, Sanitary District No. 2 of Marin County, and the City of Larkspur entered into a joint powers agreement (JPA) in October 1979 to create a separate governmental entity, the Central Marin Sanitation Agency (CMSA), to oversee the construction and operation of a regional wastewater treatment facility. San Quentin State Prison chose not to join the JPA. The treatment facility was constructed at a cost of $84 million and was funded by federal (75%) and state (12.5%) clean water grants and local shares (12.5%) from the four local wastewater agencies and San Quentin State Prison. The CMSA wastewater treatment facility became operational in January 1985.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Financial Reporting Entity

Although the nucleus of a financial reporting entity usually is a primary government, an organization other than a primary government, such as a stand-alone government, may serve as the nucleus for its financial reporting entity when the stand-alone government provides separately issued financial statements. A stand-alone government is a legally separate governmental organization that does not have a separately elected governing body and does not meet the definition of a component unit. Central Marin Sanitation Agency meets the criteria as a stand-alone government, and accordingly, is accounted for and reported on as though it were a primary government.

Component units are defined as legally separate organizations for which the primary government are financially accountable, and other organizations for which the nature and significance of their relationship with a primary government are such that exclusion would cause the reporting entity's financial statements to be misleading or incomplete. The Agency considered all potential component units in determining what organizations should be included in the financial statements. Since no other entities are controlled by, or rely upon the Agency, the reporting entity consists solely of the Agency. Based on these criteria, there are no component units to include in the Agency's financial statements.

Basis of Presentation

The Agency's Basic Financial Statements are prepared in accordance with the policies and procedures for California special districts. The accounting policies of the Agency conform to accounting principles generally accepted in the United States of America, and as prescribed by the Governmental Accounting Standards Board and Audits of State and Local Governmental Units, issued by the American Institute of Certified Public Accountants.

The activities of the Agency are accounted for in a single enterprise fund. Enterprise funds are used to account for those operations that are financed and operated in a manner similar to private business or where the Board has decided that the determination of revenues earned, costs incurred and/or net income is necessary for management accountability.

Measurement Focus and Basis of Accounting

Enterprise funds are accounted for on the flow of economic resources measurement focus utilizing full accrual accounting. With this measurement focus, all assets, deferred outflows of resources, liabilities, and deferred inflows of resources of the enterprise are recorded on its statement of net position, and under the full accrual basis of accounting, all revenues are recognized when earned and all expenses, including depreciation, are recognized when incurred.

A deferred outflow of resources is defined as a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expenses/expenditure) until then. A deferred inflow of resources is defined as an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenues) until that time.

When applicable, unamortized portion of the gain and loss on refunding debt are reported as deferred inflows and deferred outflows of resources, respectively. Deferred outflows and inflows of resources are reported for the changes related to pension from the implementation of GASBS No. 68 and No. 75.

Unearned revenue arises when assets are received before revenue recognition criteria have been satisfied. Grants and entitlements received before eligibility requirements are met are recorded as deferred inflows from unearned revenue.

The Agency applies all applicable GASB pronouncements for certain accounting and financial reporting guidance. In December of 2010, GASB issued *GASBS No. 62, Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements.* This statement incorporates pronouncements issued on or before November 30, 1989 into GASB authoritative literature. This includes pronouncements by the Financial Accounting Standards Board (FASB), Accounting Principles Board Opinions (APB), and the Accounting Research Bulletins of the American Institute of Certified Public Accountants' (AICPA) Committee on Accounting Procedure, unless those pronouncements conflict with or contradict with GASB pronouncements.

Statement of Net Position

The statement of net position is designed to display the financial position of the Agency. The Agency's net position is classified into three categories as follows:

- Net Investment in Capital Assets - This component of net position consists of capital assets, including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt are also included in this component of net position, as applicable.
- Restricted - This component of net position consists of constraints placed on an asset's use through external constraints imposed by creditors (such as through debt covenants), grantors, contributors, or law and regulations of other governments, and reduced by liabilities and deferred inflows of resources related to those assets. It also pertains to constraints imposed by law or constitutional provisions or enabling legislation. The Agency applies restricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position is available.

- Unrestricted - This component of net position consists of the net amount of the assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

Statement of Revenues, Expenses, and Changes in Net Position

The statement of revenues, expenses, and changes in net position is the operating statement for proprietary funds. This statement distinguishes between operating and non-operating revenues and expenses and presents a separate subtotal for operating revenues, operating expenses, and operating income. Operating revenues and expenses generally result from providing services in connection with the Agency's principal ongoing operations. The principal operating revenues of the Agency are charges to customers for services. Operating expenses for the Agency include the cost of services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as non-operating revenues and expenses.

Joint Ventures

The Agency is the locus of a joint powers agreement among its four member agencies, which provide wastewater collection and transmission to the treatment plant. Joint venture details are discussed in Note 6.

Cash and Investments

Cash includes amounts in demand deposits as well as short-term investments.

In accordance with GASB Statement No. 40, *Deposit and Investment Disclosures (Amendment of GASB No.3)*, certain disclosure requirements for deposits and investment risks were made in the areas of interest rate risk and credit risk. The credit risk disclosures include the following components; overall credit risk, custodial credit risk and concentrations of credit risk. In addition, other disclosures are specified including use of certain methods to present deposits and investments, highly sensitive investments, credit quality at year-end and other disclosures.

Investments are reported in the statement of net position at fair value, with the exception of the CAMP pool. Changes in fair value that occur during the fiscal year are recognized as investment income reported for that fiscal year. Investment income includes interest earnings, changes in fair value, and any gains or losses realized upon the liquidation or sale of investments.

The Agency participates in an investment pool managed by the State of California and regulated by California government code Section 16429 known as the Local Agency Investment Fund (LAIF), which has invested a portion of the pooled funds in structured notes and asset-backed securities. LAIF's investments are subject to credit risk with the full faith and credit of the State of California collateralizing these investments. In addition, the structured notes and asset-backed securities are subject to market risk as to change in interest rates.

Investments held with LAIF are recorded at fair value in accordance with GASB Statement No. 72, *Fair Value Measurement and Application*. Accordingly, the change in fair value of investments is recognized as an increase or decrease to investment assets and investment income.

The following is a summary of the definition of fair value:

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction. In determining this amount, three valuation techniques are available:

- Market approach - This approach uses prices generated for identical or similar assets or liabilities. The most common example is an investment in a public security traded in an active exchange such as the NYSE.

- Cost approach - This technique determines the amount required to replace the current asset. This approach may be ideal for valuing donations of capital assets or historical treasures.

- Income approach - This approach converts future amounts (such as cash flows) into a current discounted amount.

Each of these valuation techniques requires inputs to calculate a fair value. Observable inputs have been maximized in fair value measures, and unobservable inputs have been minimized.

Investments held with CAMP are recorded at amortized cost in accordance with GASB Statement No. 79, *Certain External Investment Pools and Pool Participants*. The Agency participates in the California Asset Management Program (CAMP) which is a voluntary investment alternative authorized by Section 53601(p) of the California Government Code. CAMP is managed by a seven-member Board of Trustees comprised of California public agency finance officials. Investments are transacted by an investment advisor and all securities are held by a third-party custodian. All securities in CAMP are purchased under the authority of Section 53601, subdivisions (a) to (n) of the California Government Code.

Statement of Cash Flows

For purposes of the statement of cash flows, all highly liquid investments with original maturities of three months or less are considered cash equivalents.

Plant and Facilities Capital Assets

Capital assets are defined by the Agency as long-lived assets acquired for use, and not intended for consumption in operations. The capitalization threshold is at $5,000 or above.

Treatment plant and facilities purchased are stated at cost less accumulated depreciation. Assets contributed by member districts have been recorded at the fair value at the date received.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend asset lives are not capitalized. Improvements are capitalized and depreciated over the remaining useful lives of the related capital assets, as applicable. Costs of feasibility studies are accumulated in construction-in-progress. If the study results in a capital asset addition, these costs are capitalized and depreciated over the remaining useful lives of the related capital assets, as applicable. Alternately, costs not resulting in a capital asset addition are expensed through operating expenses. Feasibility studies, when used, are considered necessary for maintaining the efficient operations of the treatment plant.

Depreciation is computed using the straight-line method based on the estimated useful lives of related asset classifications useful life in excess of one year. Depreciation of all plant and facilities in service is charged as an expense against operations each year and the total amount of depreciation taken over the years, called accumulated depreciation, is reported on the statement of net position as a reduction in the book value of the capital assets.

The Agency has assigned the useful lives listed below to plant and facilities:

Wastewater Treatment Facilities:

Buildings	40 years
Other	5 – 25 years
Wastewater Disposal Facilities	40 – 50 years

General Plant & Administrative Facilities:

Buildings	40 years
Other	5 – 30 years

Long-Term Debt

Long-term debt and other long-term obligations are reported as liabilities in the Statement of Net Position. Bond premiums and discounts are deferred and amortized over the life of the bonds. Bonds payable are reported net of applicable bond premium and discounts are reported as noncurrent assets along with any insurance payments made during issuance of the bond. Bond issuance costs, other than prepaid insurance, are expensed in the period incurred.

Compensated Absences

Compensated absences include vacation leave and sick leave. Vested or accumulated vacation leave is recorded as an expense and liability as the benefits accrue to the employees. A liability is recognized for that portion of accumulated sick leave that has been vested.

Pensions

For purposes of measuring the net pension liability and deferred outflows/inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Agency’s California Public Employees’ Retirement System (CalPERS) plan (the Plan) and additions to/deductions from the Plan’s fiduciary net position have been determined on the same basis as they are reported by CalPERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Other Post-Employment Benefits (OPEB)

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the Agency’s plan (OPEB plan) and additions to/deductions from the OPEB Plan’s fiduciary net position have been determined on the same basis. For this purpose, benefit payments are recognized when currently due and payable in accordance with the benefit terms. Investments are reported at fair value.

Generally accepted accounting principles require that the reported results must pertain to liability and asset information within certain defined timeframes. For this report, the following timeframes are used:

Valuation Date	June 30, 2017
Measurement Date	June 30, 2018
Measurement Period	July 1, 2017 to June 30, 2018

Accounting Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Subsequent Events

Management has reviewed subsequent events and transactions that occurred after the date of the financial statements through the date the financial statements were issued. The financial statements include all events or transactions, including estimates, required to be recognized in accordance with generally accepted accounting principles. Management has determined that there are no non-recognized subsequent events that require additional disclosure.

Implemented New Accounting Pronouncements

GASB Statement No. 83, *Certain Asset Retirement Obligations.* - This Statement addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement.

The implementation of this pronouncement did not have a significant impact on the Agency's financial statements.

GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements* - The primary objective of this Statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt.

This Statement defines debt for purposes of disclosure in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established.

The requirements of this Statement will improve financial reporting by providing users of financial statements with essential information that currently is not consistently provided. In addition, information about resources to liquidate debt and the risks associated with changes in terms associated with debt will be disclosed. As a result, users will have better information to understand the effects of debt on a government's future resource flows.

The implementation of this pronouncement did not have a significant impact on the Agency's financial statements.

Upcoming New Accounting Pronouncements

GASB Statement No. 84, *Fiduciary Activities.* - The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported.

This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. The requirements of this Statement are effective for the financial statements for periods beginning after December 15, 2018 (fiscal 2020). Earlier application is encouraged. The Agency doesn't believe this statement will have a significant impact on the Agency's financial statements.

GASB Statement No. 87, *Leases.* - The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments.

This Statement will increase the usefulness of governments' financial statements by requiring reporting of certain lease liabilities that currently are not reported. It will enhance comparability of financial statements among governments by requiring lessees and lessors to report leases under a single model. This Statement also will enhance the decision-usefulness of the information provided to financial statement users by requiring notes to financial statements related to the timing, significance, and purpose of a government's leasing arrangements. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019 (fiscal 2021). Earlier application is encouraged.

GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period.* - The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period.

The requirements of this Statement will improve financial reporting by providing users of financial statements with more relevant information about capital assets and the cost of borrowing for a reporting period. The resulting information also will enhance the comparability of information about capital assets and the cost of borrowing for a reporting period for both governmental activities and business-type activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019 (fiscal 2021). Earlier application is encouraged. The requirements of this Statement should be applied prospectively.

GASB Statement No. 90, *Majority Equity Interests—an amendment of GASB Statements No. 14 and No. 61.* - The primary objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. It defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment.

The requirements of this Statement will improve financial reporting by providing users of financial statements with essential information related to presentation of majority equity interests in legally separate organizations that previously was reported inconsistently. In addition, requiring reporting of information about component units if the government acquires a 100 percent equity interest provides information about the cost of services to be provided by the component unit in relation to the consideration provided to acquire the component unit.

The requirements of this Statement are effective for reporting periods beginning after December 15, 2018 (fiscal 2020). Earlier application is encouraged. The requirements should be applied retroactively, except for the provisions related to (1) reporting a majority equity interest in a component unit and (2) reporting a component unit if the government acquires a 100 percent equity interest. Those provisions should be applied on a prospective basis.

GASB Statement No. 91, *Conduit Debt Obligations* - The primary objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures.

The requirements of this Statement will improve financial reporting by eliminating the existing option for issuers to report conduit debt obligations as their own liabilities, thereby ending significant diversity in practice. The clarified definition will resolve stakeholders' uncertainty as to whether a given financing is, in fact, a conduit debt obligation. Requiring issuers to recognize liabilities associated with additional commitments extended by issuers and to recognize assets and deferred inflows of resources related to certain arrangements associated with conduit debt obligations also will eliminate diversity, thereby improving comparability in reporting by issuers. Revised disclosure requirements will provide financial statement users with better information regarding the commitments issuers extend and the likelihood that they will fulfill those commitments. That information will inform users of the potential impact of such commitments on the financial resources of issuers and help users assess issuers' roles in conduit debt obligations.

The requirements of this Statement are effective for reporting periods beginning after December 15, 2020 (fiscal 2022). Earlier application is encouraged. The Agency doesn't believe this statement will have a significant impact on the Agency's financial statements.

NOTE 3 - CASH, CASH EQUIVALENTS AND INVESTMENTS

The Agency's cash, cash equivalents and investments consisted of the following as of June 30, 2019:

Cash and Investments	Carrying Amount	Fair Value / Amortized	Investment Rating	Maturities
Business-type Activities:				
Cash Deposits:				
Cash on hand	$ 269,662	$ 269,662	N/A	N/A
Petty Cash	796	796	N/A	N/A
Total Cash Deposits	270,458	270,458		
Investments:				
California Local Agency Investment Fund	16,493,415	16,521,649	Unrated	< 1 year
Wells Fargo Escrow	80,894	80,894	Unrated	< 1 year
California Asset Management Program	374,326	374,326	AAAm	< 1 year
Total Investments	16,948,635	16,976,869		
Total Cash and Investments	$ 17,219,093	$ 17,247,327		

Cash Deposits

Bank balances are insured up to $250,000 per bank by the Federal Deposit Insurance Company ("FDIC"). The actual bank statement balance of the Agency's cash in bank exceeded the insured limit by $129,175 as of June 30, 2019. The difference between the book balance and the bank statement balance was for outstanding checks. None of the Agency's deposits with financial institutions in excess of FDIC limits were held in uncollateralized accounts. All of the Agency's accounts met the collateral and categorization requirements as noted in the following paragraphs.

Fair Value Measurements

GASB 72 established a hierarchy of inputs to the valuation techniques above. This hierarchy has three levels:

- Level 1 inputs are quoted prices in active markets for identical assets or liabilities.
- Level 2 inputs are quoted market prices for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other than quoted prices that are not observable.
- Level 3 inputs are unobservable inputs, such as a property valuation or an appraisal.

The Agency has the following recurring fair value measurements as of June 30, 2019:

- California Local Agency Investment Fund (LAIF) of $16,521,649; valued using Level 2 inputs.

California Local Agency Investment Fund

The Agency participates in an investment pool managed by the State of California known as the Local Agency Investment Fund (LAIF), which has invested a portion of the pooled funds in structured notes and asset-backed securities, defined as follows:

- Structured Notes are debt securities (other than asset-backed securities) whose cash flow characteristics (coupon rate, redemption amount, or stated maturity) depend upon one or more indices and/or that have embedded forwards or options.

- Asset-Backed Securities, the bulk of which are mortgage-backed securities, entitle their purchasers to receive a share of the cash flows from a pool of assets such as principal and interest repayments from a pool of mortgages (such as Collateralized Mortgage Obligations) or credit card receivables.

LAIF's investments are subject to credit risk with the full faith and credit of the State of California collateralizing these investments. In addition, the structured notes and asset-backed securities are subject to market risk as to change in interest rates.

LAIF allows local governments such as the Agency to participate in a Pooled Money Investment Account managed by the State Treasurers Office and overseen by the Pooled Money Investment Board and State Treasurer investment committee. A Local Agency Investment Advisory Board oversees LAIF. The investments with LAIF are not classified for credit risk due to their diverse nature and are stated at cost, which approximates fair value.

The total amount invested by all public agencies in LAIF, as of June 30, 2019, was approximately $105.7 billion. Of that amount, 98.23% is invested in non-derivative financial products and 1.77% in structured notes and asset-backed securities. The balance in LAIF is available for withdrawal on demand.

California Assets Management Program

The CAMP pool has a diverse credit risk allocation averaging a rating of AAAm, per S&P ratings. The total amount invested by all public agencies in CAMP, as of June 30, 2019 was approximately $4.7 billion. Of that amount, 69% was invested in non-derivative financial products and 31% was invested in repurchase agreements. An investment in the Trust is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Shares of the Trust are distributed by PFM Fund Distributors, Inc., member Financial Industry Regulatory Authority (FINRA) (www.finra.org) and Securities Investor Protection Corporation (SIPC) (www.sipc.org). PFM Fund Distributors, Inc. is a wholly owned subsidiary of PFM Asset Management LLC. The plan has elected to be measured at amortized cost for financial reporting purposes per GASB Statement No. 79, *Certain External Investment Pools and Pool Participants*. The plan's net assets, portfolio holdings, are valued at amortized cost based on trade date.

Investment Policy

The Agency is authorized under California Government Code and the Agency's investment policy to make direct investments in local agency bonds, notes, or warrants within the State; U.S. Treasury instruments; registered State warrants or treasury notes; securities of the U.S. Government or its agencies; bankers acceptances of U.S. banks; commercial paper of prime quality; negotiable certificates of deposit; repurchase or reverse repurchase agreements; and passbook savings account demand deposits. Investments prohibited by the Agency are inverse floaters, range notes, mortgage pool interest-only strips, and zero interest accrual at maturity notes. The Agency's investments were in compliance with the above provisions as of and for the year ended June 30, 2019. The Agency's investment policy follows the California Government Code which authorizes the Agency to invest in the following:

Authorized Investment Type	Maximum Remaining Maturity	Maximum Percentage of Portfolio	Maximum Investment In One Issuer
Local Agency Bonds, Notes, Warrants	5 years	None	None
Registered State Bonds, Notes, Warrants	5 years	None	None
U.S. Treasury Obligations	5 years	None	None
Federal Agency Securities	5 years	None	None
Banker's Acceptance	180 days	40%	30%
Commercial Paper	270 days	25%	10%
Negotiable Certificates of Deposit	5 years	30%	None
Repurchase Agreements	1 year	None	None
Reverse Repurchase Agreements	92 days	20% of base	None Local
Agency Investment Fund (LAIF)	N/A	None	None
Passbook Savings Account Demand Deposits	N/A	None	None
California Asset Management Program (CAMP)	N/A	None	None

Risk Disclosures

Limitations as they relate to interest rate risk, credit risk, and concentration of credit risk are described below:

- *Interest Rate Risk* - Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to the changes in market interest rates. The Agency manages its exposure to interest rate risk by purchasing a combination of shorter term and longer-term investments and by timing cash flows from maturities so that a portion of the portfolio is maturing or coming close to maturity evenly over time as necessary to provide the cash flow and liquidity needed for operations. The sensitivity of the Agency's investments to interest rate risk is displayed in the summary schedule of cash and cash equivalents at the top of Note 3.

- *Credit Risk* - Credit risk is the risk of loss due to the failure of the security issuer. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. In order to limit loss exposure due to Credit Risk, the investment policy limits purchases of investments to those rated A-1 by Standard & Poor's or P-1 by Moody's Investors Service. The Agency's minimum legal rating is not applicable to the LAIF and CAMP investment pools.

- *Custodial Credit Risk* - Custodial credit risk is the risk that in the event of a bank failure, the Agency's deposits may not be returned to it. The Agency does not have a written policy for custodial credit risk over deposits.

  The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit). The fair value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure public deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits and letters of credit issued by the Federal Home Loan Bank of San Francisco having a value of 105% of the secured deposits. In the case of investments, the risk of loss of the investment due failure, impairment or malfeasance of the third party whose name in which the investment is held and who has physical possession of the instrument. Neither the California Government Code nor the Agency's investment policy contains legal or policy requirements that would limit the exposure to custodial risk.

- *Concentration of Credit Risk* – See the chart in investment policy for the Agency's limitations on the amount that can be invested in any one issuer. As of June 30, 2019, external investment pools were not subject to a limitation. As of June 30, 2019, the Agency invested 97% in LAIF. There were no other investments in any one issuer that represent five percent or more of the total investments.

NOTE 4 – SELF-INSURED DENTAL DEPOSIT

During the year ended June 30, 2019, the Agency analyzed the existing third-party dental insurance plan, and determined that it would be fiscally beneficial to self-insure. As a result, $33,250 was deposited into a separate account which will be used to pay employee dental expenses to dentists for authorized procedures beginning in fiscal 2020. This amount is shown as an asset on the Statement of Net Position. As of the date of the financial statements, the contract with the trustee is still being reviewed by attorneys for both parties.

NOTE 5 - PLANT AND FACILITIES (CAPITAL ASSETS)

The Agency's plant and facilities capital assets consisted of the following as of June 30, 2019:

Capital Assets	Balance July 01, 2018	Additions	Disposals & Adjustments	Transfers	Balance June 30, 2019
Non-depreciable Plant and Facilities:					
Land and land improvements	$ 4,857,321	-	-		$ 4,857,321
Construction in progress	1,363,564	1,358,722	(569,439)	(1,034,584)	1,118,263
Total non-depreciable plant and facilities	6,220,885	1,358,722	(569,439)	(1,034,584)	5,975,584
Depreciable Plant and Facilities:					
Wastewater treatment facilities	131,141,647	572,740	-	722,371	132,436,758
Wastewater disposal facilities	13,659,653	-	-	-	13,659,653
General plant and administrative facilities	9,625,474	253,847	(45,702)	312,213	10,145,832
Total depreciable plant and facilities	154,426,774	826,587	(45,702)	1,034,584	156,242,243
Less accumulated depreciation for:					
Wastewater treatment facilities	(63,352,133)	(3,504,394)	-	-	(66,856,527)
Wastewater disposal facilities	(10,279,306)	(320,928)	-	-	(10,600,234)
General plant and administrative facilities	(5,678,647)	(282,085)	45,448	-	(5,915,284)
Total accumulated depreciation	(79,310,086)	(4,107,407)	45,448	-	(83,372,045)
Total depreciable plant and facilities - net	75,116,688	(3,280,820)	(254)	1,034,584	72,870,198
Total plant and facilities - net	$ 81,337,573	(1,922,098)	(569,693)	-	$78,845,782

Depreciation expense for the year ended June 30, 2019 was $4,107,407.

NOTE 6 - LONG-TERM OBLIGATIONS

The Agency's long-term obligations consisted of the following as of June 30, 2019:

	Balance July 1, 2018	Additions	Deductions	Balance June 30, 2019	Due Within One Year
2015 Refunding Revenue Bonds	$ 42,770,000	-	$2,330,000	$ 40,440,000	$ 2,395,000
2015 Refunding Revenue Bonds Discounts and premiums, net	4,240,486	-	348,533	3,891,953	-
Net Pension Liability	11,275,371	-	174,213	11,101,158	-
Net OPEB Liability	2,119,424	-	51,633	2,067,791	-
Compensated Absences	583,077	137,352	40,315	680,114	318,526
Total Long-term Obligations	$ 60,988,358	137,352	2,944,694	$ 58,181,016	$ 2,713,526

On March 26, 2015, the Agency issued $49,310,000 in Series 2015 Refunding Revenue Bonds at a premium of $5,344,174 with an interest rate ranging from 2.5 to 5.0 percent. The Bonds were used to refund the Series 2006 Revenue Bonds whose proceeds were used to finance improvements to the wastewater treatment and disposal system of the Central Marin Sanitation Agency, consisting primarily of improvements to the Agency's Treatment Plant to increase capacity for wet weather flows, to pay costs of issuance of the Bonds and for certain other capital projects to provide treatment capacity, replace capital assets at end of service life and to make other capital improvements as approved by the Board of Commissioners. The Bonds are fully registered with principal due annually on September 1 and interest payable semi-annually on March 1 and September 1.

The Agency's 2015 Refunding Revenue Bonds debt service requirements were as follows as of June 30, 2019:

Year Ending June 30,	Principal	Interest	Total
2020	$ 2,395,000	$ 1,572,331	$ 3,967,331
2021	2,470,000	1,487,006	3,957,006
2022	2,580,000	1,386,006	3,966,006
2023	2,685,000	1,280,706	3,965,706
2024	2,785,000	1,157,381	3,942,381
2025 – 2029	16,105,000	3,659,406	19,764,406
2030 – 2032	11,420,000	533,516	11,953,516
Total Debt Service	$ 40,440,000	$ 11,076,352	$ 51,516,352

NOTE 7 - JOINT VENTURES

The Agency serves as a regional wastewater treatment plant for its four member agencies and San Quentin State Prison (SQ) and is governed by a six-member Board of Commissioners, two appointed by the governing board of Sanitary District No. 1 (SD 1), two appointed by the governing board of San Rafael Sanitation District (SRSD), one appointed by the governing board of Sanitary District No.2 (SD 2), and one appointed by the City Council of the City of Larkspur (Larkspur). Total project costs for the joint venture were funded from federal (75%) and state (12.5%) clean water grants and from local shares (12.5% total) allocated among the member agencies and SQ based upon the weighted average of the strength and volume of sewage flows applicable at inception of the project. Final individual local shares of total project costs were approximately $6.3 million for SD 1, $7.6 million for SRSD, $1.6 million for SD 2, $1 million for Larkspur and $1.4 million for SQ.

CMSA derives its annual funding for its operations and equipment repair and replacement programs almost exclusively from service charges to its member agencies and SQ. Beginning in fiscal year 2006-07, funding for CMSA's capital program also includes proceeds from the sale of revenue bonds which were exhausted in fiscal year 2014-15. The joint powers agreement makes no provisions for an equity interest for any of the joint venture participants' operations and stipulates that all excess capital funds and all excess administration, operations and maintenance funds, from whatever source, are the property of the Agency. Complete separate financial statements of the member agencies may be obtained by contacting their administrative offices directly.

NOTE 8 - COMMITMENTS AND CONTINGENCIES

The Agency had no significant unexpended construction-related contractual commitments as of June 30, 2019. Contingencies of an interminable amount include normal recurring pending claims and litigation. Agency management is of the opinion that the resolution of these matters will not result in a material liability to the Agency. No provision has been made for a contingent liability that meets the criteria for accrual set forth in current government accounting standards.

NOTE 9 - RISK MANAGEMENT

The Agency is exposed to risks of loss from property, liability, and workers' compensation. The Agency mitigates risk by participating in risk sharing and insurance purchasing pools through membership in the California Sanitation Risk Management Authority (CSRMA). Risk sharing pools provide general and automobile liability and workers' compensation coverage. The pools operate to share risk among the members of the pool up to a limit of $15,500,000 and $750,000 for general liability and workers' compensation, respectively.

The cost to each CSRMA member agency for program participation is determined by the Executive Board upon the basis of cost allocation plan and rating formula. The premium for each participating agency includes the agency's share of expected losses, program insurance costs, and program administrative costs for the year, plus the agency's share of Authority general expense allocated to the program by the Board. Members share losses, which exceed the maximum premium assessment. Insurance purchasing pools provided property insurance and excess coverage to $15,000,000 on general liability and workers' compensation. Audited condensed financial information for CSRMA is presented below for the year ended June 30, 2018 (most recent information available):

	June 30, 2018
Total Assets	$ 25,703,119
Total Liabilities	17,997,369
Total Equity	7,705,750
Total Revenues	10,453,268
Total Expenditures	13,926,188
Retrospective Contribution	(1,198,408),

NOTE 10 - DEFINED BENEFIT PENSION PLAN

General Information about the Pension Plans

Plan Description - All qualified permanent and probationary employees are eligible to participate in the Agency's Miscellaneous Employee Pension Plan (the Plan), a cost-sharing multiple employer defined benefit pension plan administered by the California Public Employees' Retirement System (CalPERS). Benefit provisions under the Plan are established by State statute and Agency resolution. CalPERS issues publicly available reports that include a full description of the pension plan regarding benefit provisions, assumptions and membership information that can be found on the CalPERS website.

Benefits Provided - CalPERS provides service retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full-time employment. Members with five years of total service are eligible to retire at age 50 with statutorily reduced benefits. All members are eligible for non-duty disability benefits after 10 years of service. The death benefit is one of the following: the Basic Death Benefit, the 1957 Survivor Benefit, or the Optional Settlement 2W Death Benefit. The cost of living adjustments for the Plan are applied as specified by the Public Employees' Retirement Law.

The Plan provisions and benefits in effect at June 30, 2019, are summarized as follows:

	Miscellaneous	
	Tier 1	PEPRA
Benefit formula	2.7% @ 55	2% @ 62
Benefit vesting schedule	5 Years	5 Years
Benefit payments	Monthly for Life	Monthly for Life
Retirement age	55	62
Monthly benefits as a % of eligible compensation	2.70%	2.00%
Required employee contribution rates	8.000%	6.250%
Required employer contribution rates	12.212%	6.842%

Contributions - Section 20814(c) of the California Public Employees' Retirement Law requires that the employer contribution rates for all public employers be determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. Funding contributions for the Plan are determined annually on an actuarial basis as of June 30 by CalPERS. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The Agency is required to contribute the difference between the actuarially determined rate and the contribution rate of employees.

For the year ended June 30, 2019 the contributions recognized as part of pension expense for the Plan were as follows:

Employer contributions	$ 1,133,396

Pension Liabilities, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions

As of June 30, 2019, the Agency reported net pension liabilities for its proportionate shares of the net pension liability of the Plan as follows:

	Proportionate Share of Net Pension Liability
Miscellaneous	$ 11,101,158

The Agency's net pension liability for the Plan is measured as the proportionate share of the net pension liability. The net pension liability of the Plan is measured as of June 30, 2018, and the total pension liability for the Plan used to calculate the net pension liability was determined by an actuarial valuation as of June 30, 2017 rolled forward to June 30, 2018 using standard update procedures. The Agency's proportion of the net pension liability was based on a projection of the Agency's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. The Agency's proportionate share of the net pension liability for the Plan as of June 30, 2017 and 2018 was as follows:

	Miscellaneous
Proportion – June 30, 2017	0.26800%
Proportion – June 30, 2018	0.25323%
Change in Proportions	0.01477%

For the year ended June 30, 2019, the Agency recognized pension expense of $1,443,569. At June 30, 2019, the Agency reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Pension contributions subsequent to measurement date	$ 1,133,396	$ -
Changes in assumptions	1,170,355	(276,358)
Differences between expected and actual experiences	379,505	(133,884)
Change in employer's proportion and differences between the employer's contributions and the employer's proportionate share of contributions	276,194	(237,198)
Net differences between projected and actual earnings on plan investments	1,062,968	(1,089,223)
Total	$ 4,022,418	$ (1,736,663)

Of the $4,022,418 reported as deferred outflows of resources, $1,133,356 related to contributions subsequent to the measurement date that will be recognized as a reduction of the net pension liability in the year ended June 30, 2020.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows:

Fiscal Year Ending:	Deferred Outflows/(inflows) of Resources
2020	973,750
2021	560,640
2022	(293,066)
2023	(88,965)

Actuarial Assumptions - The total pension liabilities in the June 30, 2018 actuarial valuations were determined using the following actuarial assumptions:

Valuation Date	June 30, 2017
Measurement Date	June 30, 2018
Measurement Period	July 1, 2017 to June 30, 2018
Actuarial Cost Method	Entry Age Normal in accordance with the requirements of GASB No. 68
Actuarial Assumptions:	
Discount Rate	7.15%
Inflation	2.50%
Salary Increases	Varies by Entry Age and Service
Mortality Rate Table	Derived using CalPERS' membership data for all funds.
Post-retirement benefit increase	Contract COLA up to 2.0% until Purchasing Power Protection allowance floor on purchasing power applies, 2.5% thereafter

The mortality table used was developed based on CalPERS-specific data. The table includes 15 years of mortality improvements using Society of Actuaries Scale 90% of scale MP 2016. For more details on this table, please refer to the December 2017 experience study report (based on CalPERS demographic data from 1997 to 2015) that can be found on the CalPERS website.

Discount Rate - The discount rate used to measure the total pension liability was 7.15%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current member contribution rates and that contributions from employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on plan investments was applied to all period of projected benefit payments to determine the total pension liability.

Long-term Expected Rate of Return – The long-term expected rate of return on pension plan investments was determined using a building-block method in which ranges of expected future real rates of return (expected returns, net of pension plan investment expenses and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, CalPERS took into account both short-term and long-term market return expectations as well as the expected pension fund cash flows. Using historical returns of all the funds' asset classes, expected compound returns were calculated over the short-term (first 10 years) and the long-term (11+ years) using a building-block approach. Using the expected nominal returns for both short-term and long-term, the present value of benefits was calculated for each fund. The expected rate of return was set by calculating the single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equivalent to the single equivalent rate calculated above and adjusted to account for assumed administrative expenses.

The table below reflects the long-term expected real rate of return by asset class. The rate of return was calculated using the capital market assumptions applied to determine the discount rate and asset allocation. These rates of return are net of administrative expenses.

Allocation by Asset Class	New Strategic Allocation	Real Return Years 1 – 10 (a)	Real Return Years 11+ (b)
Global Equity	50.0%	4.80%	5.98%
Fixed Income	28.0%	1.00%	2.62%
Inflation Assets	—	0.77%	1.81%
Private Equity	8.0%	6.30%	7.23%
Real assets	13.0%	3.75%	4.93%
Liquidity	1.0%	—	-0.92%
Total	100.00%		

(a) An expected inflation of 2.00% was used for this period.
(b) An expected inflation of 2.92% was used for this period.

Sensitivity of the Proportionate Share of the Net Pension Liability to Changes in the Discount Rate - The following presents the Agency's proportionate share of the net pension liability for the Plan, calculated using the discount rate for the Plan, as well as what the Agency's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1- percentage point lower or 1-percentage point higher than the current rate:

Discount Rate – 1% (6.15%)	Current Discount Rate (7.15%)	Discount Rate +1% (8.15%)
$ 17,097,933	$ 11,101,158	$ 6,150,919

Pension Plan Fiduciary Net Position - Detailed information about each pension plan's fiduciary net position is available in the separately issued CalPERS financial reports.

NOTE 11 - OTHER POST EMPLOYMENT BENEFITS (OPEB)

Plan Description

The Agency's defined benefit postemployment healthcare plan provides a post-retirement health care benefit to eligible retirees in accordance with a Memorandum of Understanding (M.O.U.) for union represented employees and Board approval for unrepresented management, supervisory, and confidential employees. For both employee groups, eligible employees retiring at or after age 50 with a minimum of 5 years CalPERS service credit may opt to continue health care coverage, with a portion of the monthly premium paid for by the Agency. Coverage may discontinue at the request of the retiree. The amount of the Agency's contribution towards retiree's medical benefit is based on the date of hire as an employee.

The Agency contracts with CalPERS to administer its retiree health benefits plan (an agent multiple-employer defined benefit plan) and to provide an investment vehicle, the California Employees' Retiree Benefit Trust Fund (CERBT), to prefund future OPEB costs. The Agency chooses from a menu of benefit provisions and adopts certain benefit provisions by Board resolution. A menu of benefit provisions as well as other requirements is established by State statute within the Public Employees' Retirement Law. By participating in CERBT, the Agency is also obligated to follow the actuarial assumptions established by the CalPERS Board of Administration. CalPERS issues a Comprehensive Annual Financial Report for the retirement plans. Copies of the CalPERS annual financial report may be obtained from the CalPERS Executive Office at 400 P Street, Sacramento, CA, 95814.

Employees Covered

As of the January 1, 2019 actuarial valuation, the following current and former employees were covered by the benefit terms under the Plan:

Active employees	43
Inactive employees or beneficiaries currently receiving benefits	32
Inactive employees entitled to, but not yet receiving benefits	-
Total	75

Contributions

The Agency's plan and its contribution requirements are established by Memoranda of Understanding with the applicable employee bargaining units and may be amended by agreements between the Agency and the bargaining units. The annual contribution is based on the actuarially determined contribution. For the fiscal year June 30, 2019, the Agency’s cash contributions were $107,314 to the CERBT trust and the implied subsidy was $191,714 resulting in total payments of $299,028.

Net OPEB Liability

The Agency's Net OPEB Liability was measured on June 30, 2018 and the Total OPEB Liability used to calculate the Net OPEB Liability was determined by an actuarial valuation dated June 30, 2019 that was rolled back June 30, 2017, and to June 30, 2018 to determine the total OPEB liability, based on the following actuarial methods and assumptions:

Actuarial Assumptions:	
Discount Rate	7.28%
Inflation	2.75% per year
Salary Increases	3.0% per annum, in aggregate
Investment rate of Return	7.28%
Mortality Rate (1)	Derived using CalPERS' membership data for all funds.
Pre-retirement turnover (2)	Derived using CalPERS' membership data for all funds.
Healthcare trend rate	Increase 5.50% per year after 2019.

Notes:

(1) Pre-retirement mortality information was derived from data collected during 1997 to 2011 CalPERS Experience Study dated January 2014 and post-retirement mortality information was derived from the 2007 to 2011 CalPERS Experience Study. The Experience Study Reports may be accessed on the CalPERS website (www.calpers.ca.gov) under Forms and Publications.

(2) The pre-retirement turnover information was developed based on CalPERS' specific data. For more details, please refer to the 2007 to 2011 Experience Study Report. The Experience Study Report may be accessed on the CalPERS website (www.calpers.ca.gov) under Forms and Publications.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Target Range	Benchmark
Global equity	59%	± 5%	MSCI AII Country World Index IMI (net)
Fixed income	25%	± 5%	Bloomberg Barclays Long Liability Index
Treasury Inflation-Protected Securities	5%	± 3%	Bloomberg Barclays US TIPS Index, Series L
Real Estate Investment Trusts	8%	± 5%	FTSE EPRA NAREIT Developed Liquid Index (net)
Commodities	3%	± 3%	S&P GCSI Total Return Index
Cash	-	+ 2%	91 Day Treasury Bill
Total	100%		

Discount Rate

The discount rate used to measure the total OPEB liability was 7.28 percent. The cash flows of the OPEB plan were projected to future years, assuming that CMSA will contribute an amount so that the assets always exceed expected benefits to retirees. Under that projection, the plan assets are projected to be adequate to pay all benefits to retirees in all future years, so the discount rate has been set equal to the long-term expected rate of return on investments, 7.28%.

Changes in the OPEB Liability

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Obligation (Asset) = (a) – (b)
Balance at June 30, 2018 (Valuation date January 1, 2018)	$4,346,151	$ 2,226,727	$ 2,119,424
Changes recognized for the measurement period			
Service cost	114,689	-	114,689
Interest	309,421	-	309,421
Employer contributions	-	299,028	(299,028)
Net investment income	-	177,929	(177,929)
Benefit payments to retirees	(191,714)	(191,714)	-
Administrative expense	-	(1,214)	(1,214)
Net changes	232,396	284,029	(51,633)
Balance at June 30, 2019 (Valuation date June 30, 2018)	$ 4,578,547	$ 2,510,756	$ 2,067,791

Sensitivity of the Net OPEB Liability to the Changes in the Discount Rate

The following presents the Net OPEB Liability of the Agency if it were calculated using a discount rate that is one percentage point higher or lower than the current discount rate, for the measurement period ended June 30, 2018:

	1% Decrease (6.28%)	Current Discount Rate (7.28%)	1% Increase (8.28%)
Net OPEB Liability	$ 2,701,141	$ 2,067,791	$ 1,546,921

Sensitivity of the Net OPEB Liability to the Changes in the Health Care Cost Trend Rates

The following presents the net OPEB liability of the Agency if it were calculated using health care cost trend rates that are one percentage point higher or lower than the current rate, for the measurement period ended June 30, 2018:

	1% Decrease (4.5%)	Current Trend Rate (5.5%)	1% Increase (6.5%)
Net OPEB Liability	$ 1,514,815	$ 2,067,791	$ 2,738,341

OPEB Plan Fiduciary Net Position

CERBT issues a publicly available financial report that may be obtained from CalPERS, Prefunding Programs, CERBT (OPEB), P.O. Box 1494, Sacramento, CA 95812-1494.

Recognition of Deferred Outflows and Deferred Inflows of Resources

Gains and losses related to changes in total OPEB liability and fiduciary net position are recognized in OPEB expense systematically over time.

Amounts are first recognized in OPEB expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to OPEB and are to be recognized in future OPEB expense.

The recognition period differs depending on the source of the gain or loss:

Net difference between projected and actual earnings on OPEB plan investments	5 years
All other amounts	Expected average remaining service lifetime (EARSL)

OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB

For the year ended June 30, 2019, the Agency recognized OPEB expense of $246,298. At June 30, 2019, the Agency reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
OPEB contributions subsequent to measurement date	$ 224,526	$ -
Net differences between projected and actual earnings on plan investments	-	(54,068)
Total	$ 224,526	$ (54,068)

The $224,526 reported as deferred outflows of resources related to contributions subsequent to the measurement date that will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2020.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as OPEB expense as follows:

Fiscal Year Ending:	Deferred Outflows/(inflows) of Resources
2020	(16,964)
2021	(16,964)
2022	(16,964)
2023	(3,175)

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Proportionate Share of Net Pension Liability
Last 10 Years*

	Fiscal Year End June 30,				
	2019	2018	2017	2016	2015
Measurement date	6/30/2018	6/30/2017	6/30/2016	6/30/2015	6/30/2014
Proportion of net pension liability	0.25323%	0.26795%	0.27951%	0.24216%	0.24376%
Proportionate share of the net pension liability	$ 11,101,158	$ 11,275,371	$ 9,709,971	$ 6,643,602	$ 6,024,473
Covered payroll	$ 4,765,978	$ 4,560,237	$ 4,764,021	$ 4,418,991	$ 4,099,618
Proportionate share of the net pension liability as a percentage of covered payroll	232.93%	247.25%	203.82%	150.34%	146.95%
Plan's fiduciary net position	$ 33,230,349	$ 32,353,864	$ 29,830,921	$ -	$ -
Plan's fiduciary net position as a percentage of the Plan's total pension liability	74.96%	74.16%	75.44%	82.12%	83.21%

Schedule of Agency's Pension Plan Contributions
Last 10 Years*

	2019	2018	2017	2016	2015
Contractually required contributions (actuarially determined)	$ 1,133,396	$ 967,659	$ 957,403	$ 950,859	$ 927,135
Contributions in relation to actuarially determined contributions	(1,133,396)	(967,659)	(957,403)	(950,859)	(927,135)
Contribution deficiency (excess)	-	-	-	-	-
Covered payroll	$ 4,985,715	$ 4,765,978	$ 4,560,237	$ 4,764,021	$ 4,418,991
Contributions as a percentage of covered payroll	22.73%	20.30%	20.99%	19.96%	20.98%

Notes to Schedule:

Valuation Date:	June 30, 2018
Methods and assuptions used to determine contribution rates:	
Actuarial cost method	Entry age normal cost method
Amortization method	Level percent of payroll
Asset valuation method	Actuarial value of assets
Inflation	2.50%
Salary increase	Varies by entry age and service
Investment rate of return	7.15%
Mortality Rate Table	Derived using CalPERS Membership Data for all Funds
Post-retirement benefit increase	Contract COLA up to 2.50% until Purchasing Power Protection Allowance Floor on Purchasing Power applies.

* Fiscal year ending June 30, 2015, was the first year of implementation, therefore only five years are shown.

CENTRAL MARIN SANITATION AGENCY
Schedule of Changes in the Net OPEB Liability and Related Ratios
for the Measurement Periods Ended June 30

		2018	2017
Total OPEB Liability			
Service cost		$ 114,689	$ 111,349
Interest on the OPEB liability		309,421	293,164
Benefits paid to retirees		(191,714)	(170,667)
Net change in total OPEB liability		232,396	233,846
Total OPEB Liability - beginning		4,346,151	4,112,305
Total OPEB Liability - ending	**(a)**	$4,578,547	$4,346,151
Plan Fiduciary Net Position			
Employer contributions		$ 299,028	$ 287,122
Net investment income		177,929	207,513
Benefits paid to retirees		(191,714)	(170,667)
Administrative expense		(1,214)	(1,006)
Net change in plan fiduciary position		284,029	322,962
Plan fiduciary net position- beginning		2,226,727	1,903,765
Plan fiduciary net position- ending	**(b)**	$2,510,756	$2,226,727
Net OPEB liability- ending	**(a) - (b)**	$2,067,791	$2,119,424
Plan fiduciary net position as a percentage of the total OPEB liability		54.84%	51.23%
Covered-employee payroll		$5,259,257	$4,716,585
Net OPEB liability as a percentage of covered-employee payroll		39.32%	44.94%

Notes to Schedule:

Historical information is required only for measurement periods for which GASB No. 75 is applicable. Future years' information will be displayed, up to 10 years, as information becomes available

The term Covered-employee payroll is used because there are employees receiving benefits not based on wages.

CENTRAL MARIN SANITATION AGENCY
Schedule of OPEB Contributions
Last Ten Fiscal Years*

Fiscal Year Ended June 30,	2019	2018
Actuarially determined contributions (ADC)	$ 246,298	$ 292,033
Contributions in relation to the ADC	(246,298)	(292,033)
Contribution deficiency (excess)	**$ -**	**$ -**
Covered-employee payroll	4,985,715	5,259,527
Contributions as a percentage of covered-employee p	4.94%	5.55%

Notes to Schedule:

*Actuarial methods and assumptions used to set the actuarially determined contributions for Fiscal Year 2019 were selected by the Agency after consultation with the actuary.

Method and assumptions used to determine contribution:

Actuarial Cost Method	Entry Age Normal
Amortization Method/Period	Level percent of payroll
Asset valuation method	Market value
Inflation	2.75%
Long-term investment rate of return	7.28%
Discount rate	7.28% per annum
Healthcare cost-trend rates	5.5% per annum
Payroll growth	3.0% per annum
Coverage elections	100% of eligible employees assumed to elect coverage upon retirement, remaining covered for life. Employees with no current medical assumed to elect employee-only medical upon retirement.
Mortality	Taken from the 2014 CalPERS OPEB Assumptions Model for *Public Agency Miscellaneous*
Retirement rates	Taken from the 2014 CalPERS OPEB Assumptions Model for *Public Agency Miscellaneous* with a 2.7% at 55 retirement plan.
Turnover (withdrawal)	Taken from the 2014 CalPERS OPEB Assumptions Model for *Public Agency Miscellaneous*

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INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Commissioners
Central Marin Sanitation Agency

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities of Central Marin Sanitation Agency, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise Central Marin Sanitation Agency's basic financial statements, and have issued our report thereon dated October 19, 2019.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered Central Marin Sanitation Agency's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Central Marin Sanitation Agency's internal control. Accordingly, we do not express an opinion on the effectiveness of Central Marin Sanitation Agency's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Central Marin Sanitation Agency's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Cropper Accountancy Corporation

CROPPER ACCOUNTANCY CORPORATION
Walnut Creek, California
October 19, 2019

Financial Statements as of June 30, 2019

CENTRAL MARIN SANITATION AGENCY

Cropper Accountancy Corporation

Items worthy of discussion

- Unmodified Opinion (page 1)

- Communication with Those Charged with Governance (SAS 114)
  - GASBS 68 & 75 and inventory continue to be most sensitive estimates and disclosures
  - No disagreements with management
  - No material weaknesses

Statement of Net Position

	2019	2018	Change
Current Assets	$ 19,572,096	$ 17,715,171	$ 1,856,925
Noncurrent Assets	78,881,155	81,376,114	(2,494,959)
Deferred Outflows	6,329,394	7,332,920	(1,003,526)
Current Liabilities	(3,879,363)	(3,780,431)	(98,932)
Noncurrent Liabilities	(55,467,490)	(58,367,168)	2,899,678
Deferred Inflows	(1,790,731)	(2,056,973)	266,242
Net Position	$ 43,645,061	$ 42,219,633	$ 1,425,428

Revenues, Expenses & Changes in Net Position

	2019	2018	Change
Operating Revenue	$ 17,901,670	$ 17,353,966	$ 547,704
Operating Expenses	(16,553,636)	(16,351,993)	(201,643)
Nonoperating Revenues	863,486	303,728	559,758
Nonoperating Expenses	(1,457,861)	(1,527,361)	69,500
Capital Contributions	671,769	197,753	474,016
Prior Period Adjustment	-	(375,820)	375,820
Change in Net Position	1,425,428	(23,907)	1,449,335

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Jacky Wong, Assistant Engineer

Approved: Jason Dow, General Manager

Subject: San Quentin Pump Station Motor Control Center and Control Panel Upgrade Project (CMSA Contract No. 20-01)

Recommendation: Award the construction contract for the San Quentin Pump Station Motor Control Center and Control Panel Upgrade Project to Fort Bragg Electric Inc., and authorize the General Manager to execute the contract agreement.

Summary: Public bids were opened for the San Quentin Pump Station Motor Control Center and Control Panel Upgrade Project (Project) on November 6, 2019. Fort Bragg Electric Inc. (Ft Bragg) was the lowest, responsive, responsible bidder with a bid proposal amount of $297,997. If the construction contract is awarded, the Award Notice will be issued to Fort Bragg Electric on November 14 and the Notice to Proceed for the construction work will be issued by early December 2019 with an anticipated project completion by June 2020.

Discussion: At the January 2019 meeting, the Board approved a Professional Services Agreement with GHD for the design of electrical, instrumentation, and mechanical improvements at the San Quentin Pump Station (SQPS). Staff and GHD identified various projects that should be grouped together in the same year for efficiency. The design package was split into two bid packages, with the first package intended for construction during FY20 (Project) and the second package intended for construction during FY21.

The Project involves replacing components that have reached the end of their useful life, including both electrical system motor control centers, as well as replacing the controls with a PLC-driven system. Improvements planned for FY21 construction involve replacing additional aging components including the emergency generator and supply and exhaust fans.

At the September 2019 meeting, the Board adopted the Project's contract documents and authorized advertising the Project for public bidding. The Notice Inviting Sealed Bids was issued on September 12, 2019, and was published in Marin IJ newspaper, the Agency's website, and various Builders' Exchanges. Three contractors attended the mandatory pre-bid meeting on October 16, 2019, and CMSA received three (3) sealed bids on November 6, 2019. Table 1 on the following page shows the bid results and the Engineer's Construction Cost Estimate.

Bidder	City, State	Total Bid Price	% Above/Below Engineer's Estimate
Fort Bragg	**Fort Bragg, CA**	**$297,997.00**	**(-7.2%)**
Bartley Pump PM LLC.	**Santa Rosa, CA**	**$354,298.00**	**+10.4%**
Mike Brown Electric Co.	**Cotati, CA**	**$362,000.00**	**+12.8%**
Engineer's Estimate		**$321,000.00**	

Table 1 - Bid Results

Staff reviewed the received bids and has confirmed that the lowest responsive and responsible bid is from Fort Bragg for $297,997, which is $23,003 (7.2%) below the Engineer's estimate of $321,000.

Fiscal Impact: The bid price submitted by Fort Bragg for the Project construction is $297,997. CDCR is responsible for all costs incurred for the Project and will reimburse CMSA in accordance with the Extra Services fee listed in the amended San Quentin State Prison Wastewater Service Agreement executed in June 2019. The Agreement has $718,807 for the FY20 and FY21 construction contract work.

Alignment with Strategic Plan: This activity is a strategic action to support Goal 4 – Objective 4.2 in the Agency's FY20 Business Plan as shown below.

Goal 4: *CMSA will lead or actively participate in collaborative efforts to address local and regional environmental opportunities and challenges.*

Objective 4.2: *Promote interagency coordination on capital projects.*

Action: *Construct the Motor Control Center and Control Panel Upgrade Project for San Quentin Pump Station.*

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Ad Hoc Space Evaluation Committee – Commissioners DiGiovanni and Kelly
Jason Dow, General Manager

Subject: Agency Space Evaluation Findings

Recommendation: Receive the ad hoc Space Evaluation Committee's findings, and provide direction to the Committee and/or staff, as appropriate.

Summary: There are several areas on the two Agency properties that are not currently used, with some being reserved for potential future use. At its May 2019 meeting, the Board briefly discussed these unused areas and created an ad hoc Space Evaluation Committee, comprised of Chair DiGiovanni and Commissioner Kelly, to work with staff to identify potential future uses for these areas and to report their finding at a future Board meeting.

Discussion: Staff and the ad hoc Committee met three times over the past few months. The first meeting included a site walk of the treatment facility property and the Andersen Drive hillside property, while the second and third meetings focused on reviewing property drawings of unused areas and discussing possible future uses. A brief description of the four attached property drawings with the Committee's evaluation findings and recommended future uses are presented below.

<u>CMSA Property</u> (Drawing 1)
The Agency owns two parcels of land, a 25-acre treatment facilities site (APN 018-180-146) and the 26-acre Andersen Drive Hillside (APN 018-180-147) that extends from the road up to the hillside ridge; it abuts State of California land to the south and Garbarino property to the west. Access to the Andersen Hillside property is through the adjacent Garbarino property, and the City of San Rafael has an easement between the two properties for Andersen Drive. Initially, the Committee thought there may be some development potential for the Andersen Hillside property, but during the site visit, it observed that the hillside is heavily wooded with steep slopes and has limited level area for development, in addition to the complicated access via Jacoby Street and several narrow access roads through the Garbarino property.

After the site visit, staff researched historical records and learned that the Andersen Drive Hillside property was funded by the EPA Clean Water Grant Project (C-06-2467) for a CMSA treatment plant odor buffer zone.

Recommendation: Leave the Andersen Drive Hillside undeveloped as an odor buffer, and staff to continue to clear the vegetation on the lower slopes above Andersen Drive.

<u>Administration and Maintenance Areas</u> (Drawing 2)
CMSA's administration and maintenance buildings are constructed with deep pile foundations due to the thick layers of bay mud beneath each, and the soil beneath the structures has been consolidating since their construction, leaving voids under the buildings. Around the single level administration building there are three large landscaped areas, and the maintenance building is surrounded by the corporation yard, employee parking lot, and an Agency vehicle parking and delivery truck maneuvering area. Currently, there is no planned use for the landscaped areas around the administration building.

The committee concluded that if the administration building needs to be expanded to accommodate additional office spaces, larger employee locker rooms, and/or an expanded environmental laboratory, the expansion can be a second story addition or into any of the landscaped areas.

Recommendation: Continue to maintain the landscaped areas, and consider their use if the administration building needs to be expanded in the future.

<u>Corporation Yard Area</u> (Drawing 3)
Adjacent to the maintenance building and its covered parking facility is a 37,000 ft^2 corporation yard. In the past, a portion of this area has been used by construction contractors as an equipment and materials staging area, but that use has been shifted to the vacant area next to the Chlorine Contract Tanks (see below). At the July 2019 meeting, the Board approved a five-year licensing agreement with Marin Airporter for approximately 18,000 ft^2 of the area to be used for Marin Transit bus parking. Currently, the remaining portion of the corporation yard is not used.

In the future, the corporation yard may be needed for nutrient removal treatment processes. In April 2018, the San Francisco Regional Water Board adopted the second Nutrient Watershed permit for the 2018 -2023 term. During this period, scientific nutrient studies and evaluations of the San Francisco Bay will provide the RWB with the necessary information to determine if portions of the SF Bay are impaired by nutrients. If the central SF Bay is impaired, then CMSA will likely have final effluent nutrient limits requiring nutrient removal treatment processes to be planned, designed, and constructed. If this occurs, which should be known around 2022, the only location to build the new treatment facilities is in the corporation yard. Our 2018 Master Plan evaluated different nutrient removal technologies, and the recommended system requires modifications to the four existing aeration basins and construction of new membrane bioreactors and a pumping facility in the corporation yard.

Recommendation: Reserve the future use of all or a portion of the corporation yard as a site for nutrient removal treatment systems.

Chorine Contact Tank Area (Drawing 4)
Between the plant road, chemical storage building, and chlorine contact tanks (CCT) is another unused area. This is one of the only areas on-site that can be used as a construction contractor staging area, and it is used for that purpose on the occasional larger construction project.

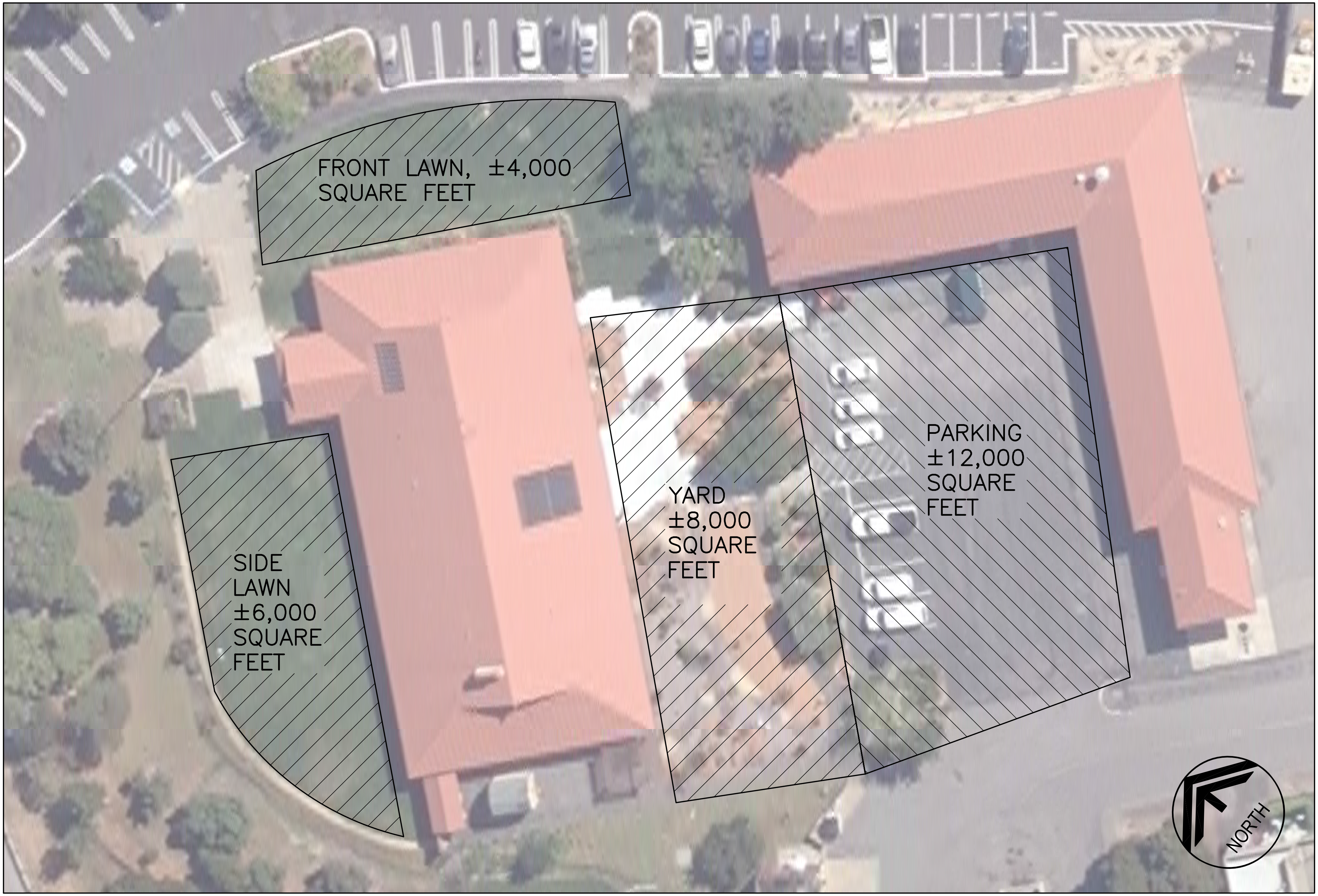
In the 2017 Recycled Water Feasibility Study, the recommended project was to provide tertiary recycled water to San Quentin State Prison for various uses such as inmate cell toilet flushing, irrigation, and boiler make-up water. On-site facilities identified for that project were a 0.2 MGD tertiary treatment system and a pumping station, both of which were located in the vacant area next to the CCTs. Marin Municipal Water District incorporated this project into its 2040 Water Supply Masterplan. There has been no discussion between CMSA, MMWD, and San Quentin about moving this project beyond the conceptual planning level due to the high cost of the recycled water, over $3,000 acre-ft.

Recommendation: Reserve the CCT area for construction contractor staging, and revisit this decision if the San Quentin project is selected for implementation in the future.

Attachments:
- Drawing 1: CMSA Property Overview
- Drawing 2: Administration and Maintenance Areas
- Drawing 3: Corporation Yard Area
- Drawing 4: Chlorine Contact Tank Area

DRAWING 1: CMSA PROPERTY

NOTES 1: ODOR BUFFER PER EPA GRANT AGREEMENT IN DECEMBER 1979.
2: CMSA GRANTED ANDERSEN DRIVE EASEMENT DEEDS TO THE CITY OF SAN RAFAEL IN AUGUST 1984.



DRAWING 2: CMSA ADMINISTRATION BUILDING AREA

NOTE 1: POSSIBLE NUTRIENT REMOVAL PROCESSES LOCATION (IN 2024)

DRAWING 3: CMSA CORPORATION YARD AREA

DRAWING 4: CMSA CHLORINE CONTACT TANK AREA

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager

Subject: Senior Engineer Job Description

Recommendation: Approve the Senior Engineer job description and compensation range, and provide direction to the General Manager, as appropriate.

Discussion: CMSA has assistant and associate engineer classifications, and staff proposes adding a senior engineer classification to complete the professional engineering classification series. By adding this new job description to the Agency's Classification Plan, it provides for more flexibility when recruiting for engineering staff and extends the career ladder for existing engineering employees. The proposed job description is attached, and the key differences between its essential job functions and qualifications and those of the associate engineer are shown below.

- Serves in a project manager capacity for Agency capital and maintenance projects.
- Prepares professional service selection documents and administers the selection process.
- Manages consultant professional service agreements.
- Updates the Agency 10-year Capital Improvement Program and reports on its expenditures.
- May directly or indirectly supervise department staff, and perform all supervisory functions such as preparing performance evaluations, directing work, establishing work expectations, and monitoring performance.
- Requires eight years of increasingly responsible professional engineering experience.
- A professional engineer license can be substituted with 10 additional years of experience.
- FLSA status is exempt, so the position is not eligible for overtime compensation.

CMSA has thirteen comparator wastewater organizations in the S.F. Bay Area that are surveyed when the Agency's human resources consultant prepares the periodic compensation market survey. Staff surveyed our comparator organizations and nine have senior engineer classifications. The proposed 5-step compensation range of $11,897 - $14,461, and its top step is 16.15% greater than the Associate Engineer's top step ($12,451) and approximately 21% less than the Technical Services Manager's top step ($18,289).

Attachment: Senior Engineer Job Description

CENTRAL MARIN SANITATION AGENCY
1301 Andersen Drive | San Rafael, CA 94901 | 415.459.1455 | FAX: 415.459.3971

JOB DESCRIPTION: SENIOR ENGINEER

SUMMARY

Under general direction of the Technical Services Manager, performs engineering, project management, construction management, and other technical services for the Agency. Makes calculations, performs design work, administers contracts, manages consultants, maintains records, conducts planning, engineering, project, and facility operational studies, and performs related work as required.

ESSENTIAL DUTIES AND RESPONSIBILITIES

Duties include, but are not limited to, the following:

- Serves as project manager on Agency maintenance and capital improvement projects: establishes project goals and objectives; prepares scopes of work, budgets and schedules; manages the preparation of plans, specifications, construction documents, and other documents for the planning, design, and construction of projects.
- Prepares professional services selection documents, reviews proposals, and recommends selection of the most qualified firm; Directs or participates in the development, negotiation, and administration of professional service contracts.
- Performs complex engineering duties and exercises significant independence in carrying out the duties of the position.
- Exercises discretion and independent judgment in developing, managing, and delivering multiple projects.
- Serves as Agency representative and construction manager on construction projects: conducts and documents onsite inspections; manages design changes in the field; reviews and recommends approval of progress payments; and prepares or approves as-built record drawings.
- Evaluates, plans, and designs modifications to wastewater and energy production facilities: identifies, analyzes, and evaluates alternatives, and makes recommendations.
- Updates, or assists with updating, the Agency's 10-year Capital Improvement Plan, and regularly monitors and reports on the expenditure of project funds.
- Assists with updating the department operating budget and regular monitoring and reporting on the expenditure of department funds.
- Researches new technologies, products, equipment, and codes and regulations, and prepares reports with alternative analyses.
- Provides technical and engineering support to other Agency teams and departments.
- Prepares contract documents for equipment procurement, planning and evaluation studies, and maintenance work, and manages consultant and contractor activities as assigned.
- Represents the Agency with industry organizations, multi-agency committees, professional groups, and the public; responds to inquiries from the public and external organizations.
- Establishes and maintains positive, constructive, and collaborative working relationships with Agency management and staff, local and regulatory agencies, contractors, consultants, and the public.

- Participates in special projects as assigned, including participating in and/or leading inter-Agency teams and committees.
- Maintains accurate records and files, including electronic and paper record drawings.
- Prepares and maintains records of correspondence, reports, procedures, and other work products.
- Gives presentations to the Board of Commissioners on projects, studies, and related activities.
- Identifies opportunities to improve department efficiency and effectiveness and assists in managing the implementation of improvements and/or update to policies and procedures.
- Assists in the development and implementation of strategic initiatives related to the Agency's Strategic Business Plan.

SUPERVISORY RESPONSIBILITIES
This position may directly or indirectly supervise Technical Services Department engineering staff and interns. Carries out supervisory responsibilities in accordance with Agency policies and procedures, as well as and applicable labor, regulatory, and safety laws. Responsibilities include training employees; directing work; assisting with establishing staff work expectations, performance goals, and work plans; evaluating employee performance; and assisting with resolving personnel complaints and related problems.

QUALIFICATIONS
To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required.

Education
Equivalent to a bachelor's degree (B.S.) from four-year ABET-accredited college with major coursework in civil engineering or related field of study. Graduate engineering degree is preferred.

Experience
Minimum of eight (8) years increasingly responsible professional engineering experience, preferably in a public agency setting, is required. Project management experience related to staff, consultants, and construction in a water- or wastewater-related field is highly desirable.

Interpersonal Skills
Ability to work cohesively in a team setting. Ability to interact with others (co-workers, supervisors, subordinates, vendors, and members of the public) in a professional manner; to accept constructive criticism from supervisors, and peers; to recognize the need for, and to seek, assistance or clarification as needed; to work independently; to handle work-related stress in a professional manner; to prioritize assignments and meet deadlines; successfully balance life demands with work demands; to arrive at work as scheduled and to work the hours as agreed upon and scheduled; to use tact, initiative, prudence, and independent judgment within Agency policy, procedural, and legal guidelines; to communicate ideas, provide direction, and assert a point of view in complex situations.

Language Skills
Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information in a variety of settings and respond to questions.

Mathematical Skills
Ability to carry out routine engineering calculations related to wastewater treatment process control parameters and engineering design including surveying, open channel and pressure pipe hydraulics, mass balance, and engineering economics.

Reasoning Ability

Ability to define problems, collect data, establish facts, and draw valid conclusions; to interpret an extensive variety of technical information in mathematical or diagram form and deal with a variety of abstract and concrete variables; to apply principles of logical or scientific thinking to a wide range of intellectual and practical problems; to deal with verbal and nonverbal symbolism such as formulas, scientific equations, graphs, etc.

CERTIFICATES, LICENSES, REGISTRATIONS

Registration as a Professional Engineer in the State of California is required, and failure to maintain a license in good standing may result in loss of employment. Ten years of additional professional engineering experience – for a total of eighteen years of experience – can be substituted for the Professional Engineer registration.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. The job duties require sitting, standing, walking on level and unleveled surfaces, reaching, twisting, turning, kneeling, bending/stooping, crouching, grasping and making repetitive hand movements in the performance of daily duties. The employee must be able to lift and/or move up to 20 pounds above the head, and up to 50 pounds to waist height.

Specific vision ability required by this job includes the ability to see clearly at 20 inches or less, at 20 feet or more, to judge distances and spatial relationships to see objects where and as they actually are, and to adjust the eye to bring an object into sharp focus.

Examples of the physical demands for this position, including their activity and duration, are available from Administration.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those that an employee encounters while performing the essential functions of this job.

The employee typically works in an office environment with moderate noise levels, temperature controlled conditions, and no direct exposure to hazardous physical substances. While performing field duties of this job, the employee is occasionally exposed to wet and/or humid conditions, outdoor weather conditions, moving mechanical parts, fumes or airborne particles, toxic or caustic chemicals, the risk of electrical shock, or to vibration. The noise level in the field work environment is usually moderate, with occasional exposure to loud equipment.

SPECIAL REQUIREMENTS

There are no special requirements for this job.

RIGHT TO WORK DOCUMENTATION

Before being hired, all new employees will be required to show documentation as proof of authorization to work in the United States.

Job Title:	Senior Engineer
Department:	Technical Services
Reports To:	Technical Services Manager
FLSA Status:	Exempt
Revision Date:	November 2019

Central Marin Sanitation Agency

BOARD MEMORANDUM

November 7, 2019

To: CMSA Commissioners and Alternates

From: Kate Brouillet, Administrative Assistant

Approved: Jason Dow, General Manager

Subject: November Informational Items

Recommendation: Informational, provide comments or direction to the General Manager, as appropriate.

A. Letter dated October 15, 2019 from Jessica Gauger, California Association of Sanitation Agencies
Re: CASA Comments on the PFAS Provisions in the NDAA

B. PFAS Factsheet, dated November 1, 2019, produced by American Public Works Association, CASA, NACWA, National Waste & Recycling Association, Solid Waste Association, Water Reuse, and the Water Environment Federation

C. Letter dated October 28, 2019 to Anna Gallagher, California Regional Water Quality Control Board
Re: Monthly Self-Monitoring Report (SMR) – September 2019

10/15/19

A

CALIFORNIA ASSOCIATION of SANITATION AGENCIES

1225 8th Street, Suite 595• Sacramento, CA 95814 • TEL: (916) 446-0388 • www.CASAweb.org

Submitted via email to

October 15, 2019

CA Congressional Delegation

Subject: CASA Comments on PFAS Provisions in the NDAA

Dear Members of the California Congressional Delegation:

The California Association of Sanitation Agencies (CASA) appreciates the opportunity to comment on PFAS provisions within the Fiscal Year 2020 National Defense Authorization Act (NDAA) (HR 2500). CASA is dedicated to protecting public health and the environment through effective wastewater treatment. We promote sustainable practices such as water recycling, biosolids management, and renewable energy production. We represent over 120 public agencies in California serving more than 90% of the California sewered population. We urge you to work with your colleagues to develop federal policy to address PFAS as detailed below.

As Congress continues to address the very important issue of per- and polyfluoroalkyl substances (PFAS) in water, we want to bring to your attention the adverse consequences of amendments sponsored by Representatives Debbie Dingell and Chris Pappas included in the House-passed NDAA pending before a House Senate Conference Committee.

The mission of wastewater utilities is to protect public health and the environment in the communities we serve. The public clean water sector is committed to working with Congress, the Environmental Protection Agency, and state regulators to ensure PFAS do not harm our communities. Unfortunately, while the Dingell and Pappas amendments are well-intentioned in trying to address PFAS concerns, the practical implications of these two amendments could be to impose serious, unintended challenges on public clean water utilities.

If these amendments are passed into law as written, Congress would circumvent the scientific and regulatory process by mandating that EPA add all PFAS as a hazardous substance under CERCLA and list PFAS as toxic pollutants under the Clean Water Act. These amendments bypass the process by which EPA first assesses which PFAS chemicals pose public health concerns and then sets evidence-based risk levels and cleanup thresholds. In short, these amendments would put the "cart before the horse" by mandating certain action before the appropriate scientific and risk analyses have been made.

Not only do important scientific determinations need to be made before identifying PFAS as a hazardous substance under CERCLA and listing PFAS as toxic pollutants under the Clean Water Act, but the focus needs to remain on the parties responsible for PFAS being in water, such as manufacturers and industrial users. Utilities and their customers should not bear the high costs of remediating PFAS.

The bipartisan Senate version of NDAA (S. 1790), led by Senators John Barasso and Tom Carper, does not include the language of the Dingell or Pappas amendments. CASA supports the Senate approach as preserving the priority to develop environmental mandates underpinned by science and consistent with the authorities of the Safe Drinking Water Act. Since 1956, CASA has represented the interests of California's wastewater community, including constituents from your congressional district, I urge that you take into account our concerns regarding the unintended consequences of the Dingell and Pappas amendments. Public clean water utilities are willing to do our part to address PFAS issues, but we cannot allow policy to outpace science.

If you would like additional background information about PFAS as it relates to the municipal wastewater sector, please see the attached fact sheet as well as documents produced by the Water Environment Federation and National Association of Clean Water Agencies. If you have any questions or concerns, please do not hesitate to reach out to me directly at (916) 446-0388 or jgauger@casaweb.org. Thank you.

Sincerely,

Jessica Gauger
Director of Legislative Advocacy

cc: Roberta Larson, Executive Director, CASA
Adam Link, Director of Operations, CASA
Eric Sapirstein, Federal Lobbyist, ENS Resources

What Are PFAS?

Per and polyfluoroalkyl substances (PFAS)[1] are a group of man-made fluorinated compounds which are used for a variety of applications by both industry and residential households. These chemicals are widely used because they are resistant to heat, water, and oil. **PFAS are commonly found in every American household, and in products as diverse as:**

PFAS have been in commercial use since the 1940's and are abundant in today's society. Two of the most common types (PFOS and PFOA) were phased out of production in the United States in 2002 and 2015 respectively, but are still present in some imported products. PFOA and PFOS are found in every person's blood stream in the parts per billion range, though those concentrations have decreased by 70% for PFOA and 84% for PFOS between 1999 and 2014, which coincides with the end of the production and phase out of PFOA and PFOS in the United States.[2]

PFAS Are Ubiquitous in Our Homes and Our Environment

Several recent legislative and regulatory efforts across the US to address PFAS have focused on limiting levels in drinking water. However, there has been relatively little conversation about the presence of these chemicals in our everyday lives. In several studies, the mean and median concentration of PFOA in household dust in the United States was found to be between roughly 10,000 and 50,000 parts per trillion (ppt)[3]. **This means there is significantly more PFAS in the ambient dust in the average home than the levels currently being discussed as thresholds for drinking water.** Not only are PFAS part of the air we breathe and the products we use, but they have also been found in the food we eat. In other words, there are numerous human exposure pathways for PFAS beyond drinking water.

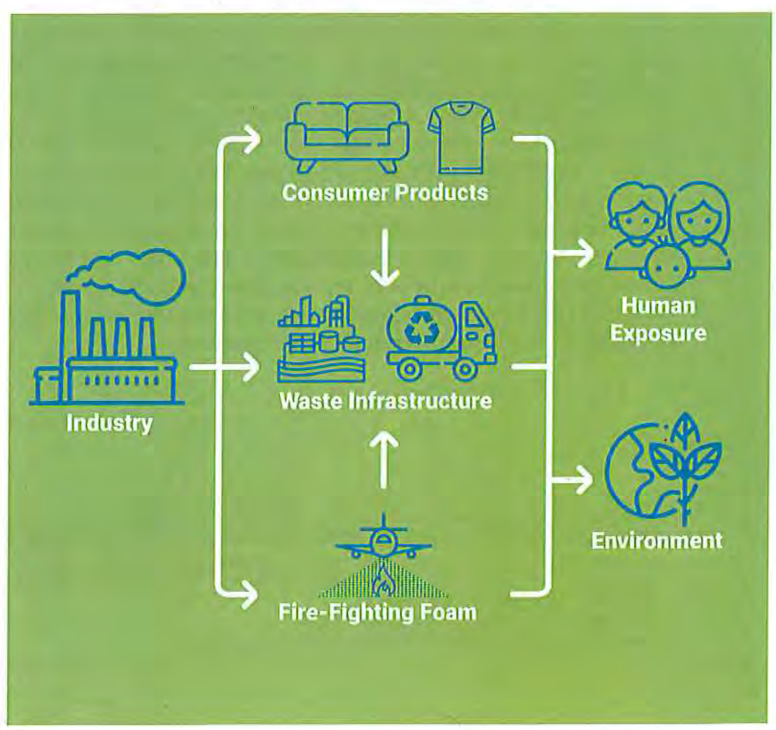
Importance of Human Health Protection

Agencies providing essential public services such as safe drinking water, wastewater treatment, water recycling, and biosolids recycling firmly believe in our **collective mission to ensure safe drinking water and sanitation services.** We also acknowledge and embrace our role as environmental and public health stewards and the responsibility of providing a healthy and clean environment now and for future generations. To that end, agencies would be in support of actions and regulations intended to ensure delivery of those services as long as they are based on credible science and developed after due deliberation. There is concern that in the case of PFAS, notification levels, thresholds, and in some cases limits are being developed in advance of the scientific and public process.

PFAS Producers and Heavy Users Are Not the Same as PFAS "Receivers"

Drinking water treatment systems and wastewater treatment facilities are not "producers" or users of PFAS, and **none of these essential public service providers utilize PFAS chemicals. Rather, they are "receivers" of these chemicals used by manufacturers and consumers, and merely convey or manage the traces of PFAS that we encounter in our daily lives.**

In order to address the true sources of these chemicals, discontinuation of production and use (both domestic and foreign) is necessary at manufacturing facilities and heavy use areas such as firefighting training sites. As long as PFAS are elements of products used in our everyday lives, and as long as background levels resulting from decades of manufacturing and use persist, they will continue to be found in the "receiver" streams.



Placing PFAS in Context: Distinguishing Contaminated Sites and Background Levels

Recent legislative and regulatory efforts to address PFAS have tended to not differentiate between concentrations at producer and heavy user contaminated sites and common background levels in drinking water, groundwater, recycled water, wastewater, or biosolids. The levels of PFAS found in these two scenarios are dramatically different. Sites found near manufacturers of PFAS can have levels of contamination at 100,000 to 500,000 ppt. At fire-fighting training sites, including military complexes, levels can be as high as 6,950,000 ppt.[4] In these circumstances, it is clear that the producers and heavy users of PFAS have caused or contributed to the contamination of sites that need to be addressed. **In contrast, the action levels currently being discussed for drinking water systems range from 5–40 ppt, an exceptionally small fraction of the concentrations found at highly contaminated sites.**

Because of this vast disparity in relative contributions, product manufacturer responsibility and stewardship, as well as cleanup and remediation at highly contaminated sites, are the most efficient and effective methods of addressing these chemicals and protecting human health and the environment.

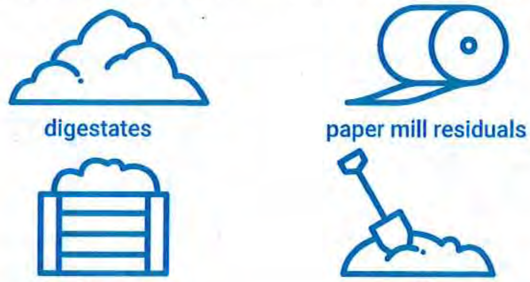
Drinking Water Thresholds and Unintended Consequences

The USEPA has set an advisory level of 70 ppt individually or combined for PFOA and PFOS in drinking water and is currently evaluating the need to develop maximum contaminant levels (MCL) for these and possibly other PFAS compounds. **For perspective, one part per trillion is the equivalent of four grains of sugar in an Olympic sized swimming pool, or the equivalent of one second in 32,000 years.** Even as EPA's work continues, states have begun setting their own PFAS standards for drinking water at a rapid pace and without following some of the usual regulatory and scientific review and public involvement procedures.

The public and political concern about PFAS is leading several states to move forward with regulatory standards or notification levels while the science is still developing. For example, the California State Water Board has established notification levels of 6.5 ppt for PFOS and 5.1 ppt for PFOA in drinking water, while other states have adhered to the USEPA health advisory level of 70 ppt for both combined. States adopting different standards for the same compounds can create confusion and risks undermining public confidence at a time when greater consistency is needed. **In fact, stringent state requirements could have significant unintended impacts on public municipalities and individuals, as numerous public systems could be deemed unusable and/or need to install expensive additional treatment systems.**

Background Levels of PFAS in Wastewater Effluent, Recycled Water and Biosolids

Strict PFAS standards for drinking water could also ultimately impact discharge limits on wastewater treatment plants, recycled water, and biosolids. Because PFAS are ubiquitous in households, consumer products, food, and the environment generally, they will typically make their way into the wastewater stream. After treatment, trace amounts of PFAS may also be found in biosolids. Of course, PFAS are also found in:



Given the ubiquity of PFAS, and the comparative background levels which may be found in wastewater and biosolids, setting requirements near analytical detection limits on these sources may not provide a discernable benefit to public health.

A Measured, Scientifically Sound Response to PFAS Contamination is Needed

Legislators, regulators, drinking water agencies, wastewater agencies, and others should work collaboratively to examine how to deal with PFAS holistically, with science guiding the decision making. We acknowledge and embrace our role as public health and environmental stewards to ensure safe drinking water and sanitation services. However, we know that science is still evolving to understand the fate, exposure, and toxicity of PFAS from environmental media, and the basic analytical methods needed to study these chemicals are still in development for media other than drinking water. Even the extent of human health impacts is not fully understood. This underscores the need to better understand the science and real world risk before setting exceedingly stringent thresholds or limits.

The goal should be to determine the most effective steps needed to reduce human exposure and implement them within the broad context of protecting human health. This requires differentiating high concentration sites from background concentrations and taking action to mitigate concentrations at high use sites. It also demands both a reassessment of products we produce and use daily, and a realistic assessment of how much any action is able to control PFAS already in the background environment. The most significant action we need to take today is to remove these chemicals of concern from the stream of commerce. Source reduction and pollution prevention can serve as the most efficient means of addressing persistent background presence of PFAS and effectively limit the occurrence of PFAS going forward.

1. PFAS is the broader class of chemicals that includes PFOA, PFOS, and many others.
2. Centers for Disease Control and Prevention. Fourth Report on Human Exposure to Environmental Chemicals, Updated Tables, (January 2019). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. cdc.gov/exposurereport
3. Trudel et al., Risk Analysis Vol. 28 No. 2, 2008
4. ewg.org/interactive-maps/2019_pfas_contamination/map

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B

PFAS

FACTSHEET

APWA AMERICAN PUBLIC WORKS ASSOCIATION

CASA

NACWA

National Waste & Recycling Association℠ Collect. Recycle. Innovate.

SWANA SOLID WASTE ASSOCIATION of North America

WATEREUSE

Water Environment Federation® the water quality people®

What Are PFAS?

Per and polyfluoroalkyl substances (PFAS)[1] are a group of manmade fluorinated compounds which are used for a variety of applications by both industry and residential households. PFAS have been in commercial use since the 1940's and are abundant in today's society. These chemicals are widely in use because of their exceptional resistance to heat, water, and oil.

PFAS are commonly found in every American household, and in products as diverse as non-stick cookware, stain resistant furniture and carpets, wrinkle free and water repellant clothing, cosmetics, lubricants, paint, pizza boxes, popcorn bags, and many other everyday products.

Two of the most common types (PFOS and PFOA) were phased out of production in the United States (US) in 2002 and 2015 respectively, but are still present in some imported products. PFOA and PFOS are found in every American person's blood stream in the parts per billion range, though those concentrations have decreased by 70% for PFOA and 84% for PFOS between 1999 and 2014, which coincides with the end of the production and phase out of PFOA and PFOS in the US[2].

PFAS Are Ubiquitous in Our Homes and Our Environment

Several recent legislative and regulatory efforts across the US to address PFAS have focused on limiting levels in drinking water. However, there has been relatively little conversation about the presence of these chemicals in our everyday lives and the public's sheer exposure to PFAS through primary contact from commercial products used in our everyday lives. Several peer reviewed studies have shown that the mean and median concentration of PFOA in household dust in the US was found to be between approximately 10,000 and 50,000 parts per trillion (ppt)[3]. These studies highlight the fact that there is significantly more PFOA in the ambient dust in the average home than the levels currently being discussed as thresholds for drinking water. Because PFAS is in the products we use, is transported through air and water and has been found in the food we eat, there are numerous public exposure pathways for PFAS beyond drinking water.

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Importance of Human Health Protection

Entities providing essential public services such as safe drinking water, wastewater treatment, water recycling, biosolids recycling, and municipal solid waste management firmly believe in our **collective mission to ensure safe drinking water, wastewater treatment, and sanitation services.** We acknowledge and embrace our role as environmental and public health stewards and our continued responsibility and commitment to providing a healthy and clean environment now and for future generations. To that end, we support actions and regulations intended to ensure delivery of those services as long as they are based on credible science and developed after due deliberation. There is concern that in the case of PFAS, due to the complexities inherent with them, notification levels, thresholds, and in some cases limits are being developed rapidly and in advance of the scientific and public process.

PFAS Producers and Heavy Users Are Not the Same as PFAS "Receivers"

Drinking water treatment systems, wastewater treatment facilities, and municipal solid waste landfills are not "producers" or users of PFAS, and **none of these essential public service providers utilize or profit from PFAS chemicals. Rather, they are "receivers" of these chemicals used by manufacturers and everyday consumers, and merely convey and/or manage the traces of PFAS** coming into our systems daily. In order to address the true sources of these chemicals, it is imperative to discontinue and phase out production and use (both domestic and foreign) at manufacturing facilities and find safer alternatives for heavy use areas such as firefighting training sites. As long as PFAS are elements of products used in our everyday lives, and background levels resulting from decades of manufacturing and use persist, these chemicals will continue to be found in "receiver" streams.

Placing PFAS in Context: Distinguishing Highly Contaminated Sites From Background Levels

Recent legislative and regulatory efforts to address PFAS contamination tend to not differentiate between concentrations at producer and heavy user contaminated sites and common background concentrations in drinking water, groundwater, recycled water, wastewater, biosolids, or landfill leachate. The concentrations of PFAS found in these two scenarios are dramatically different and must be managed separately in public policy and regulation. Sites found near PFAS manufacturers have found contamination at concentrations reaching 100,000 to 500,000 ppt. In the same context, firefighting training sites, including military complexes, PFAS concentrations have been found as high as 6,950,000 ppt.[4] In these circumstances, PFAS producers and heavy users have created severely contaminated sites that must be remedied. In contrast, the action levels currently discussed for drinking water systems range from 5–40 ppt, an exceptionally small fraction of the concentrations found at highly contaminated sites. Because of this vast disparity in relative contributions, it is imperative that policy and regulation reflect product manufacturer responsibility and stewardship, as well as cleanup and remediation at highly contaminated sites, differentiated from those that are receiving PFAS in their systems at significantly smaller concentrations.

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Regulatory Thresholds and Unintended Consequences

The USEPA has set a drinking water health advisory level of 70 ppt individually or combined for PFOA and PFOS in drinking water. Through USEPA's Action Plan[5] the Agency is currently evaluating the need to develop maximum contaminant levels (MCL) for these and possibly other PFAS compounds. The Agency similarly proposed preliminary groundwater remediation goals for PFOA and PFOS at 70 ppt combined in areas where groundwater may be used for drinking water. **For perspective, one part per trillion is the equivalent of four grains of sugar in an Olympic sized swimming pool, or the equivalent of one second in 32,000 years, or $1.50 out of all the US currency in the world.** Even as EPA's work continues, states have begun setting their own PFAS standards for drinking water at a rapid pace and without following some of the usual regulatory and scientific review and public involvement procedures. The public and political concern about PFAS is leading several states to move forward with regulatory standards or notification levels while the science is developing. For example, New Hampshire[6] has adopted regulatory standards of 12 ppt for PFOA and 15 ppt for PFOS in drinking water, the California State Water Board[7] has established notification levels of 6.5 ppt for PFOS and 5.1 ppt for PFOA in drinking water, while other states have adhered to the USEPA health advisory level of 70 ppt for both PFOA and PFOS combined. States adopting different standards for the same PFAS compounds are creating confusion and risking undermining public confidence at a time when greater consistency is needed. **In fact, stringent state requirements could have significant unintended impacts on public municipalities and individuals, if public systems are deemed unusable and/or need to install prohibitively expensive supplemental treatment systems. Similarly, policies that limit the landfill disposal of PFAS containing wastes could force alternative means of disposal that are less protective of public health and the environment.**

4 grains of sugar in an Olympic-sized swimming pool

Background Levels of PFAS in Wastewater Effluent, Recycled Water, Biosolids, and Leachate

States that are establishing, or have adopted, strict PFAS standards for drinking water could also ultimately impact discharge limits on wastewater treatment plants effluent, recycled water, as well as the management of biosolids and leachate. Because PFAS are ubiquitous in households, consumer products, food, and the environment generally, some trace levels reflecting this ubiquitous broad use of these compounds will make their way into the wastewater and solid waste streams. From wastewater treatment plants, some of these trace amounts of PFAS may also be found in biosolids. Trace amounts will also make their way to landfills and resulting leachate. In response to the phase out of PFAS use and appropriate source control and product substitution, continued reduction of trace levels is anticipated. It is important to note that PFAS are also found in paper mill residuals, digestates, composts, and soils. Given the ubiquity of PFAS, and the comparative background levels which may be found in wastewater, biosolids, and leachates, setting requirements near analytical detection limits on these sources may not provide a discernable benefit to protecting public health.

A Measured, Scientifically Sound Response to PFAS Contamination is Needed

Legislators, regulators, and drinking water, wastewater, and solid waste agencies must work collaboratively to examine how to manage PFAS holistically, with science driving the decision making. We acknowledge and embrace our role as public health and environmental stewards to ensure safe drinking water and sanitation services. However, we know that science is still evolving to understand the fate, exposure, and toxicity of PFAS in various environmental media. The analytical methods needed to study and accurately monitor these chemicals at such trace concentrations are still in development for media other than drinking water. In addition, the extent of public health impacts remains unclear and is not fully understood. This underscores the need to better understand the complex science of PFAS exposure and impacts, verifiable analytical methods, and real-world risk before setting exceedingly stringent thresholds or limits. **The goal of any PFAS policy or regulation should be to determine the most effective steps needed to reduce human exposure and implement them within the broad context of protecting human health.** This requires differentiating high concentration sites from background concentrations and taking action to mitigate concentrations at high use sites. It also demands both a reassessment of products we produce and use daily, and a realistic assessment of how to control PFAS chemicals already in the background environment. The most significant action we need to take today is to remove these chemicals of concern from the stream of commerce and pursue cleanup and remediation at highly contaminated sites. Source reduction and pollution prevention can serve as the most efficient means of addressing the persistent background presence of PFAS and effectively limit exposure to PFAS going forward.

1. PFAS is the broader class of chemicals that includes PFOA, PFOS, and many others.
2. Centers for Disease Control and Prevention. Fourth Report on Human Exposure to Environmental Chemicals, Updated Tables, (January 2019). Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. cdc.gov/exposurereport
3. Trudel et al., Risk Analysis Vol. 28 No. 2, 2008
4. ewg.org/interactive-maps/2019_pfas_contamination/map
5. https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf
6. https://www4.des.state.nh.us/nh-pfas-investigation/
7. https://www.waterboards.ca.gov/press_room/press_releases/2019/pr082319_pfoa_pfos_guidelines_news_release.pdf

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October 28, 2019

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

Attention: Anna Gallagher

Subject: **Monthly Self-Monitoring Report (SMR) – September 2019**

The September 2019 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 #R2-2018-003, Alternate Monitoring and Reporting Requirements Order #R2-2016-0008 and the Mercury and PCBs Order #R2-2017-0041. Additionally, effective July 1, 2019, Order #R2-2019-0017 removed CMSA influent nutrient monitoring requirements. The results provided in this report comply with these new requirements.

Violations
There are no reportable NPDES Permit violation(s) for this reporting period.

Blending Events
The CMSA treatment facility did not exceed the maximum secondary capacity of 30 MGD. No blending events occurred during this monitoring period.

Data Validation
All regulatory daily, weekly, and monthly quality control calibrations/checks conducted during the month of September met established quality assurance acceptance criteria, except those data results indicated within the attached Quality Assurance report.

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 each are 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