Central Marin Sanitation Agency

COMMISSION REGULAR MEETING AGENDA
Tuesday, April 9, 2024
Hybrid Meeting
6:00 p.m.

NOTE: This is a Hybrid Board meeting and will be held in-person at the Agency and via Zoom®.

If you would like to participate via Zoom, click the link below or copy and paste the address into your browser. You may also phone-in at the number below.

Join Zoom Meeting

Online:
https://us06web.zoom.us/j/83768271372

Phone in:
+1 253 215 8782

Meeting ID:
837 6827 1372

Public Comment: 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. Public comments can also be submitted via email to the Recording Secretary at aiacoviello@cmsa.us.

The public comment period opens when the agenda is posted online and will close two hours prior to the start of the meeting. Include your name and the item you'd like to provide written comment on. Written comments submitted will be shared with the Board before the meeting, summarized during the Open Period for Public Participation, and included in the meeting proceedings.

To provide comments virtually during the meeting:

- If in the Zoom teleconference, use the "raise hand" feature. The Host will notify and unmute you when it is your turn to speak.
- If on a phone, press *9 ("star + 9"), and the Host will notify and unmute you when it is your turn to speak.

If you experience an issue providing comments in the meeting, please email those comments to the Recording Secretary at aiacoviello@cmsa.us.

CONTINUED ON NEXT PAGE

AGENDA

1. **6:00 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. **Resolution of Appreciation for Kenneth Spray**
   Recommendation: Adopt Resolution No. 360: A Resolution of Appreciation for Kenneth Spray.

5. **Consent Calendar**
   a) Minutes – Regular Board Meeting, March 12, 2024
   b) Treasurer's Report – March 2024
   c) March 2024 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report
   d) Performance Metric Report – March 2024
   e) CASA Statewide Wastewater Air Toxics Pooled Emissions Study
   f) FY24 Asset Management Program 3rd Quarter Report
   g) Updated Resolution Authorizing Investment of Monies in the Local Agency Investment Fund (LAIF)

6. **Request for Proposal - Consultant Services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project**
   Recommendation: Approve issuance of Request for Proposals for Consultant Services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project, and provide feedback to the General Manager.

7. **FY24 Pavement Repair Project – Construction Contract Award**
   Recommendation: Award the construction contract for the FY24 Pavement Repair Project to Always Paving for the total bid amount of $234,275, and authorize the General Manager to execute the contract agreement.

8. **Resolution for the Marine Outfall Diffuser Cleaning Project**
   Recommendation: Adopt Resolution No.361 to authorize the General Manager to represent the Agency on the Marine Outfall Diffuser Cleaning Project and sign the Dredging-Dredged Material Reuse/Disposal Application.

9. **April 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***

12. **Oral Reports by General Manager***

13. **Next Scheduled Regular Meeting**
    Tuesday, May 14, 2024 at 6:00 p.m.

*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

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners & Alternates

From: Jason Dow, General Manager

Subject: Resolution of Appreciation for Kenneth Spray

Recommendation: Adopt Resolution No. 360: A Resolution of Appreciation for Kenneth Spray.

Summary: Ken Spray, our Administrative Services Manager, has retired and his last day of work was March 29, 2024. Ken initially worked for the Agency between 1992 and 1999, and later returned in March 2017. During his second tenure at CMSA, he led and/or participated in many initiatives to improve financial and administrative processes, activities, and business operations. Ken was an exceptional employee and worked well with all staff. He will be missed by all and we hope he has a wonderful retirement. His manager colleagues prepared the attached Resolution of Appreciation for the Board to review and adopt.

Attachment:
- Resolution No. 359

ATTACHMENT

CMSA Resolution No. 360

Resolution of Appreciation for
Kenneth Spray

WHEREAS, ***Kenneth Spray*** was hired in 1992 as an accountant and left CMSA in 1999 to accept a higher-level position at another wastewater agency, and then Ken returned to CMSA in March 2017 to finish his career as its Administrative Services Manager; and

WHEREAS, during ***Ken's*** second tenure at CMSA, he made significant improvements to many financial planning documents, such as the 10-year Financial Forecast, 5-year Revenue Plan, and 10-year Capital Funding Plan, and created harmonious alignment between them; and

WHEREAS, ***Ken*** has been a productive and conscientious employee, and made numerous enhancements to the Agency's financial and accounting processes, practices, and procedures; as well as preparing detailed procedures for all financial transactions; and

WHEREAS, ***Ken*** regularly attended the annual CalPELRA conference with his senior manager colleagues, where he learned a lot, enjoyed the team building and camaraderie, and joined the biking excursions on the 17 Mile Drive during the conference lunch period; and

WHEREAS, ***Ken*** was instrumental in the selection and implementation of the Agency's financial software, Tyler Incode, and completely reorganized and improved the accuracy of the fixed asset schedule; and

WHEREAS, ***Ken*** always took an annual family vacation, with his last before retirement to Italy, where he took classes on how to make delicious Italian pizzas. He has promised his CMSA colleagues that he will return and make us Italian pizzas for lunch using his new 800F° pizza oven; and

WHEREAS, ***Ken*** was an active participant on the Executive Team and Strategic Planning Committee, and worked with staff to make important decisions to improve many aspects of the Agency's business and operations; and

WHEREAS, ***Ken*** had the ability to process complex technical issues and apply a single thumbs up/down approach to problem solving; and

WHEREAS, ***Ken*** has always shown the intention to act in the best interest of the Agency and its customers during his two tenures at CMSA, and will be missed by all.

NOW, THEREFORE, BE IT RESOLVED that the Commissioners of the Central Marin Sanitation Agency express their appreciation to ***Ken*** for his years of service and dedication to the Agency.

PASSED AND ADOPTED by the CMSA Board of Commissioners at a regular meeting held on April 9, 2024.

_____

Douglas T. Kelly, Commission Chair

ATTEST: _____

Dean DiGiovanni, Commission Secretary

Central Marin Sanitation Agency

COMMISSION REGULAR MEETING MINUTES
Tuesday, March 12, 2024
Via Hybrid Meeting

NOTE: The minutes are an official record of the Board meeting. There are also official audio and video recordings available on the Agency's website at www.cmsa.us. The time stamps on these minutes refer to the items' start times on the video recording of the meeting.
Please contact CMSA at 415-459-1455 for information about receiving a copy of these records.

1. Call Meeting to Order/Pledge of Allegiance
Chair Kelly called the meeting to order at 6:02 p.m. A quorum was present.

2. Roll Call **00:00:36**

Present: Commissioners Michael Boorstein, Maribeth Bushey, Dean DiGiovanni, Doug Kelly, and Alternate Commissioner Fred Casissa

Absent: Eli Beckman

Staff Present: Jason Dow, General Manager; Mark Koekemoer, Regulatory Compliance Manager; and Adrianna Iacoviello, Recording Secretary

Public Present: Tris Kelly and Gail (via Zoom)

3. Open Period for Public Participation **00:00:51**
There were no comments from members of the public.

4. Consent Calendar **00:00:56**
a) Minutes – Regular Board Meeting, February 13, 2024
b) Treasurer's Report – February 2024
c) February 2024 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report
d) Performance Metric Report – February 2024
e) CMSA Investments Policy – Financial Policy #531
f) Procurement of Equipment for Primary Clarifier No. 1

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

Chair Kelly asked for a motion on Consent Calendar items 4a through 4f.

ACTION: Commissioner Boorstein moved to approve Consent Calendar items 4a through 4f; second, Commissioner Bushey.

VOTE: The item was passed unanimously.

AYES: Boorstein, Bushey, Casissa, DiGiovanni, Kelly

NAYS: None

ABSTAIN: None

5. Revised Contracting Financial Policy **00:01:12**

GM Dow said that CMSA has food waste processing and disposal contracts with Marin Sanitary Service, Republic Services of Sonoma County, and Sustainable Organic Services (SOS). He explained that in order to fully utilize the additional power generation capacity in the 995kW Jenbacher cogeneration system, the Agency is seeking additional haulers of organic waste materials. He mentioned that at the February 2024 meeting, the Board approved an agreement with SOS and directed staff to revise the Agency's contracting financial policy, authorizing staff to approve future organic waste disposal agreements. He stated that the revised policy was attached with revisions shown in red text.

Comments from the Public

There were no comments from members of the public.

ACTION: Commissioner Boorstein moved to approve revised Financial Policy #561: Contracting and provide any comments or direction to the General Manager; second, Commissioner Casissa.

VOTE: The item was passed unanimously.

AYES: Boorstein, Bushey, Casissa, DiGiovanni, Kelly

NAYS: None

ABSTAIN: None

6. CMSA Laboratory Staffing Assessment **00:03:54**

GM Dow said that since 2018, the workload in the CMSA environmental laboratory has significantly increased, requiring Environmental Services Analysts (ESA) to assist with lab analyses. He explained several factors for why the workload has increased and that hiring another Laboratory Analyst would allow the ESAs to focus on their source control program activities, provide increased staffing resiliency during approved leaves, and minimize reliance on lab interns and/or contract laboratories. He also explained that the Regional Water Board is set to approve a new Nutrient Watershed Permit, that will require CMSA to reduce effluent nutrient loading by 61%, which would strain their understaffed Laboratory with the significant increase in sample collection and analyses. He concluded by detailing the staffing assessment's different options to continue performing the current and future laboratory activities, with staff's recommendation to hire a third Laboratory Analyst.

Board members asked clarifying questions and GM Dow responded accordingly.

After some discussion, Commissioner DiGiovanni mentioned that the cost savings of having an additional Laboratory Analyst to run more analyses in-house rather than pay a contract laboratory to do the work, would essentially pay for the added position.

ACTION: Commissioner Boorstein moved to approve hiring a full-time Laboratory Analyst to support the Agency's increased laboratory workload; second, Commissioner Bushey.

VOTE: The item was passed unanimously.

AYES: Boorstein, Bushey, Casissa, DiGiovanni, Kelly

NAYS: None

ABSTAIN: None

7. Outfall Diffuser Section Cleaning Update **00:22:29**

GM Dow said that last fall, a diving contractor was hired to perform routine annual preventative maintenance on the diffuser section of the CMSA outfall in the San Francisco Bay. He mentioned that based on the elevation profile in the diffuser section measured by the diver, 600 cubic yards of solids has settled out since the last diffuser section cleaning in 2009.

GM Dow said that in late 2023, he contacted the Regional Water Board (RWB) Permit Division Chief about the solids accumulation in the diffuser section and the need to remove the material. He explained that the RWB informed him that he would need to present the proposed project to the Dredged Material Management Office (DMMO). On March 6, GM Dow attended a DMMO meeting to review information and answer questions; the feedback was positive, and the DMMO supported the project and the side-cast disposal method.

GM Dow said that once the Agency receives project approval from the necessary regulatory agencies, staff will bring an outfall solids removal contract to the Board for acceptance and public bidding authorization.

Chair Kelly asked clarifying questions regarding the frequency of outfall cleanings and check valve inspections, and GM Dow responded accordingly.

Comments from the Public

There were no comments from members of the public.

ACTION: This item was informational no action was taken.

8. Authorization to Bid the Primary Clarifier No. 1 Rehabilitation Project **00:38:44**

GM Dow said that the Agency has seven primary clarifiers, and clarifiers 1 through 5 were last rehabilitated in the early 2010s. He mentioned that as part of periodic maintenance and rehabilitation work to properly maintain and extend the life of the clarifiers, staff has scheduled their rehabilitation over the next several years, and briefly described the Project's scope of work.

GM Dow mentioned that at its May 2023 meeting, the Board authorized prepurchase of a flow optimization baffle system for Primary Clarifier No. 1 for a pilot test to determine if the clarifier's solids capture efficiency improves. He said that the baffle system has since been delivered to CMSA and will be handed over to the selected general contractor for installation as part of this Project. He explained that staff prepared construction contract documents for the Project and recommends advertising it for public bidding in March for work to begin in the early summer. He said a construction contract award recommendation will be prepared by the May 2024 Board meeting.

Comments from the Public

There were no comments from members of the public.

ACTION: Commissioner DiGiovanni moved to adopt the construction contract documents for the Primary Clarifier No. 1 Rehabilitation Project, and authorize the General Manager to advertise the project for public bidding; second, Commissioner Bushey.

VOTE: The item was passed unanimously.

AYES: Boorstein, Bushey, Casissa, DiGiovanni, Kelly

NAYS: None

ABSTAIN: None

9. February Informational Items **00:43:39**

ACTION: This item was informational no action was taken.

10. North Bay Watershed Association (NBWA) Report **00:44:22**

Commissioner Boorstein reported that the NBWA held their meeting at the City of Sonoma Council Chambers on March 1. He briefly discussed the presentation given by Eileen White regarding the San Francisco Bay Regional Water Board Strategic Workplan Overview and North Bay Priorities. He mentioned that NBWA's Annual Conference will be held on April 19 at Sonoma State University.

11. Oral Reports by Commissioners **00:48:28**

Commissioner Bushey said that SRSD is continuing to have strategic level discussions with RVSD and CMSA looking at opportunities for increased collaboration in operational coordination.

12. Oral Reports by General Manager **00:48:10**

GM Dow referred to his handout and reported:

- At a recent managers' group meeting, Board meeting formats were discussed. Several agencies have moved away from hybrid meetings due to inappropriate audience participation.
    - Chair Kelly mentioned the option to switch to webinar Board meetings in the effort to have more control over hybrid participants. He requested that this topic be added as a future CMSA Board agenda item.
- BACWA provided comments to the Regional Water Board on the Draft Nutrient Watershed Permit. GM Dow briefly described the graph he provided illustrating Interim Nutrient Limits, and mentioned that an item regarding participation in CASA's pooled emissions study will likely be brought before the Board at the next meeting.

13. Next Scheduled Meeting **00:59:45**

The Board has scheduled a Regular meeting for Tuesday, April 9, 2024 at 6:00 p.m.

Chair Kelly adjourned the meeting at 7:01 p.m.

Respectfully submitted,

_____	_____
Adrianna Iacoviello, Recording Secretary	Dean DiGiovanni, Secretary

TREASURER'S REPORT
As of the Month Ended March 31, 2024

Description	Account Type	Book Value	Market Value (1)	% Portfolio	Budget / Proj Year End
Cash and Investments:					
WestAmerica Bank (*See Schedule 1 for Account Activity*)	Operating Acct	$ 809,730.52	$ 809,730.52		
US Bank 2015 Revenue Bonds (Restricted)	Debt Serv Acct	1.89	1.89		
US Bank 2020 Revenue Bonds (Restricted)	Project/DS Acct	1,282.19	1,282.19		
US Bank 2022 Pension Oblig Bonds (Restricted)	Debt Serv Acct	52.82	52.82		
Keenan Benefit Trust (Restricted) - February 2024	Pension Stab Trust	219,797.76	219,797.76		
CAMP Cash Reserve Pool: 5.48%	Investment Acct	414,268.60	414,268.60		
Local Agency Investment Fund (LAIF): 4.122% - February 2024	Investment Acct	21,726,650.06	21,726,650.06		
Total cash and investments		**$ 23,171,783.84**	**$ 23,171,783.84**	**100.0%**	
Designations of Cash and Investments:					
Current Operating Fund (2)		974,645.42	974,645.42	4.2%	
Debt Service Accounts (Restricted)		1,336.90	1,336.90	0.0%	
Employee Benefit Trust (Restricted)		219,797.76	219,797.76	0.9%	
Capital Reserves (Restricted) (3) - *See Schedule 2*		1,125,252.20	1,125,252.20	4.9%	1,125,252
Operating Reserve (Unrestricted) (4)		4,003,033.75	4,003,033.75	17.3%	4,003,034
Capital Reserves (Unrestricted) (5) - *See Schedule 2*		16,347,717.81	16,347,717.81	70.6%	8,105,877
Contingency and Emergency Reserve (Unrestricted)		500,000.00	500,000.00	2.2%	500,000
Total designations of cash and investments		**$ 23,171,783.84**	**$ 23,171,783.84**	**100.0%**	

NOTES:

(1) Market values are per the fiscal agent's respective monthly statements
(2) Current operating fund is the residual of the other designations
(3) Includes capacity charges and debt service coverage
(4) Operating reserves calculated at 25% operating budget
(5) Includes capital fee

Statement of Compliance

The above portfolio of investments is in compliance with the Agency's investments policy, adopted annually, and California 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.

Corey Spray, CPA
Administrative Services Manager

Central Marin Sanitation Agency
Schedule 1 - Operating Account Activity Schedule
For the Month of March 2024

Beginning Balance at March 1, 2024	$	1,777,506.91
Cash Receipts (Deposits into Westamerica):		
Transfers from LAIF	$	500,000.00
Capacity Charges: (SRSD: 887.5 FU, 85 HSFU, -25 FU credit)		333,575.35
Permit and Inspection Fees		458.00
Laboratory Services (Verily Life Sciences <Oct-Nov>)		5,850.00
Almonte FOG Program (FY24 2Q: Oct-Dec)		1,001.94
Revenue from Septage Haulers & RVs		4,490.75
Revenue from Organic Waste Programs		1,551.64
County-wide Public Education Program (FY24 2Q: LGVSD, NSD)		713.00
SD#2 Operations & Maintenance Contract (FY24 Nov-Dec)		57,225.67
SQSP Wastewater Services Contract (FY24 Dec-Jan)		272,344.18
SQ Village Operations & Maintenance Contract (FY24 Jan-Feb)		2,336.20
Reimbursed airfare, Returned ACH payment		1,530.41
Total Cash Receipts	$	1,181,077.14
Cash Disbursements (Withdrawals from Westamerica):		
March 2024 Operating account disbursements register (see Schedule 1a)	$	919,711.14
Regular Payroll paid 03/08/24		164,351.77
Regular Payroll paid 03/22/24		167,404.25
Board compensation reported as full stipend on Disbursement Register (paid March payroll)		(1,350.00)
Final Separation Pay (1)		21,935.53
Transfers to EFTPS Federal Payroll Taxes (03/08, 03/22, 03/29)		96,986.25
Transfers to US Bank (Debt Service Payments due 03/01/24)		779,379.63
Bank and Credit Card Fees		434.96
Total Cash Disbursements	$	2,148,853.53
Ending balance at March 31, 2024	$	809,730.52

Central Marin Sanitation Agency
Schedule 1a - Operating Account Disbursements Register
For the Month of March 2024

Number	Date	Vendor/Payee	Amount	Description
2025067				Last check from prior month's register
2025068	3/1/2024	Byron Jones	167.79	Reimbursement for retiree health benefits
2025069	3/1/2024	Phillip Frye	167.79	Reimbursement for retiree health benefits
2025070	3/1/2024	Jason Dow	1,300.71	Employee Exp Reimb: CASA DC Policy Forum
2025071	3/1/2024	Peter Kistenmacher	198.00	Employee Exp Reimb: CWEA 2024 Food Waste Presentation
2025072	3/4/2024	EDIS	9,773.27	Dental insurance monthly fee, March 2024
2025073-5097	3/4/2024	24 Employees	2,300.00	Safety Incentive Program award
2025098	3/6/2024	American Power Corporation	3,504.46	SQPS Maint: Generator services (Note B)
2025099	3/6/2024	Angelo Sacerdote	550.25	Employee Exp Reimb: Safety boots and glasses
2025100	3/6/2024	Antonette Monsada	63.37	Employee Exp Reimb: Pittcon conference
2025101	3/6/2024	Atmospheric Analysis	2,984.00	Quarterly biogas siloxanes analysis
2025102	3/6/2024	Black & Veatch	7,221.00	Prof Svcs: Design - Centrifuge Dewatering Improvements Project, 12/30/2023 - 02/02/2024
2025103	3/6/2024	Brian Carr	372.00	Employee Per Diem: CWEA conference
2025104	3/6/2024	Caltest Analytical Laboratory	3,170.15	NPDES Permit sample analyses, December - February 2024
2025105	3/6/2024	Claremont EAP	375.00	Employee Assistance Program, February 2024
2025106	3/6/2024	CWEA TCP	221.00	Membership fee (1 employee)
2025107	3/6/2024	Edward Lee	400.00	Employee Exp Reimb: Safety boots and glasses
2025108	3/6/2024	Environmental.com	143.94	Lab supplies
2025109	3/6/2024	Evoqua Water Tech LLC	823.95	Laboratory DI water tank refills (2 invoices)
2025110	3/6/2024	Fastenal Company	391.08	Maintenance vending machine replenishment, February 2024
2025111	3/6/2024	Frank A. Olsen Co	486.93	Knob assembly and battery plug
2025112	3/6/2024	Golden State Lumber	86.99	SQPS Maint: 2X6 treated wood (Note B)
2025113	3/6/2024	Hach Company	1,353.38	Vials and chemicals for Lab, February 2024
2025114	3/6/2024	Hasa Inc.	15,437.18	Sodium hypochlorite (1 delivery)
2025115	3/6/2024	IDEXX Distribution Inc	3,312.98	Enterolert, colilert, and lab supplies, February 2024
2025116	3/6/2024	Jackson's Hardware	1,097.80	Misc. hardware supplies, February 2024
2025117	3/6/2024	Justifacts Credential	360.34	Recruitment: Background check (2 employees)
2025118	3/6/2024	Marin Color Service	326.77	Paint and painting supplies
2025119	3/6/2024	Marin Recycling HHWF	117.00	Fluorescent tubes and batteries disposal
2025120	3/6/2024	Marin Water	3,767.02	Water service (3 invoices), 12/10-02/09/2023
2025121	3/6/2024	Mary Jo Ramey	1,004.70	Employee Exp Reimb: CWEA P3S conference
2025122	3/6/2024	Motion Industries, Inc.	1,791.91	Critical spare gearbox and motor for secondary clarifier
2025123	3/6/2024	Nickell Fire Protection Inc	855.00	Quarterly fire sprinkler inspection
2025124	3/6/2024	North Bay Watershed Assoc.	2,500.00	Membership fee for FY 23-24
2025125	3/6/2024	Northeast-Western	5,635.17	Jenbacher preventive maintenance, February 2024
2025126	3/6/2024	P.G.E.	11,713.56	Electricity service, 01/20-02/18/2024
2025127	3/6/2024	Pace Supply Corp.	2,010.20	Pipe fittings and supports
2025128	3/6/2024	Progent Corporation	99.95	IT monthly support
2025129	3/6/2024	Radwell International LLC	407.16	Door lock and latch
2025130	3/6/2024	Reinholdt Engineering Construction	880.00	Monthly underground storage tank inspection and leak sensor testing services (3 invoices)
2025131	3/6/2024	Rock Steady Juggling	1,000.00	Public Ed Program: Presentations at two schools (Note B)
2025132	3/6/2024	Rockwell Solutions	2,916.59	Headwork site sump pump rebuild parts
2025133	3/6/2024	Ross Valley Sanitary District	22,308.48	Public Ed ads on Comcast 11/2022 - 11/2023 (Note B)
2025134	3/6/2024	SPURR	2,998.05	Natural gas supply, January 2024
2025135	3/6/2024	Staples	270.51	Office supplies
2025136	3/6/2024	ULINE	744.72	Nitrile gloves
2025137	3/6/2024	United initiators Canada Ltd.	11,420.40	Hydrogen peroxide (1 delivery)
2025138	3/6/2024	Univar USA Inc	8,387.82	Sodium bisulfite (1 delivery)
2025139	3/8/2024	California State Disbursement	972.11	Garnishment for PPE 03/02/2023
2025140	3/13/2024	Blue Sky Environment, Inc.	10,105.00	Jenbacher emissions testing services
2025141	3/13/2024	CAL-CARD	12,805.21	State of California Purchase Card, January-February 2024
2025142	3/13/2024	Diamond Tire Center	654.08	Agency vehicle tire rotation and repair
2025143	3/13/2024	Void	-	
2025144	3/13/2024	Gallagher Benefit Svcs Inc	16,000.00	Recruitment for Accounting Technician and Admin Specialist
2025145	3/13/2024	Home Depot Credit Services	1,481.92	Electrical and plumbing supplies, February 2024
2025146	3/13/2024	Huber Technology, Inc.	18,776.58	Strainpress purchase contract, final payment
2025147	3/13/2024	Kone Inc	191.33	Elevator monthly maintenance
2025148	3/13/2024	Linde Gas and Equipment	46.21	Propane
2025149	3/13/2024	Marin Resource Recovery Center	110.00	Trash disposal
2025150	3/13/2024	Marin Sanitary Service - 0004321	1,119.60	Recycling disposal, February 2024
2025151	3/13/2024	Marin Sanitary Service - 0027511	5,513.64	Grit box, February 2024
2025152	3/13/2024	Marin Sanitary Service - 0033224	1,500.00	Rag bins, February 2024
2025153	3/13/2024	Medical Center of Marin	242.00	Pre-employment testing (2 new employees)
2025154	3/13/2024	Nicola Franceschine	3,600.00	Prof Svcs: GASB 68 Disclosure Report for FY24

Central Marin Sanitation Agency
Schedule 1a - Operating Account Disbursements Register
For the Month of March 2024

Number	Date	Vendor/Payee	Amount	Description
2025155	3/13/2024	Roy's Sewer Service, Inc.	3,200.00	Cleaning and flushing of OWRF tank
2025156	3/13/2024	Waste Management	16,949.66	Biosolids disposal, February 2024
2025157	3/13/2024	Woodland Center Auto Supply	3,999.15	Battery cores and replacements
2025158	3/22/2024	California State Disbursement	972.11	Garnishment for PPE 03/16/2023
2025159	3/25/2024	Aleshire & Wynder LLP	828.00	Legal Services: Employment Law, February 2024
2025160	3/25/2024	Allied Fluid Products Corp	1,565.03	Wet well link seals for Boardwalk A and B (Note B)
2025161	3/25/2024	Aramark Uniform Services	2,852.76	Uniform Service, January-March 2024
2025162	3/25/2024	Armer/Norman & Associates	24,750.00	Underground storage tank fuel piping replacement
2025163	3/25/2024	AT&T Corp	187.83	Monthly internet fee
2025164	3/25/2024	Bay City Boiler & Engineering	5,751.74	Annual Boilers preventative maintenance
2025165	3/25/2024	Black & Veatch	18,656.00	Prof Svcs: Design - Centrifuge Dewatering Improvements Project, 02/03/2024 to 03/01/2024
2025166	3/25/2024	Burlingame Engineers, Inc.	3,832.89	Chemical pump diaphragms and rebuild kits
2025167	3/25/2024	CDW Government, Inc.	1,846.24	Annual Sophos firewall threat subscription
2025168	3/25/2024	Comcast	212.98	Monthly internet fee
2025169	3/25/2024	Denali Water Solutions	34,090.38	Biosolids hauling, December-February 2024
2025170	3/25/2024	Endress + Hauser, Inc	4,411.79	Level sensors for Primary Clarifiers
2025171	3/25/2024	Evoqua Water Tech LLC	395.90	DI water tank rental
2025172	3/25/2024	Examinetics, Inc.	67.50	Audio test (3 employees)
2025173	3/25/2024	Fisher Scientific	426.56	Solutions for Lab
2025174	3/25/2024	Gallagher Benefit Svcs Inc	5,000.00	Recruitment for Admin Services Manager, final payment
2025175	3/25/2024	Gutierrez, Christopher	600.40	Employee Exp Reimb: Safety boots and glasses
2025176	3/25/2024	Hach Company	1,981.26	Vials and chemicals, February 2024
2025177	3/25/2024	Hagel Supply Co.	601.99	Utility and janitorial supplies, February 2024
2025178	3/25/2024	Hasa Inc.	30,871.21	Sodium hypochlorite (2 deliveries)
2025179	3/25/2024	Herc Rentals Inc	872.56	Drill rental
2025180	3/25/2024	Horizon Dist. Inc	145.52	Utility supplies
2025181	3/25/2024	International Fire Inc.	3,178.60	Annual fire extinguishers inspection and testing
2025182	3/25/2024	Jennifer R. Falcon	3,420.00	Annual CPR/AED First Aid training: 40 CMSA employees and 17 NSD employees (Note B)
2025183	3/25/2024	JM Squared & Associates, Inc.	41,947.82	Secondary system tank drain pump replacement
2025184	3/25/2024	Joyce Cheung	183.29	Employee Exp Reimb: Safety boots
2025185	3/25/2024	Kemira	16,136.53	Ferric chloride (1 delivery)
2025186	3/25/2024	Konecranes, Inc.	816.07	OWRF crane control box cover
2025187	3/25/2024	Liebert Cassidy Whitmore	2,215.00	Annual membership fee
2025188	3/25/2024	Linde Gas and Equipment	551.04	Gas cylinders replenishment
2025189	3/25/2024	Lystek International LTD	11,023.40	Biosolids beneficial reuse fee, February2024
2025190	3/25/2024	Marin Resource Recovery Center	192.00	Yard waste disposal
2025191	3/25/2024	McMaster-Carr Supply Co.	3,189.28	Lubricant, gaskets, and misc. electrical and janitorial supplies, February 2024
2025192	3/25/2024	Metrohm USA, Inc	277.77	IC solution for Lab
2025193	3/25/2024	Brown, D Michael	6,501.00	Prof Svcs: IRA Assistance Consulting, February 2024
2025194	3/25/2024	Motion Industries, Inc.	5,289.20	Critical spare gearbox for Headworks
2025195	3/25/2024	PG&E	160.15	Renewable energy expansion, March 2024
2025196	3/25/2024	REXEL	3,871.61	SQPS Maint: VDF filter replacement (Note B)
2025197	3/25/2024	Roy's Sewer Service, Inc.	1,700.00	OWRF odor scrubber media removal
2025198	3/25/2024	Sentry	8,400.00	Subscription for Aeration Basins pilot study
2025199	3/25/2024	Shamrock Building Materials	99.42	Propane
2025200	3/25/2024	State Water Resources Ctrl Brd	150.00	Membership fee (1 employee)
2025201	3/25/2024	TEC Associates Inc	1,149.12	Boiler room water sensor replacement
2025202	3/25/2024	United initiators Canada Ltd.	10,195.90	Hydrogen peroxide (1 delivery)
2025203	3/25/2024	Wells Fargo Vendor	757.22	Lease payment for three printer/copiers, 01/20-02/19/2024
2025204	3/26/2024	Bob Bally	1,273.78	Reissued check
2025205	3/26/2024	CWEA TCP	221.00	Membership fee (1 employee)
2025206	3/26/2024	Forster & Kroeger Landscape Maintenance	94,800.00	V-Ditch hillside maintenance contract, payment #1
2025207	3/26/2024	The Hellan Strainer Company	2,375.30	Strainer parts for process tank maintenance
		TOTAL - CHECKS	**595,680.01**	

Central Marin Sanitation Agency
Schedule 1a - Operating Account Disbursements Register
For the Month of March 2024

Number	Date	Vendor/Payee	Amount	Description

Payments by ACH:

Date	Vendor/Payee	Amount	Description
3/8/2024	Amazon	1,000.51	Office supplies and computer equipment, March 2024
3/1/2024	Cal Public Medical	87,587.18	Medical insurance
3/8/2024	CalPERS	47,105.83	Retirement pension contribution: Agency and employees, PPE 03/02/2024 (Note C)
3/22/2024	CalPERS	47,321.84	Retirement pension contribution: Agency and employees, PPE 03/16/2024 (Note C)
3/29/2024	CalPERS	2,330.23	Retirement pension contribution: Agency and employee final pay PPE 03/29/2024 (Note C)
3/14/2024	Carollo	6,295.00	Prof Svcs: Design - Grit Classifiers Replacement Project, February 2024
3/8/2024	Employment Development Department	15,927.07	State and SDI Taxes, PPE 03/02/2024
3/22/2024	Employment Development Department	15,577.38	State and SDI Taxes, PPE 03/16/2024
3/29/2024	Employment Development Department	4,956.91	State and SDI Taxes, for paycheck 03/29/2024
3/8/2024	IEDA	960.89	Labor relations consulting
3/1/2024	Lincoln Financial Group	2,638.52	Life insurance
3/8/2024	Mission Square	1,550.00	Deferred compensation contributions, PPE 03/02/2024 (Note A)
3/22/2024	Mission Square	1,550.00	Deferred compensation contributions, PPE 03/16/2024 (Note A)
3/8/2024	Navia Benefit Solutions	898.09	Flexible spending account, PPE 03/02/2024
3/14/2024	Navia Benefit Solutions	201.10	Monthly fee
3/22/2024	Navia Benefit Solutions	898.09	Flexible spending account, PPE 03/16/2024
3/8/2024	Nationwide Retirement	24,857.27	Deferred compensation contributions, PPE 02/03/2024 (Note A)
3/22/2024	Nationwide Retirement	25,230.49	Deferred compensation contributions, PPE 02/17/2024 (Note A)
3/29/2024	Nationwide Retirement	19,145.28	Deferred compensation contribution final pay PPE 03/29/2024 (Note A)
3/8/2024	Nitel Inc	1,499.93	Primary telephone and internet service, March 2024
3/1/2024	Payments to 30 retirees	10,341.90	Reimbursement for retiree health benefits
3/8/2024	Public Agency Retirement Svcs	306.68	Retirement pension contribution: Part-time employees, PPE 03/02/2024
3/22/2024	Public Agency Retirement Svcs	751.36	Retirement pension contribution: Part-time employees, PPE 03/16/2024
3/8/2024	SEIU Local 1021	1,142.64	Union dues, PPE 03/02/24
3/22/2024	SEIU Local 1021	1,068.63	Union dues, PPE 03/16/24
3/1/2024	Vision Service Plan (CA)	1,538.31	Vision insurance
	TOTAL - ACH	**322,681.13**	

Board Member Compensation:

Date	Vendor/Payee	Amount	Description
3/22/2024	Boorstein, Michael	450.00	Stipends for 03/01/2024 NBWA Board meeting and 03/12/2024 Board Meeting
3/22/2024	Bushey, Maribeth	225.00	Stipend for 03/12/2024 Board Meeting
3/22/2024	Casissa, Fred	225.00	Stipend for 03/12/2024 Board Meeting
3/22/2024	Dean DiGiovanni	225.00	Stipend for 03/12/2024 Board Meeting
3/22/2024	Doug Kelly	225.00	Stipend for 03/12/2024 Board Meeting
TOTAL - BOARD MEMBER COMPENSATION		**1,350.00**	

	GRAND TOTAL	**919,711.14**

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 2 - CAPITAL RESERVES ACTIVITY SCHEDULE

Year-to-Date as of the Month Ended March 31, 2024

Restricted Capital Reserves Sources and Uses	Monthly Amounts Received (Used)	YTD Amounts Received (Used)
Capacity charges revenue	$ 333,575	$ 783,717
Debt coverage collection revenue	-	1,125,252
Total restricted capital reserve funding sources	333,575	1,908,969
Capacity charges usage for capital (1st)	(333,575)	(783,717)
Debt coverage usage for capital (2nd)	-	(1,130,508)
Total restricted capital reserve uses	(333,575)	(1,914,225)
Net change		(5,256)
Balance - beg of year		1,130,508
Balance - end of month/year		$ 1,125,252
Unrestricted Capital Reserves Sources and Uses		
Capital fee revenue	$ -	$ 948,413
Cal Recycle grant proceeds received	-	1,556,349
Unrestricted operating-reserve-transfer-in	-	1,117,975
Total unrestricted capital reserve funding sources	-	3,622,737
Capital fee usage to fund CIP (3rd)	-	(948,413)
Unrestricted capital reserve draw (4th)	(44,975)	(1,146,652)
Total unrestricted capital reserve uses	(44,975)	(2,095,065)
Net change		1,527,672
Balance - beg of year		14,820,046
Balance - end of month/year		$ 16,347,718
Total capital reserve balances		$ 17,472,970
Total approved CIP budget		$ 8,892,401
Total CIP funded from capital reserve sources		(4,009,290)
Total approved capital budget remaining		$ 4,883,111

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners and Alternates

From: Alan Burleigh, Operations Supervisor

Approved: Jason Dow, General Manager

Subject: March 2024 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report

Recommendation: Accept the March 2024 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report.

I. NPDES Permit Compliance

Our NPDES permit testing for March 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. CMSA's NPDES permit specifies monitoring the six-week rolling geometric mean of enterococcus bacteria which shall be calculated weekly. The rolling enterococcus geometric mean was 4.1 MPN, which is significantly lower than our permit limit of 255 MPN. The average ammonia concentration for the month was 16.1 mg/L, which is less than CMSA's monthly limit of 60 mg/L.

II. Influent and Effluent Flows

Central Marin temperatures remained relatively mild in March, with daytime highs reaching into the 60's to lows in the mid-40's. The Agency recorded 5.16 inches of rain at its on-site rain gauge and no blend events occured. Table 1 shows CMSA's daily influent and effluent flows, Table 2 denotes the CMSA treatment plant and each satellite collection agency's daily average and total monthly influent flows, and Table 3 denotes the CMSA treatment plant and each satellite collection agency's total and peak flow rates for March 2024.

Table 1: CMSA Influent and Effluent Flow Summary

Flow Location	Daily Maximum	Hourly Maximum	5 Minute Maximum	Daily Average
Influent	25.9 MG	37.9 MG	40.4 MG	16.2 MGD
Effluent	24.7 MG	29.3 MG	29.5 MG	14.5 MGD

Table 2: Satellite Collection Agency and Total Flow Summary

Flow Type	SRSD	RVSD	San Quentin	SD2	CMSA Totals
Average Daily (MGD)	6.0 MGD	7.8 MGD	0.8 MGD	1.6 MGD	16.2 MGD
Total for Month (MG)	186.1 MG	242.8 MG	25.7 MG	48.1 MG	502.7 MG
Percent of Flow	37.0%	48.3%	5.1%	9.6%	100%

Table 3: CMSA and Collection System Agency Wet Weather Flows

Wet Weather Peak Flow*	San Rafael (SRSD)	Ross Valley (RVSD)	San Quentin (SQPS)	Corte Madera (SD2)	CMSA
03/02 Total Day's Flow	10.5 MG	11.7 MG	1.01 MG	2.7 MG	25.9 MG
Peak Inf. Flow Rate	18.3 MGD	22.1 MGD	2.4 MGD	9.4 MGD	40.4 MGD

***** The time for peak flows and maximum day's flow varies depending on an area's rainfall during the storm.

III. Treatment Process

The treatment plant is currently operating in wet weather mode and has been operating this way the entire month. Two significant rain events, the first beginning on March 1 and the second on March 29, elevated flows but did not require CMSA to blend primary and secondary flows. On March 10, staff removed an aeration tank from service to align the process with the decreasing flows. On March 17, staff removed Secondary Clarifier No. 2 from service to facilitate the repair of a broken reclaimed water line. On March 18, staff welcomed one new Operator, Scott Hayes. On March 19, staff removed Grit Tank No. 1 from service to allow Maintenance staff to replace the base on Grit Pump No. 1. On March 21, staff received training on the new rotary lobe mixing pump at the Organic Waste Receiving Facility (OWRF).

The Mixed Liquor Suspended Solids inventory averaged 779 mg/l in March, a 4.4% decrease in inventory from last month. The solids inventory is in alignment with our target Mean Cell Residence Time of 3.0 days.

Graph #3 shows the enterococcus MPN, which represents the effectiveness of the disinfection system's performance. The enterococcus rolling average in March was 4.1 MPN/100mL, well below the Agency KPI average of 35 MPN and well below the permit limit of 255 MPN.

Graph #4 shows the Total Suspended Solids (TSS), which is a good indicator of the effluent quality. The TSS monthly average in March was 4.8 mg/l, which is 32.0% of our KPI of 15 mg/l and 16.0% of our permit's monthly average limit of 30 mg/l.

IV. Maintenance Activities

The cogeneration systems produced approximately 98.8% of the Agency's power in March, and MCE supplied the balance, as depicted on Graph #8.

Most of March's work activities were spent performing process equipment corrective maintenance. Technicians relocated the OWRF's odor scrubber for better access to replace the media, replaced the block heater on the backup cogeneration engine, installed a new cutter cartridge on the digester grinder, and repaired several leaks on disinfection chemical pumps. New controls were installed on the secondary scum pumps to replace old controls that were no longer functioning correctly. The Utility staff installed a new downspouts and irrigation piping at the Administration building, filled holes around its foundation, and performed weeding tasks throughout the facility.

Attachment:

- March 2024 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report

NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report

March 2024

The Organic Waste Receiving Facility's new receiving tank and equipment.

Monthly Compliance Summary Table
Central Marin Sanitation Agency
March, 2024
Final Effluent Monitoring

Parameter	Limit Type	NPDES Monitoring Frequency	CMSA Monitoring Frequency	Results	Units	Limit
Carbonaceous Biochemical Oxygen Demand (cBOD)	Weekly Average	1/Week	3/Week	7.8	mg/L	Maximum 40
	Monthly Average	1/Week	3/Week	4.9	mg/L	Maximum 25
cBOD Removal	Monthly Average	1/Week	3/Week	96	%	Minimum 85
Total Suspended Solids (TSS)	Weekly Average	2/Week	3/Week	7.5	mg/L	Maximum 45
	Monthly Average	2/Week	3/Week	4.8	mg/L	Maximum 30
TSS Removal	Monthly Average	2/Week	3/Week	96	%	Minimum 85
Chlorine Residual	Hourly Average	Continuous	Continuous	0.03	mg/L	Maximum 0.56
Ammonia	Monthly Average	2/Month	1/Week	16.1	mg/L	Maximum 60
	Daily Maximum	2/Month	1/Week	16.8	mg/L	Maximum 120
pH	Instantaneous	Continuous	Continuous	6.7	SU	Minimum 6
	Instantaneous	Continuous	Continuous	7.2	SU	Maximum 9
Bacteriological Analysis						
Enterococcus	6-Week Geomean	2/Week	3/Week	4.1	MPN/100mL	Maximum 255
	10% Maximum	2/Week	3/Week	8.3	MPN/100mL	Maximum 1,055
Metals Analysis						
Copper	Daily Maximum	Monthly	Monthly	4.4	ug/L	Maximum 84
	Monthly Average	Monthly	Monthly	4.4	ug/L	Maximum 48
Cyanide	Daily Maximum	Monthly	Monthly	ND	ug/L	Maximum 37
	Monthly Average	Monthly	Monthly	ND	ug/L	Maximum 21
Semiannual and Quarterly Analysis						
Mercury	Weekly Average	Quarterly	Quarterly	0.0042	ug/L	Maximum 0.072
	Monthly Average	Quarterly	Quarterly	0.0042	ug/L	Maximum 0.066
	Annual Load	Quarterly	Quarterly	0.02	kg/yr	Maximum 0.11
Chronic Toxicity	Pass/Fail	Semiannual	Semiannual	*	Pass/Fail	Pass Minimum
	Effect	Semiannual	Semiannual	*	%	50% Maximum
	Survival	Semiannual	Semiannual	*	%	50% Maximum
Permit Analysis						
Dioxin - TEQ Sum	Daily Maximum	1/Permit	1/Permit	*	ug/L	Maximum 2.8E-08
	Monthly Average	1/Permit	1/Permit	*	ug/L	Maximum 1.4E-08
PCB Aroclor Sum	Sum	1/Permit	1/Permit	*	ug/L	Maximum 0.012

** 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**: 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 110 mg/L and a monthly average limit of 60 mg/L.
- **Carbonaceous Biochemical Oxygen Demand (cBOD)**: The amount of dissolved oxygen needed by microorganisms (biomass) to reduce organic material in the effluent. Effluent permit limits require removal of 85% influent cBOD, a monthly average of concentration of less than 25 mg/L cBOD and a weekly average concentration of less than 40 mg/L.
- **Chlorine Residual:** The secondary effluent is disinfected with hypochlorite (chlorine), and then the residual chlorine is neutralized with sodium bisulfite to protect the Bay environment. The final effluent chlorine residual hourly average limit is 0.56 mg/L, which is monitored continuously.
- **Chronic Bioassay:** A 7-day test of Mysida shrimp's exposure to final effluent in a static renewed tank to determine their survivability. The permit requires that we maintain a less than a 50 percent survival effect.
- **Copper:** Our permit requires monitoring of the final effluent for a variety of different metals and has limits for Copper and Mercury. The Copper monthly average limit is 48 ug/L, and the daily maximum limit is 84 ug/L. The remaining metals are monitored only.
- **Cyanide:** A byproduct of potential source control activities and is also a by-product of the disinfection process, and out permit requires monthly sampling and analysis. The Cyanide monthly average limit is 21 ug/L, and the daily maximum limit is 37 ug/L.
- **Dioxin:** Our permit requires monitoring of 17 dioxin-like compounds once per permit cycle. It has a limit for the weighted sum of these 17 dioxin compounds, referred to as the Dioxin Toxic Equivalency (TEQ). The Dioxin TEQ monthly average limit is 0.014 pg/L and daily maximum limit is 0.028 pg/L.
- **Enterococcus:** Enterococcus bacteria are the indicator organisms for the determination of the effectiveness of the disinfection process. The Enterococcus six-week rolling geometric mean limit is 255 MPN/100mL and the Enterococcus 10 percent monthly maximum limit is 1,055 MPN/100mL.
- **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 effluent pH must stay within the range of 6.0 to 9.0, which we monitor continuously.
- **Mercury:** Our permit requires monitoring of the final effluent for a variety of different metals, and has limits for Copper and Mercury The Mercury monthly average limit is 0.066 ug/L, the weekly average limit is 0.072 ug/L, and the annual average loading limit is 0.11 kg/yr. The remaining metals are monitored only.
- **Total Suspended Solids (TSS):** Measurement of suspended solids in the effluent. Our permit requires removal 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
March 2024

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

PRIMARY CLARIFIER PERFORMANCE

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

Total Suspended Solids (TSS) in:	196.0	mg/l	
TSS out:	88.7	mg/l	
Percent Removal Achieved:	54.8	%	**Design 50-70% Removal**
Total Biochemical Oxygen Demand (BOD) in:	179.0	mg/l	
BOD out:	112.7	mg/l	
Percent Removal Achieved:	36.9	%	**Design 25-40% Removal**
Plant Influent Flows:	16.2	MGD	

SECONDARY SYSTEM PERFORMANCE

AERATION TANKS/ACTIVATED SLUDGE

Dissolved Oxygen set point:	2.3	mg/l
MLSS:	779	mg/l
MCRT:	3.0	Days
SVI:	157	

SECONDARY CLARIFIERS

WAS concentration:	6,660	mg/l
TSS out:	6.7	mg/l
Secondary System TSS Removal	92.6	%

FINAL EFFLUENT

Effluent TSS for the month:	4.8	mg/l	(Maximum Limit: 30mg/l)
Week #1 weekly average	7.5	mg/l	(Maximum Limit: 45mg/l)
Week #2 weekly average	3.3	mg/l	"
Week #3 weekly average	4.3	mg/l	"
Week #4 weekly average	4.3	mg/l	"
Week #5 weekly average	7.0	mg/l	"
Monthly average TSS removal efficiency through the plant:	96.1	%	(Minimum Limit: 85%)

Effluent CBOD:	4.9	mg/l	(Maximum Limit: 25mg/l)
Week #1 weekly average	7.8	mg/l	(Maximum Limit: 40mg/l)
Week #2 weekly average	3.3	mg/l	"
Week #3 weekly average	5.0	mg/l	"
Week #4 weekly average	6.3	mg/l	"
Week #5 weekly average	5.0	mg/l	"
Monthly average CBOD removal efficiency through the plant:	95.6	%	(Minimum Limit: 85%)

Disinfection Dosing Rate:		3.9	mg/l	monthly average
Ammonia Monthly Average:		16.1	mg/l	(Maximum 120)
Enterococcus six-week Geometric Mean:		4.1	MPN	(Maximum 255)
Enterococcus 10% Maximum:		12.1	MPN	(Maximum 1,055 MPN)
Effluent pH for the month:	Min	6.7		(Min 6.0)
	Max	7.2		(Max 9.0)

DIGESTER TREATMENT

Thickened Waste Concentration from the RDT:	5.84	%
Volatile Solids destroyed:	84.6	%
Cubic feet of biogas produced:	9,363,600 (Total)	302,052 (Daily Average)
Temperature of the digesters:	101.8	degrees Fahrenheit

EXECUTIVE SUMMARY PROCESS PERFORMANCE DATA
March 2024

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

DEWATERING

Centrifuge feed concentration:	2.4	%
Biosolids concentration:	25.0	%
TSS of the centrate:	403	mg/l
Centrifuge solids capture:	98.50	%
Polymer use per dry ton of biosolids:	17.08	#/dry ton
Polymer feed rate per run:	3.11	gpm
Concentration of the polymer batches:	0.328	%
Sludge feed rate per run:	50.1	gpm

Comments:
The treatment plant performed well, and all equipment remained online and operating without incident.

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 blue bars depict the CMSA rain gauge recordings for the month.

Graph #2:
Depicts individual collection agency flows.
The Y-axis is in the flow range of 0-14 MGD.

Graph #3:
Depicts the enterococcus most probable number (MPN) results which are an indication of the performance of the disinfection system.
The enterococcus average for the month of March was 4.1 MPN, well below the Agency KPI of 35 MPN and permit limit of 255 MPN. Enterococcus remained below the Agency KPI for the entire month.

Graph #4:
Depicts the total suspended solids in the effluent.
Our monthly average was 4.8 mg/l versus our KPI of 15 mg/l and permit monthly average limit of 30 mg/l. The effluent suspended solids remained below the Agency KPI for the entire month.

Graph #5:
Depicts the effluent CBOD which is measuring the oxygen demand of the wastewater.
The effluent CBOD average was 4.9 mg/l, below our NPDES limits of 40 mg/l weekly and 25 mg/l for the month. The effluent CBOD remained below the Agency KPI of 15mg/l for the entire month.

Graph #6:
Depicts the degree to which the biosolids have been dewatered.
Our biosolids % concentration met or exceeded our KPI of 25% for 17 out of 30 days. For 13 days the concentration was below the KPI; the Operations department is currently training three new staff members on centrifuge operation. Average concentration for the month met the Agency KPI at 25.02%. No dewatering operations were performed one day in March.

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 March averaged 302,052 cubic feet per day, above our monthly KPI of 200,000 cubic feet per day.

Graph #8:
This graph depicts the amount of energy produced through cogeneration versus the energy purchased from MCE for Agency operations, and the green line represents power exported to the grid. In March total power exported was 79,385 kWh.

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.

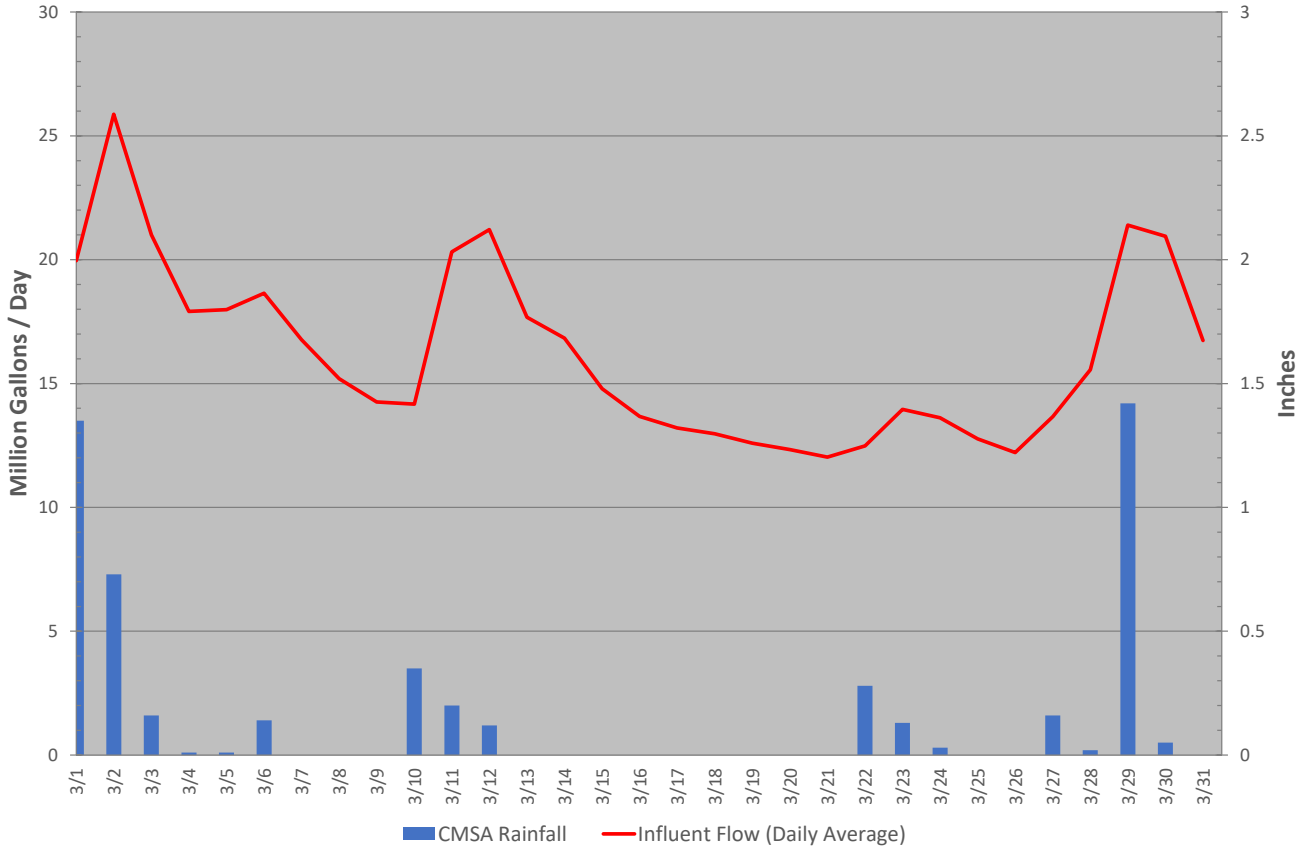
- **Volatile Solids:** Organic content of the wastewater suspended solids.

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

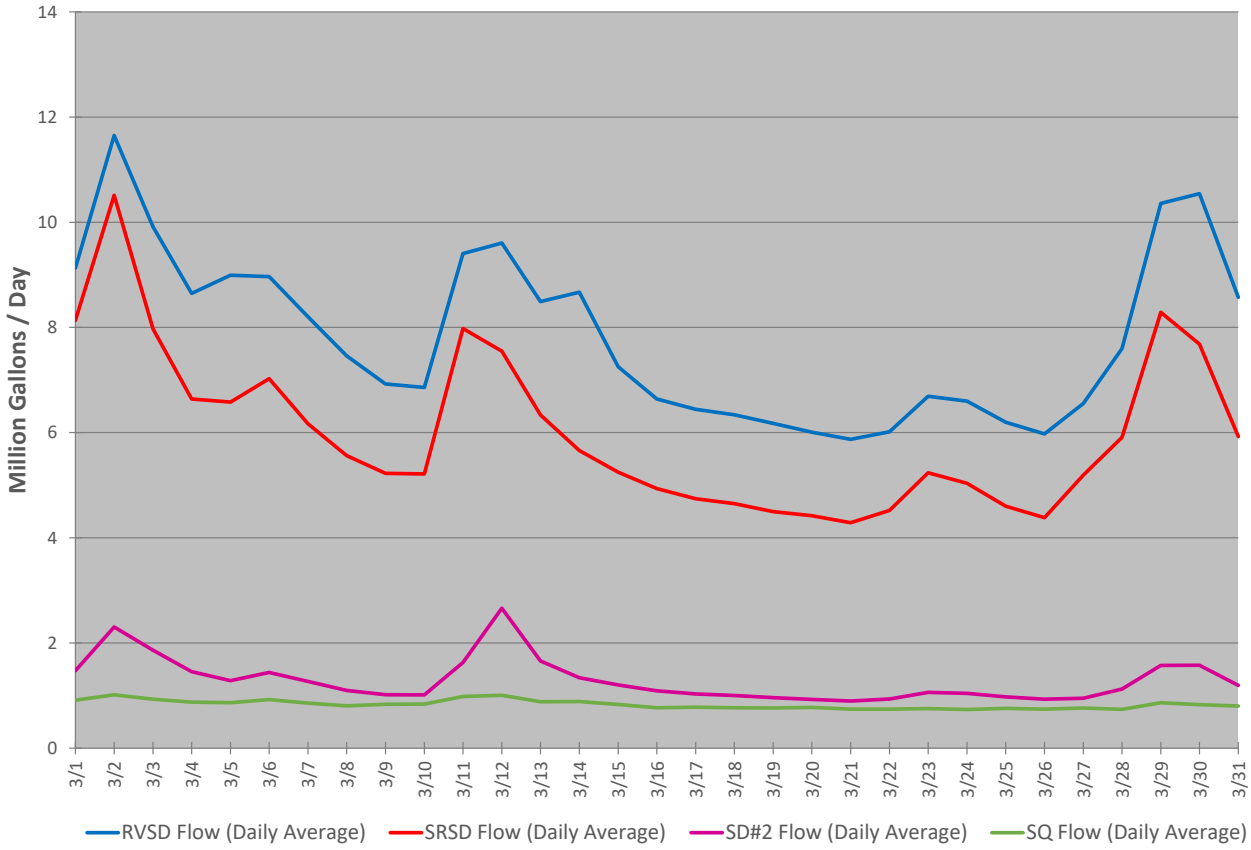
Units of Measurement

- 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.

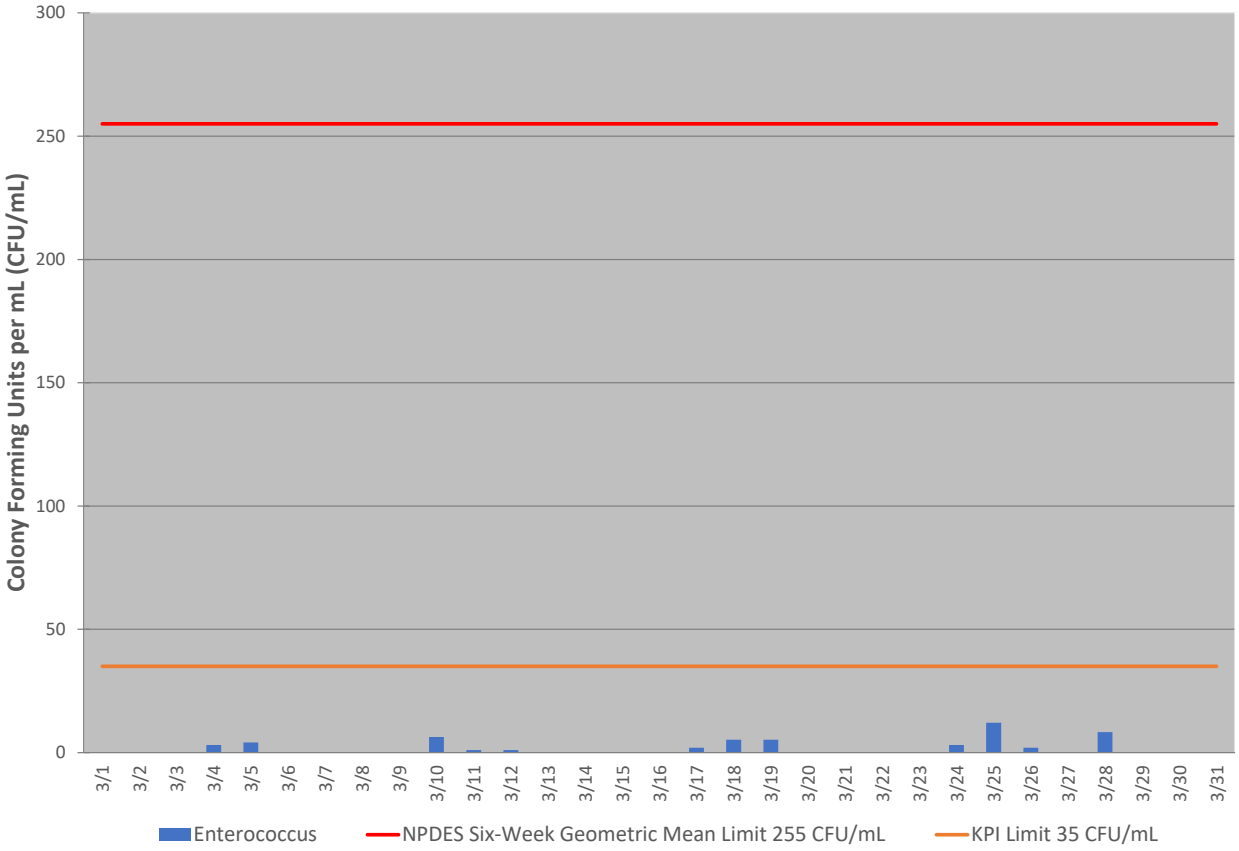
Graph #1: CMSA Influent Flow and Rainfall



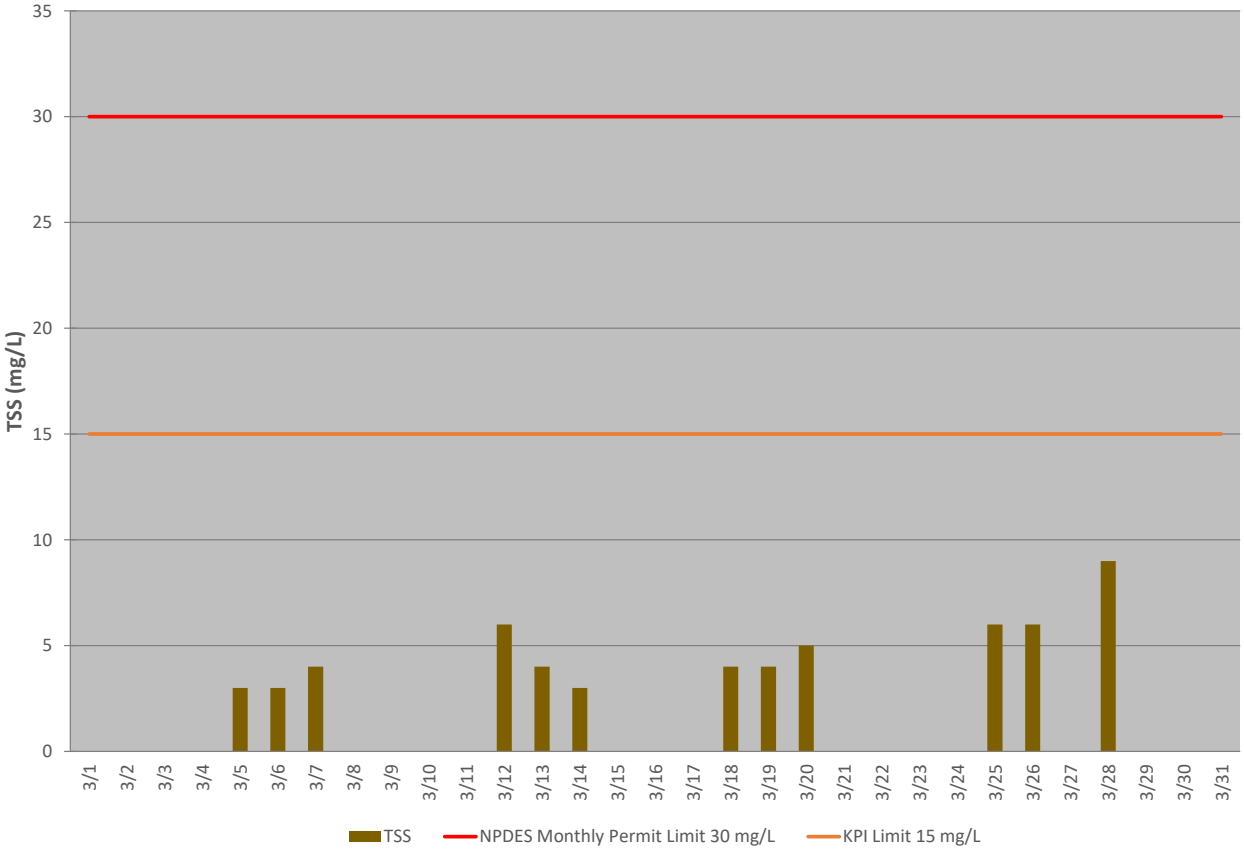
Graph #2: Collection System Influent Flows



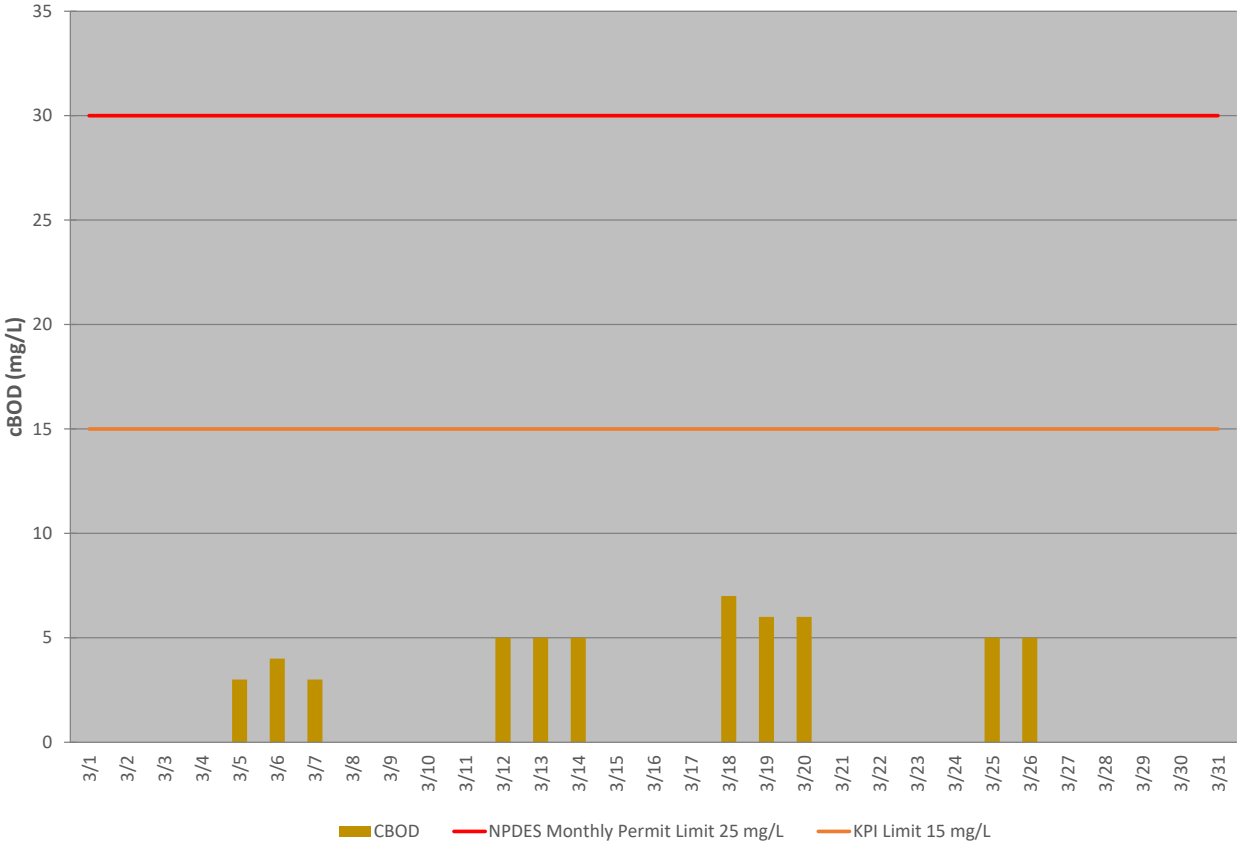
Graph #3: Enterococcus



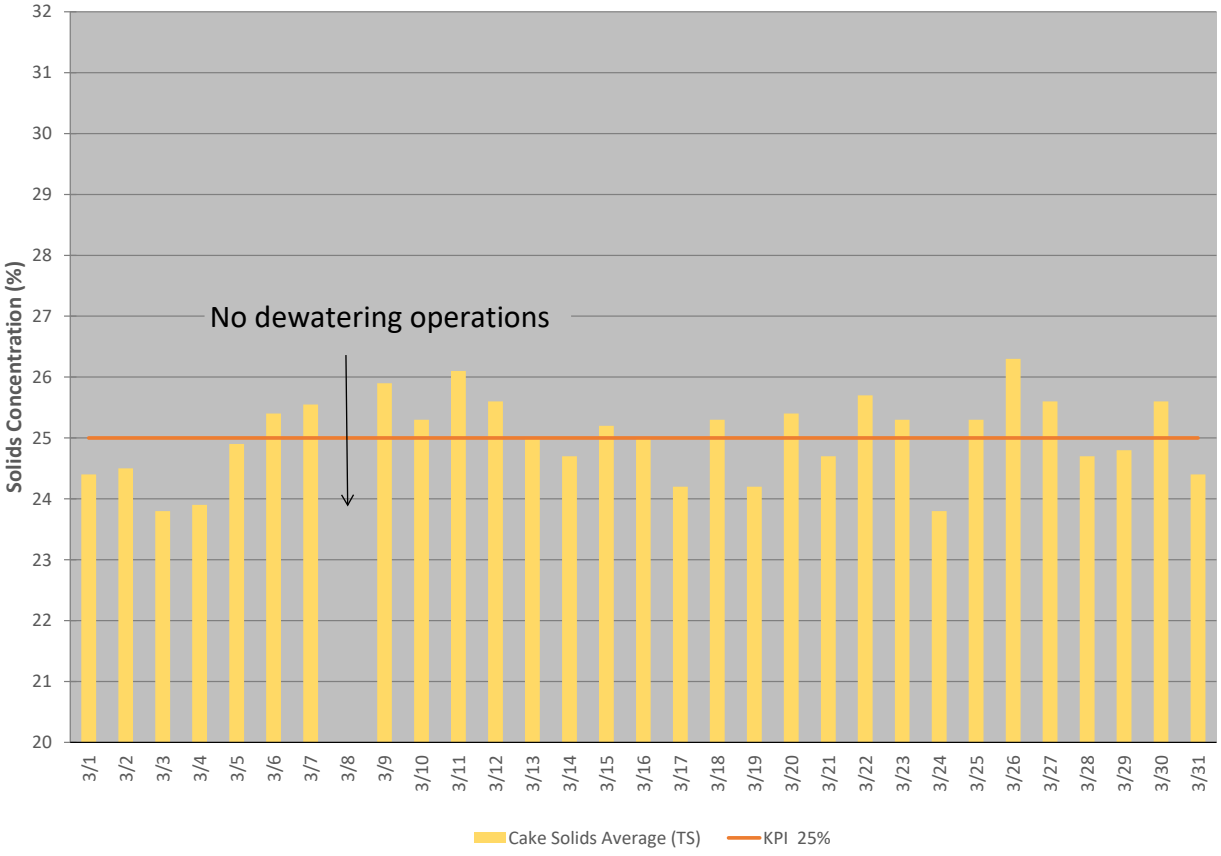
Graph #4: Final Effluent Total Supended Solids



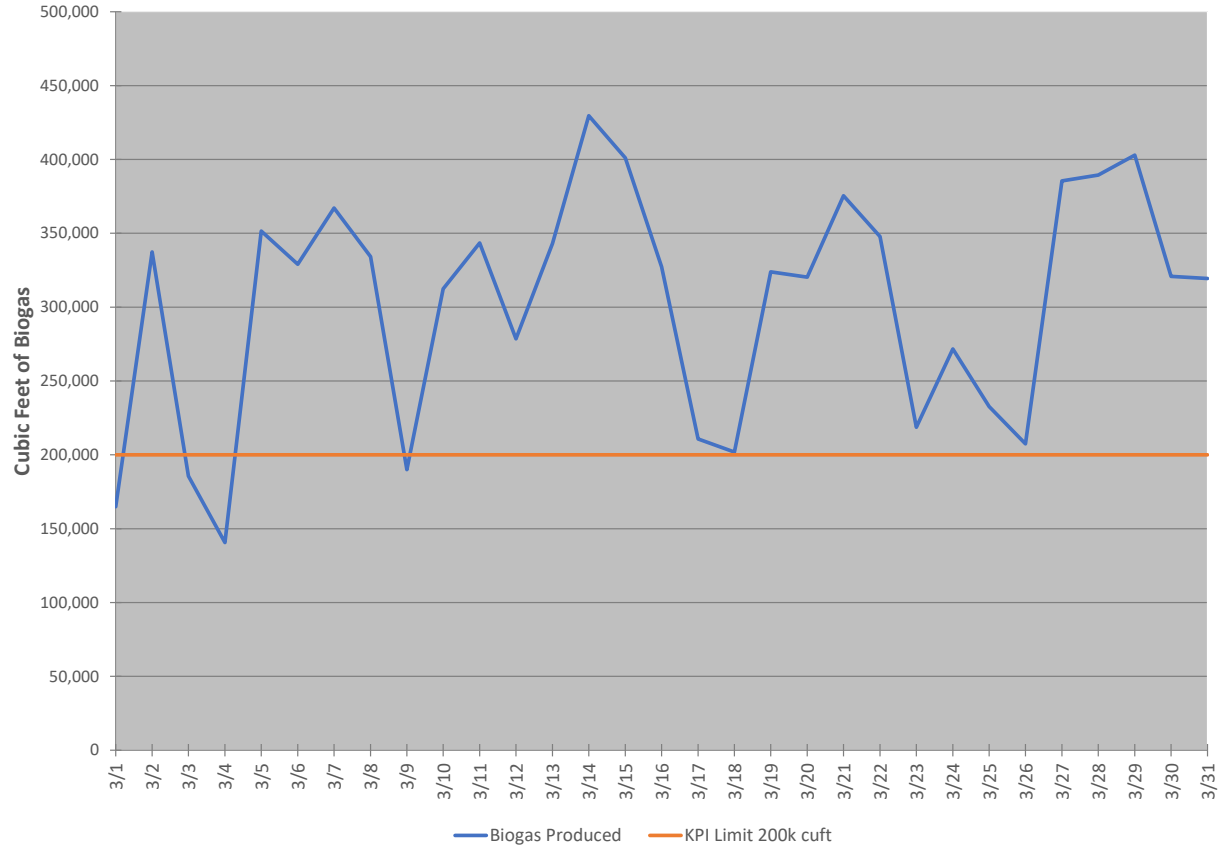
Graph #5: Carbonaceous Biochemical Oxygen Demand (cBOD)



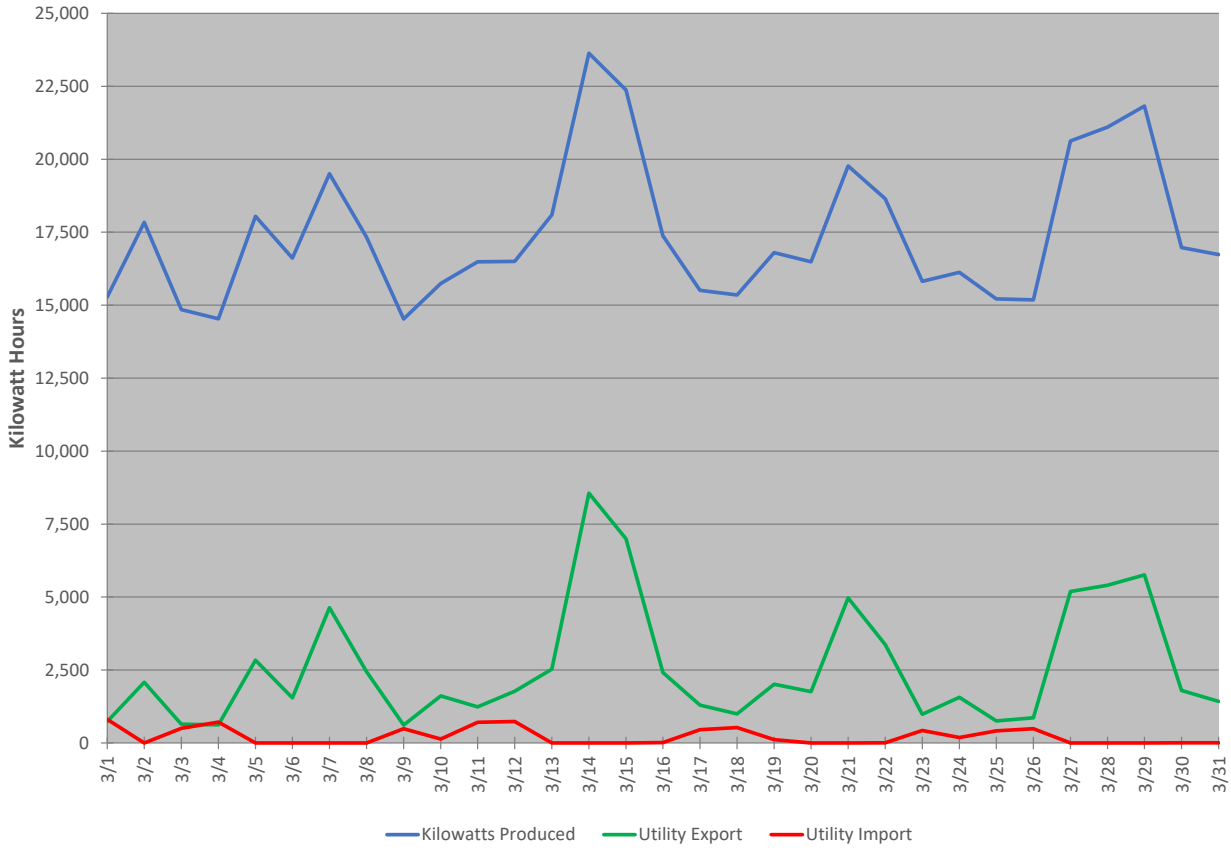
Graph #6: Biosolids Solids Concentration



Graph #7: Biogas Production



Graph #8: Power Distribution



BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager

Subject: Performance Metric Report – March 2024

Recommendation: Accept the March 2024 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 nearly all of our metric goals/targets. Noteworthy metrics or variances are described below.

Table I – Treatment/Process Metrics
The treatment facilities were in the wet weather mode of operation over the month, and effluent quality was very good.

Table II – Employee Metrics
Employees completed their First Aid/CPR, Bloodborne Pathogen, and Electrical safety trainings. Several employees received department specific development training, and operations staff received vendor training for the new Screenpress at the Organic Waste Receiving Facility.

The General Manager attended the California Sanitation Risk Management Authority long range planning session in Napa.

Table III – Public Outreach
Three odor notifications were posted to the Agency website and there were no public odor complaints. The notifications were for draining the Chorine Contact Tanks for routine maintenance (3/17), removing a primary clarifier from service as wet weather flows subsided (3/30), draining a Chorine Contact Tank to repair a drain valve (3/31).

Monthly public education events may include staff attendance at public outreach events, school classroom and/or juggler show presentations, and Agency tours, as presented below.

Public Outreach Events

Date	Event	Attendees
3/23	Spring Faire at the Mill Valley Community Center	300

School Events – Juggler Show Presentations and Classroom Events
Rock Steady Juggling provides elementary school outreach presentations.

Date	School	Attendees
3/7	Our Lady of Loretto School in Novato	235

CMSA Tours

Date	Group	Attendees
3/5	Marin Academy students	25
3/6	Marin Catholic students	25
3/7	San Domenico students	35
3/15	Marin Waldorf students	25
3/19	Laboratory intern candidate	1
3/21	Archie Williams High School students	60
3/22	Commissioner Boorstein and three colleagues	4

Table IV – Environmental and Regulatory Compliance Metrics
There were no final effluent or air permit exceedances in March. FOG source control inspections have returned to planned levels during the month.

Attachment:
- March 2024 Performance Metric Report

TABLE I - TREATMENT/PROCESS METRICS

Metric	Definition	Measurement	Range/Target/Goal
1) Wastewater Treated	Volume of wastewater influent treated in million gallons (Mg); *Year to date in billion gallons (Bg)*	502.7 Mg; 1.78 Bg	165 – 820 Mg/month
2) Recycled Water Use	Volume of recycled water produced and used on-site, in million gallons (Mg) Volume delivered at the truck fill station, in thousand gallons (Kg)	26.8 Mg 51.2 Kg	25 - 40 Mg variable
3) Biosolids Reuse	Disposal or reuse 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)	385 wt 0 wt 87.5 wt	360 – 665 wt
4) 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 BOD removed; % BOD removal	 233.7 tons; 96% 206.5 tons; 96%	 > 85% > 85%
5) Priority Pollutants Removal	Diversion of priority NPDES metals from discharge to the San Francisco Bay: a. % Mercury, for current quarter b. % Copper	 88% 79%	 88 – 99% 84 – 98%
6) Biogas Production	Biogas generated in our anaerobic digesters, in million cubic feet (Mft^3) Natural gas equivalent of the biogas, in million cubic feet (Mft^3)	9.36 Mft^3 5.99 Mft^3	7.0 - 10.5 Mft^3 4.5 - 6.7 Mft^3
7) Power Produced	Power produced from cogeneration of biogas and purchased natural gas - in kilowatt hours. (kWh) Power produced from cogeneration of biogas and delivered to the MCE Cogeneration system runtime on biogas*, in hours (hrs.); % time during month* Agency power demand supplied by renewable power*, %* Cogeneration system uptime, *in hours; % time during month* Biogas value (natural gas cost equivalent).	540,997 kWh 79,385 kWh 633 hrs; 85.1% 87.1% 742 hrs; 99.8 % $52,505	380 - 480,000 kWh 40,000 - 70,000 kWh 600 hrs; 80% 80 - 100% 650 hrs; 87% $30,000 - $60,000
8) Efficiency	The cost to operate and maintain the treatment facilities per million gallons of wastewater treated, in dollars per million gallons. ($/Mg) Energy used, kilowatt hours, per million gallons treated. (kWh/Mg)	$2,141/Mg 1,090 kWh/Mg	$2,500 - $5,400/Mg (wet - dry) 670 - 2,400 kWh/Mg

CMSA CY24 PERFORMANCE METRICS – March 2024

Table II – EMPLOYEE METRICS

Metric	Definition	Measurement	Target/Goal
1) Employee Training	Hours of internal training – safety, virtual, project, vendor, etc. Hours of external training – employment law, technical, regulatory, etc.	Internal = 183 External = 10	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);	333 hrs 1,064 hrs (99.77%) 2.5 hrs (0.23%) 0.31	800 - 1,100 hrs ≥ 70% total CM hrs ≤ 30% total hours ≥ 0.45
3) Overtime Worked	Monthly hours of overtime worked; *Year to date hours of overtime (YTD)* % of regular hours worked; *% Year to date (YTD)*	126 hrs; *(458.5 hrs)* *1.8%; (2.3%)*	< 5%
4) Internship Program	Number of high school and college student interns work hours; (YTD)	0 hrs; *(*92 *hrs)*	Variable

Table III- PUBLIC OUTREACH

Metric	Definition	Measurement	Target/Goal
1) Public Education Events	Attendance at public education outreach events; # of booth visitors; *(YTD)*	300; *(300)*	3,000/year
2) School Events	Participation or sponsorship in school outreach events; attendees; *(YTD)*	235; *(1,171)*	variable
3) Agency Tours	Tours given to students and the public; # of people, *(YTD)*	178; *(179)*	variable
4) Odor Notifications	Number of odor alerts posted to the Agency website	3	1-10
5) Odor Complaints	Number of odor complaints received from the public	0	0

CMSA CY24 PERFORMANCE METRICS – March 2024

Table IV - ENVIRONMENTAL AND REGULATORY COMPLIANCE METRICS

Metric	Definition	Measurement	Range/Target/Goal
1) Permit Exceedances	# of NPDES permit exceedances # of BAAQMD permit exceedances	0 0	0 0
2) Regulatory Analyses	# of analyses by the CMSA laboratory for NPDES, stormwater, and biosolids regulatory compliance monitoring and reporting.	257	200-500
3) Process Control Analyses	# of analyses by the CMSA laboratory for process control monitoring	578	400-900
4) Contract Laboratory Analyses	# of analyses by contract laboratories for regulatory compliance reporting, and source control program monitoring.	84	25-150
5) Quality Control Testing	# of CMSA performed laboratory analyses for QA/QC purposes.	866	500-1,500
6) Water Quality Sample Analyses	# of ammonia, total and fecal coliform, enterococcus, and/or sulfide analyses performed for the CMSA member agencies, and occasionally source control monitoring analyses.	114	50-500
7) Source Control Inspections	Inspections of industrial and commercial businesses in the Agency's and LGVSD's source control programs and Novato Sanitary District's Mercury Reduction Program – 199 businesses and 100 dental offices.	9	10-30
8) FOG Program Inspections	Inspections of food service establishments (FSEs) in the Almonte, TCSD, SD2, RVSD, SRSD, and LGVSD service areas – approx. 314 FSEs are regulated.	43	30 – 50
9) Permits Issued/Renewed	Permits issued for the source control programs – pretreatment, pollution prevention, food service establishments, and ground water discharge.	*6*	variable

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners & Alternates

From: Jason Dow, General Manager

Subject: CASA Statewide Wastewater Air Toxics Pooled Emissions Study

Recommendation: Approve the Agency's participation in the CASA Statewide Wastewater Air Toxics Pooled Emission Study.

Summary: The California Air Resources Board (CARB) is requiring all wastewater agencies with treatment plants to conduct a two-phase emissions study over the next three years, to determine which of 1,700 identified air toxic pollutants are released from treatment plants, and then quantity the pollutant concentrations. Beginning in 2028, identified pollutants must be monitored and reported.

The California Association of Sanitation Agencies (CASA) and the regional wastewater associations, such as the Bay Area Clean Water Agencies, have proposed and CARB has approved that wastewater agencies can participate in a pooled emissions study. CASA sent the attached notice to its members with the offer to participate in a CASA administered pooled emissions study. Benefits of utilizing a pooled statewide approach are detailed in the attachment and include cost savings and statewide study coordination with CARB, testing laboratories, and agency participants.

Fiscal Impact: CMSA has a three-year average annual flow of 11.3 MGD. Based on that flowrate, our annual contribution to the Study is approximately $13,500 in FY25, and $14,125 in FY26 and FY27.

Attachment:
- CASA Notice: Statewide Wastewater Air Toxics Pooled Emission Study

CALIFORNIA ASSOCIATION of SANITATION AGENCIES
925 L Street, Suite 200 • Sacramento, CA 95814 • TEL: (916) 446-0388 • www.casaweb.org

Statewide Wastewater Air Toxics Pooled Emissions Study

The following document describes the "two-step process" pooled emissions study that is required by the California Air Resources Board (CARB). CASA has agreed to serve as the fiscal agent for this project with support from the regional associations (Bay Area Clean Water Agencies, Clean Water SoCal, and Central Valley Clean Water Association).

Background

Reporting requirements for air toxics emitted from permitted stationary sources in California (including WWTPs) have expanded since CARB's latest amendments to the Emissions Inventory Criteria and Guidelines (EICG) and the Reporting of Criteria Air Pollutants and Toxic Air Contaminants Regulations (CTR) became effective January 1, 2022. WWTPs can report business-as-usual through 2027 but are required to conduct a two-step process (on their own or as a group) to determine which of the 1,700+ air toxics referenced in the latest EICG need to be monitored and reported beginning in 2028. CARB's provision for the wastewater sector to complete a two-step process to establish air toxics emission factors that can be adjusted for the capacity of the WWTP and will be applicable to all WWTPs. Identifying a shortlist of air toxic compounds to be tested requires:

1. Scanning emissions from representative WWTPs and unit processes to determine detectable air toxics
2. Quantifying emissions of the detectable air toxics using approved sampling and analysis methods to determine which must continue to be monitored and reported beginning with calendar year 2028

For the past few years, CASA has been working with a variety of agencies, regional associations, and the Air Quality, Climate Change, and Energy (ACE) Air Toxics Subgroup to develop an appropriate approach to initiating this two-step process on behalf of the wastewater community.

Benefits of Engaging in the Two-Step Process and Pooled Emissions Study

Through CASA and the regional associations' leadership, the wastewater sector is uniquely positioned to help lead the execution of a statewide two-step process in the form of a pooled emissions study (Study). Conducting the Study as a statewide group offers numerous benefits to the sector, including:

- **Representative Testing Cost Savings:** Having a select number of WWTPs[1] perform the Study and represent the sector versus every WWTP having to perform the Study. This allows the sector to streamline the work, avoid overwhelming source test specialists (which are already overextended across the state) and significantly reduce costs.[1]
- **Administrative Cost Savings:** Pooling funds as a sector and having CASA serve as the fiscal administrator relieves WWTPs of the burden of managing individual contracts and coordinating comparisons of the results across the state, significantly reducing overall administrative costs.
- **Streamlined Project Execution:** Hiring a single project manager (PM) to coordinate and produce a sound technical approach/source test protocol[2] that is consistently applied across the state, including selection of source test specialists and laboratory to streamline the execution of the Study and the analysis of results.
- **Coordinated Statewide Action:** Close coordination by the PM across CASA staff, regional association staff, WWTPs, CARB staff, Air District staff (including the California Air Pollution Control Officers' Association or CAPCOA), Source Test Specialists, and other technical experts as needed to complete the Study in time for expanded monitoring and reporting to begin in 2028.
- **Single Reference Set for Future Use:** Producing a single set of emission factors for a shortlist of air toxics that all WWTPs can use for reporting purposes beginning in 2028.

The alternative would be for every WWTP (or smaller groups of WWTPs) to perform their own two-step process for the 1700+ air toxics identified by CARB. That approach poses significant challenges and increased costs for

[1] Per the regulations, WWTPs include covered (≥10 million gallons annual average daily flow) and uncovered (≥5 million gallons annual average daily flow) systems. Covered systems are defined as "…wastewater treatment having a covering over the physical area where the primary settling process occurs in the wastewater treatment process, such as sedimentation tanks. The primary tanks may be sealed or covered with a fixed, floating or retractable cover and shall be airtight, thus preventing emissions from being released to the air."

[2] Scanning and sampling protocols will be developed in collaboration with and approved by local air districts and CARB staff. The PM and CASA Steering Committee will lead the coordination and development of the overarching Source Test Protocol.

the wastewater sector. Additionally, the numerous efforts will likely yield inconsistent results, in part from having to use multiple source test specialists and laboratories, which will make it very challenging to determine a single emission factor for any air toxic. Finally, the sampling and analyses necessary would be cost prohibitive for most WWTPs on their own. That is why it is important to maximize individual WWTP participation and contributions to the Study, which will serve as documentation for your agency's compliance with the requirements under CARB's EICG and CTR.

Pooled Emissions Study Details and Next Steps

We estimate the Study could take three to four years and could cost up to or possibly more than $10 million for the wastewater sector to complete as a group. This time and cost factor is based on an assumption that we would be required to sample and analyze over seven families of air toxics across various WWTPs and unit processes, and extrapolation from a previous similar effort, the 1990 Pooled Emissions Estimation Program, which took just over two years to complete and focused on only one family of compounds.

The Study will be performed in two phases, with the vast majority of costs incurred in Phase 2:

1. During Phase 1 (2024), the selected PM in collaboration with CASA and Source Test Specialists will develop (and gain approval from CARB and Air Districts for) the overarching Source Test Protocol necessary to perform the two-step process.
2. During Phase 2 (2025-2027), the PM will coordinate completion of the two-step process with the selected Source Test Specialist(s) in close collaboration with CARB, air districts, the Steering Committee and WWTPs.

The results of Step 1 of this Study will inform the details needed as part of Step 2 (i.e., number of WWTPs, number of unit treatment processes to be sampled at each WWTP, and number of air toxics that will need to sampled and analyzed from each unit process), at which time we will be able to refine the estimated cost and timeline to perform Step 2. As of November 1, 2023, CASA and the regional associations distributed a request for qualifications to interested entities, and plan to select a suitable PM for Phase 1 in early 2024.

Agency Cost Sharing and Planning for Future Budget Allocations

The $10 million estimated budget is to be shared by the ~145 WWTPs[1] across the state who have annual average daily flows near or exceeding the regulatory threshold.[1] We have estimated contributions per million gallons of average annual daily flow, with the costs spread over the next three to four fiscal years. This resulted in a total project estimate of approximately **$3,700 per MGD of average annual daily flow** (based on 2019-2021 flows) for each of the ~145 WWTPs[1]. For smaller agencies who may be exempt from these regulations at this time, we are still requesting your participation. CASA is requesting the following of those who wish to participate:

Fiscal Year 2024: Pay now or July 1, 2024*	Fiscal Year 2025: Pay now or July 1, 2024*	Fiscal Year 2026: Pay July 1, 2025	Fiscal Year 2027: Pay July 1, 2026
$200 per MGD	$1,000 per MGD	TBD, budget ~$1,250 per MGD	TBD, budget ~$1,250 per MGD

***Paying now is encouraged. If not budgeted, please budget for Fiscal Year 2025 and send payment July 1, 2024.**

Agencies that have budgeted for this Study in FY24 are encouraged to make contributions promptly to the maximum extent possible to fund Phase 1 PM costs. We recognize that some agencies may not have budgeted for FY24 – those agencies may pay both the FY24 and FY25 amounts as a lump sum in FY25. Any funds not spent on Phase 1 of the Study will be applied to Phase 2. CASA will track early contributions to ensure equity across the sector. Funding levels for FY 26 and FY 27 will be determined as part of Phase 1.

Contact Information

Please contact Shacara Gamboa at sgamboa@casaweb.org to confirm participation in the statewide group and ability to contribute in FY 23/24 and 24/25. Please also provide a point of contact for invoicing. At the appropriate time, CASA can send an invoice for your contribution to the Study or work with your respective regional association (BACWA, CVCWA, or Clean Water SoCal) to administer the invoice. For substantive questions about the Study, please reach out to Sarah Deslauriers at sdeslauriers@carollo.com.

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners and Alternates

From: Abel Villarreal, Maintenance Supervisor

Approved: Jason Dow, General Manager

Subject: FY24 Asset Management Program - 3rd Quarter Report

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

Summary: Since February 2011, staff has provided the Board with periodic reports to highlight the Agency's fully implemented Asset Management Program work activities. Staff publishes quarterly reports in October, January, and April, and the annual report is presented in July.

Second Quarter Highlights

Jenbacher Cogeneration Engine Service

The 3,333-hour scheduled preventative maintenance (PM) service, similar to the 2,000-hour PM for the Waukesha engine, was successfully completed on the Jenbacher cogeneration engine during this last quarter. Technicians from Western Energy Systems (WES), the local representative for the cogen system, had previously conducted the PM and provided training to CMSA technicians for future maintenance tasks. Maintenance included replacing oil, air, and natural gas filters, re-gapping spark plugs, adjusting intake valves, and conducting exhaust emission checks to ensure compliance with CMSA's air quality permit, and was all performed in-house by CMSA technicians. Recently, WES also trained several Agency technicians to adjust emissions on the new system, enhancing their capabilities in maintaining the equipment.

Inline Sludge Grinder Cartridge Replacement

The content of the Agency's anaerobic digesters is recirculated in two separate and very distinct loops. The mixing loop uses large pumps to circulate the digester contents for the primary purpose of enhancing biogas production. The heating loop, which controls the temperature inside the digesters, utilizes a sludge grinder to prevent large diameter debris from plugging the relatively small diameter piping within two heat exchangers. Recently, while performing annual maintenance on the in-service sludge grinder, staff replaced the grinder's cutting cartridge due to operational wear and tear. Cutting cartridges macerate sand, hair, inorganic materials, and are designed to be removed and replaced periodically to preserve the overall life of the sludge grinder. Typically, CMSA replaces one cartridge per year, which is then exchanged and refurbished by the grinder system's manufacturer.

Primary Sludge Flowmeter Replacement

The primary sludge flowmeters, originally installed in 1984, have recently been replaced. Over the past year, these meters had become increasingly unreliable, necessitating additional maintenance efforts from staff to keep them operational. To mitigate disruptions to the solids treatment process, the meter replacement was coordinated with Operations staff. Following this, E/I staff performed calibration procedures, ensuring the accuracy and functionality of the new meters. Subsequently, the new meters have been seamlessly integrated into the system, now actively reporting data to SCADA, enhancing operational efficiency and reliability.

Original Door

New Door

Facility Door Replacement

There are over one hundred exterior doors at CMSA, and most were installed when the facilities was built in the early 1980s. Given their exposure to high humidity and corrosive environments, these doors have gradually deteriorated over time. In response, CMSA initiated a multi-year project to systematically replace doors based on their condition. In FY23, the initiative saw the replacement of 10 facility doors, followed by an additional 10 doors in FY24. The process involved the removal of old doors and cutting the frames out from the concrete walls that supported them. Subsequently, new doors and frames were installed and painted to match the existing aesthetic. Five more doors are slated for replacement in FY25, alongside the windows and frames at the aeation building, further enhancing the infrastructure and functionality of CMSA's facilities.

Asset Inventory

Staff conducted a review of Agency assets tracked within the computerized maintenance management system (CMMS) asset tree. This quarterly exercise is performed to verify active assets within the system. As Agency managed projects or regularly scheduled maintenance work is completed, both new and old assets must be accounted for in an asset inventory count. Along with entering new and removing obsolete assets from the asset tree, staff removed improperly grouped or classified assets, and removed additional non-critical assets. In all, 39 items were entered, reclassified, or removed from the CMMS asset tree this past quarter.

Asset Locations	Total Assets
CMSA	2,699
Sanitary District No. 2	390
San Quentin Prison Pump Station	31
San Quentin Village Sewer Maintenance District	16

Parts Inventory

The parts inventory is comprised of critical spare parts and equipment, and consumable items for Agency and managed pump station assets – Sanitary District No. 2 (SD2), San Quentin State

Prison (SQSP), and San Quentin Village Sewer Maintenance District. Spare parts for CMSA and San Quentin Village are kept at CMSA site-specific parts rooms, SD2 equipment is stored at Paradise pump station, and San Quentin parts and equipment are stored at SQSP pump station.

Parts Inventory	Parts Quantity	Total Value
CMSA	36,706	$2,129,713
Sanitary District No. 2	374	$259,395
San Quentin Prison	64	$72,858
San Quentin Village	3	$1,536

Asset Improvements, Repairs, and Refurbishment Work

1) Construction Project Work

Projects in the table below are construction projects that were completed or are in progress. For some of the projects, CMSA staff performed work alongside contractors, below is the total cost of CMSA staff support.

Project Name	CMSA Staff Costs	Total Cost	Status
Organic Waste Storage Tank and Biogas Treatment System Upgrades	$36,560	$2.5M	Staff attended LobePro pump training and Huber strainpress training.

2) CMSA Asset Management Improvements

Projects in the table below are considered routine, recurring, and usual maintenance work for the preservation, protection, or replacement of Agency assets. CMSA labor and materials costs are included to determine the overall cost to perform a specific task.

Area	Equipment	Improvement	Total Cost	Comments
Administration Building	Lab Room	Pipe Repair	$1,266	Replaced cracked vent pipe fitting.
Administration Building	Gutters	Improvements	$2,517	Installed downspout flow pipes.
Administration Building	Security Fence	Improvements	$2,263	Installed barb wire outside laboratory storage shed.
Administration Building	Fire Alarm System	Refurbishment	$2,272	Replaced and reprogrammed CPU.
Facility – Flare	Plant Road Area	Landscape improvements	$10,832	Terrace with fieldstone and xeriscape with wildflowers.
Facility – Digester Gallery	Digester Pump Room	Improvements	$2,447	Painted digester basement walls.
Facility – Solids Building	Air Handler	Improvements	$1,035	Installed access doors for maintenance.

Area	Equipment	Improvement	Total Cost	Comments
Headworks	Grit Pump No. 1	Refurbishment	$1,055	Replaced sheaves and belts.
Headworks	Grit Pump No. 3	Pump Refurbishment	$22,728	Replaced seals, bearings, and shaft resurfaced.
Headworks	Influent Sample Pump No. 3	Pump Refurbishment	$3,740	Replaced bearings, shaft sleeve, and mechanical seal.
Primary Clarifiers	Primary Tank Drain	Pump Refurbishment	$5,008	Replaced pump and motor.
Primary Clarifiers	Primary Sludge Flowmeters	Replacement Improvements	$17,372	Replaced both primary sludge flowmeters.
Biotowers	Sump Pump – Gallery H	Pump Replacement	$2,645	Replaced sewage pump.
Secondary Clarifiers	Scum Pump Nos. 1 & 2	Electrical Improvements	$7,471	Replaced bad float and updated/redesigned circuit.
Chlorine Contact Tanks	CCT/Pond Drain Pump	Pump Refurbishment	$2,730	Removed debris, replaced coupling, and re-aligned pump and motor.
Disinfection / Dechlorination	Plant Strainers	Strainer cleaning	$1,989	Removed debris from strainers from blend events.
Disinfection / Dechlorination	Plant Water Pump No. 3	Pump Refurbishment	$1,856	Replaced failed bearings.
Disinfection / Dechlorination	Hypochlorite Disinfection Pump P10.220	Pump Refurbishment	$1,110	Replaced ball checks and diaphragm.
Solids Handling	Centrifuge No. 1	Sensor Replacement	$1,506	Replaced vibration sensor switch.
Solids Handling	Centrifuge No. 2	Amplifier Replacement	$3,014	Replaced current amplifier.
Solids Handling	Centrifuge Nos. 1 & 2 Diverter Gates	Air Ram Replacement	$1,974	Replaced both air rams.
Solids Handling	TWAS Pump No. 2	Pump Refurbishment	$6,319	Replaced lobes, wear plates, cartridge seals, housings, and lubricants.
Solids Handling	Boiler Nos. 1 & 2	Electrical Improvements	$7,043	Installed new conduit and wires.
Solids Handling	SCR System	Improvements	$6,190	Installed back-up air supply line to SCR system.

Area	Equipment	Improvement	Total Cost	Comments
Solids Handling – Energy Generation	Waukesha Cogeneration Engine – Block Water Heater	Improvements	$9,522	Installed new engine block water heater.
Solids Handling – Energy Generation	Jenbacher Cogeneration Engine	Preventative Maintenance	$4,694	Engine oil change.
Solids Handling – Energy Generation	Jenbacher Cogeneration Engine	Preventative Maintenance – 10K PM	$1,395	Replaced oil and air filters. Adjusted intake and exhaust valves.
Solids Handling – Energy Generation	Jenbacher Cogeneration Engine Emission Analyzer	Improvements	$1,355	Installed emission analyzer calibration station.
Digesters	Dystor Blower No. 1 Motor	Motor Replacement	$3,022	Replaced failed motor.
Digesters	Sludge Recirculation Grinder No. 2	Cartridge Replacement	$15,702	Replaced cutter cartridge.
Underground Pipe Galleries	Drainpipe – Gallery F	Improvements	$1,146	Replaced corroded metal pipe with ABS pipe.
Organic Waste Receiving Facility	Odor Scrubber	Media Changeout	$15,899	Changeout of media and skid replacement.
Organic Waste Receiving Facility	Paddle Finisher Pump	Hose Replacement	$2,314	Replaced EPDM hose and hose lubricant.
Organic Waste Receiving Facility	Mix Pump Nos. 1 & 2	Pump and Valve Refurbishment	$13,703	Replaced impellers and suctions valves.
Nitrate Station - Greenbrae	Chemical Storage	Improvements	$8,142	Installed chemical tank fill piping.

3) CMSA Maintained Assets (San Quentin Prison, Sanitary District No. 2, and San Quentin Village)

Maintenance work performed over the quarter on collection agency assets by CMSA staff, an approved contractor, or service provider.

Asset Owner	Asset	Improvement	Total Cost	Comment
SD2	Paradise	Wet Weather Preparation	$4,849	Storm preparation/Response/SD2 Support.

SD2	Paradise	Parts Replacement	$5,098	Replaced VFD fan assembly for pump No. 3.
SD2	Paradise	Parts Replacement	$1,565	Replaced leak detector relay.
SD2	Boardwalk A	Pump Replacement	$7,892	Replaced pump No. 1.

Work Orders

A work order is a written request that a preventive, corrective, or unplanned corrective maintenance task or project be performed. Work orders are typically generated and sent internally from one department to another. Shown in the table below are the types of work orders prepared by staff, the annual work orders completed, and the total labor hours, by type, to complete the work orders.

Work Order Type	# of WO's	% of Total WO's	Labor Hrs.	% of Total Hrs.
Preventative Maintenance (PM)	286	52.48%	2,243.20	29.77%
Corrective-Planned	185	33.94%	1,372.50	18.21%
Corrective-Unplanned	47	1.65%	25.00	0.33%
Improvement Project Work	1	0.18%	3.00	0.04%
Coating Projects	0	0.00%	0.00	0.00%
Safety	13	2.39%	59.25	0.79%
Professional Development/Staff Meetings	14	2.57%	84.25	1.12%
Facilities Administration/Housekeeping	18	3.30%	771.25	10.24%
Process Control and Facility Operations	19	3.49%	2,976.75	39.50%
Total	**545**	**100%**	**7,535.20**	**100%**

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners & Alternates

From: Corey Spray, Administrative Services Manager

Approved: Jason Dow, General Manager

Subject: Updated Resolution Authorizing Investment of Monies in the Local Agency Investment Fund (LAIF)

Recommendation: Adopt Resolution No. 359 to update persons authorized to make changes to the Agency's Local Agency Investment Fund account.

Summary: Resolution No. 288, adopted by the Commission in 2010, authorized the following persons to verify LAIF account information or make changes to the LAIF account: General Manager, Commission Chair, Commission Vice-Chair, and Commission Secretary. Persons authorized by Board Resolution can delegate to Agency staff the responsibility of transferring funds between the Agency's WestAmerica and LAIF accounts.

The Agency is in the process to submit an *Authorization for Transfer of Funds* form to LAIF to update the latest list of individuals on file. All Board Commissioner titles are being updated from their annual Board position titles, i.e., Chair, Vice-Chair, and Secretary, to instead being "CMSA Commissioner" for ease of timely reporting to LAIF. The representative for the Administrative Services Manager position is being updated from Kenneth Spray to Corey Spray. Lastly, the representative for the Personnel & Accounting Technician, Ahn Ta, is being removed for compliance with the Agency's Financial Policies.

Resolution No. 359 replaces Resolution No. 288 and will be filed with the State of California Treasurer's Office for full compliance of the account update.

Attachments:

1. Resolution No. 359
2. California State Treasurer's Office LAIF Authorization for Transfer of Funds

ATTACHMENT 1

CMSA Resolution No. 359

RESOLUTION FOR THE AUTHORIZATION FOR TRANSFER OF FUNDS WITH THE CALIFORNIA LOCAL AGENCY INVESTMENT FUND

WHEREAS, the Central Marin Sanitation Agency (CMSA) is authorized to invest in the California Local Agency Investment Fund (LAIF); and

WHEREAS, staff authorized to make transactions to or from LAIF must be approved by the CMSA Board of Commissioners; and

WHEREAS, the CMSA Administrative Services Manager is responsible for maintaining cash and investments balances in accordance with Agency needs; and

WHEREAS, a new CMSA Administrative Services Manager began with the Agency effective March 11, 2024 replacing the prior and now retired Administrative Services Manager; and

WHEREAS, the Local Agency Investment Fund requires a form to authorize changes in approved staff called the *Authorization for Transfer of Funds*.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners approves and authorizes the employees and Directors as shown on the attached *Authorization for Transfer of Funds* to make transactions to or from LAIF.

PASSED AND ADOPTED *at the meeting of the Central Marin Sanitation Agency Board of Commissioners, County of Marin, State of California, on April 9, 2024.*

AYES:

NAYS:

ABSTAIN:

ABSENT:

_____
Douglas T. Kelly, Commission Chair

ATTEST:

By_____
Dean DiGiovanni, Secretary

PRINT CLEAR

ATTACHMENT 2

California State Treasurer's Office
Local Agency Investment Fund (LAIF)

Authorization for Transfer of Funds

Effective Date	Agency Name	LAIF Account #
April 9, 2024	CENTRAL MARIN SANITATION AGENCY	70-21-003

Agency's LAIF Resolution # 359 or Resolution Date April 9, 2024

ONLY the following individuals whose names appear in the table below are hereby authorized to order the deposit or withdrawal of funds in LAIF. ***This authorization REPLACES AND SUPERSEDES all prior authorizations on file with LAIF for the transfer of funds.***

Name	Title
Jason Dow	General Manager
Michael Boorstein	CMSA Commissioner
Dean DiGiovanni	CMSA Commissioner
Eli Beckman	CMSA Commissioner
Corey Spray	Administrative Services Manager

Two authorized signatures required. Each of the undersigned certifies that he/she is authorized to execute this form under the agency's resolution, and that the information contained herein is true and correct.

Signature: Jason Dow	Signature: Dean DiGiovanni
Print Name: General Manager	Print Name: Secretary
Title: 415-459-1455	Title: 415-459-1455
Phone Number	Phone Number

Please provide email address to receive LAIF notifications.

Name	Email
Corey Spray	cspray@cmsa.us

Please email the completed form for review to laif@treasurer.ca.gov and allow 2 days for a response. **DO NOT** mail the original form until you receive approval.

Mail the approved form to: CA State Treasurer's Office
Local Agency Investment
Fund P.O. Box 942809
Sacramento, CA 94209-0001

STO-LAIF-4008
Revised 1/2024

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners and Alternates

From: Peter Kistenmacher, Technical Services Manager

Approved: Jason Dow, General Manager

Subject: Request for Proposal – Consultant Services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project

Recommendation: Approve issuance of Request for Proposals for Consultant Services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project, and provide feedback to the General Manager.

Summary: The San Francisco Regional Water Quality Control Board (RWB) recently issued the draft Nutrient Watershed Permit (Permit) which includes proposed interim and final nutrient limits on CMSA's effluent. The final Permit is expected to be adopted this summer. Compliance with the interim limits will be required beginning in the second half of 2024, and compliance with the final limits will be required by 2034. Staff prepared a draft Request for Proposals (RFP) for consultant services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project (Project). If the Board approves issuing the RFP, staff intends to issue it mid-April. A negotiated contract with the selected consultant will be brought to the Board for approval in August, and contracts for subsequent phases of the Agency's Nutrient Removal Program (Program), such as predesign and final design services, will be brought to the Board for consideration of approval in future years.

Fiscal Impact: The Agency's Capital Improvement Program (CIP) has $1,000,000 allocated for Nutrient Removal in FY25, and a total of $5,000,000 for Nutrient Removal through FY29, which is anticipated to cover the planning, predesign, and final design phases of the Project. Staff will work with the Board's Finance Committee to prepare funding options for the eventual construction of future Nutrient Removal facilities.

Discussion: At the February 2024 Board meeting, the General Manager provided an oral report on the draft Permit status including a graph of CMSA's historical effluent nutrient levels compared to the proposed interim and final limits. The first phase of the Program entails an evaluation of the nutrient removal alternatives that would allow the Agency to meet the proposed interim and final limits. Once a preferred alternative is selected, a Facilities Plan for the selected alternative will be prepared, including layout drawings, facility sizing information,

conceptual level capital and O&M cost estimates, and an evaluation of the impacts of the new facilities on existing facilities. At the conclusion of this initial Project, anticipated around late spring of 2025, the Project results will be presented to the Board for their feedback and approval of the recommended alternative. Subsequently, staff would work with the consultant to develop a scope of work for the predesign phase of the selected alternative, to be eventually followed by final design, environmental impact review, and construction.

Staff prepared the attached RFP to be issued to consulting firms specialized in nutrient removal, and has met with several consulting firm representatives to discuss the Project and Program. After reviewing and evaluating the proposals, staff will negotiate a final scope with the selected consultant and bring it to the August 2024 Board meeting for approval.

Alignment with Strategic Plan: This Project aligns with the Agency's FY24 Business Plan to support Goal 4 – Objective 4.2 as shown below.

Goal Four: *CMSA will be a leader and/or active participant in collaborative efforts to address industry and community challenges and opportunities.*

Objective 4.2: *Track developments on regional nutrient watershed permit and its potential impacts to CMSA.*

Attachment:
- Draft RFP for Nutrient Removal Alternatives Evaluation and Facilities Plan

ATTACHMENT

DRAFT

CENTRAL MARIN SANITATION AGENCY

Request for Proposals for Consultant Services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project

CMSA Project No. 24-33

Issued April 2024

TABLE OF CONTENTS

Central Marin Sanitation Agency (CMSA or Agency) is a regional wastewater agency located in San Rafael, California that provides wastewater treatment, biosolids management, resource recovery, renewable power generation, and other environmental services to the residents and businesses in central Marin County. In early 2024, the San Francisco Bay Regional Water Quality Control Board (Water Board) issued the draft order for the Nutrient Watershed Permit, which includes proposed interim and final nutrient limits on CMSA's effluent. The Final Order (Permit), reflecting most if not all the conditions in the draft order, is expected to be issued soon.

The Agency is requesting proposals from engineering firms with experience evaluating and designing nutrient removal systems in wastewater facilities, for consulting services for the Nutrient Removal Alternatives Evaluation and Facilities Plan Project (Project). The Agency's Project team is available to meet with each proposer virtually or in person to answer questions about the request for proposals (RFP). To schedule a meeting, contact CMSA Project Manager Peter Kistenmacher (See Section VII). Proposals must be received by the Agency **no later than 2:00 pm (PST) on July 8, 2024**. The Agency will enter into a Professional Services Agreement (Attachment A is a specimen copy) with the selected firm based on a negotiated scope of work, fee estimate, and schedule.

The Agency's intent is to initially negotiate a contract with the selected Consultant to provide consulting services for the alternatives evaluation and facilities planning phase of the Project. Near the completion of this phase, the Agency intends to negotiate and contract for the subsequent phases of the Project including potentially piloting assistance, predesign, final design, engineering services during construction, and start-up and commissioning assistance. To meet the permit compliance timeline, CMSA expects to immediately transition into the next phase of the Project. The Agency has historically contracted with the same Consultant for all phases of a major project sequence and intends to do the same for this Project. A recent example is the recently completed Cogeneration System Installation Project, which was preceded by the Cogeneration System Predesign Evaluation and 2017 Facilities Master Plan. However, the Agency reserves the right to issue a new RFP and select a new consultant for future phases of this Project, and/or for other work not included in the negotiated contract.

I. AGENCY BACKGROUND

CMSA is a Joint Powers Agency (JPA) that was formed in 1979 by local wastewater agencies in central Marin County to provide wastewater treatment and disposal services to comply with the 1972 Clean Water Act's secondary treatment requirements. The JPA member agencies are: San Rafael Sanitation District (SRSD), Ross Valley Sanitary District (RVSD), and Sanitary District No. 2 of Marin County (SD2). Through the early 1980s, central Marin's wastewater transport, treatment, and disposal system improvements included construction of wastewater pump stations, force mains, and interceptors, and a marine outfall at CMSA's treatment plant. The Agency's treatment plant replaced four existing small treatment plants, began operation in early 1985, and consists of headworks influent screens and grit removal, primary clarification,

secondary treatment – biotowers and activated sludge in series, secondary clarification, disinfection, and dechlorination. Solids handling includes waste activated sludge thickening, anaerobic digestion, and biosolids dewatering utilizing high-speed centrifuges. Biogas produced in the digesters fuels an on-site cogeneration system that produces renewable electricity to power the Agency's facilities and export excess energy to the grid under an existing Power Purchase Agreement with Marin Clean Energy (MCE).

The treatment plant has a primary treatment design capacity of 125 million gallons per day (MGD) and a secondary treatment design capacity of 30 MGD. During wet weather events, when the secondary treatment capacity is exceeded, primary effluent is passively diverted around the secondary system (blending) and recombined with the secondary effluent for disinfection, dechlorination, and discharged into San Franciso Bay.

CMSA also has an Organic Waste Receiving Facility (OWRF) which began operations in 2014 to accept food waste from a local solid waste hauler, and fats-oils-grease (FOG) from restaurants and food markets. These organic wastes are then screened and pumped into the Agency's two anaerobic digesters for co-digestion for additional biogas generation. The digested sludge is dewatered and transported off-site for reuse.

II. PROJECT BACKGROUND AND RELEVANT INFORMATION

The Water Board's administrative Draft Permit includes proposed interim and final nutrient limits on CMSA's effluent from May 1 through September 30. The proposed interim total inorganic nitrogen (TIN) of 1,300 kg/day begins on May 1, 2025, and the final effluent TIN of 510 kg/day would be implemented starting May 1, 2034. It is anticipated that the final order will be available before Notice-to-Proceed (NTP) is issued to the selected Consultant.

CMSA's treatment plant is designed for an average dry weather flow of 10 MGD, with a peak wet weather flow of over 125 MGD. Currently, most of the Agency's TIN is ammonia. Ammonia levels decrease during wet weather events, but the concentrations do not significantly differ between the plant influent to the secondary effluent. Based on historical data (attached), the Agency anticipates challenges in meeting the interim nutrient limits during dry weather drought years with the current treatment system.

Prior Nutrient Removal Efforts

The Agency currently operates a conventional Biochemical Oxygen Demand (BOD) removal secondary treatment process comprised of biotowers followed by aeration basins and secondary clarification. While the potential for an eventual nutrient removal requirement has been widely known for years, due to the high degree of uncertainty around the final timing and specific effluent nutrient targets, CMSA has only completed limited nutrient removal analyses in the past. These include a Bay Area Clean Water Agencies (BACWA) nutrient evaluation by HDR in 2018 and a brief nutrient removal alternatives evaluation in the 2017 Facilities Master Plan by Carollo. Both documents are included in the attachments.

Nutrient Removal Technology Preferences

CMSA is aware of the wide range of technology options available to remove nutrients. While the above-mentioned studies may have suggested certain technology options to consider, CMSA intends for the selected Consultant to complete a "blank slate" technology screening and assessment. No single technology options are currently considered "preferred" by CMSA and CMSA has not piloted any nutrient technology options. The technology screening will be completed according to technology selection criteria that are jointly developed and selected by the Consultant and CMSA staff. Criteria may include, but are not limited to, technology maturity and robustness, capital and Operations and Maintenance (O&M) costs, energy and chemical usage, ease of operation and maintenance, compactness, and ability to fit onto CMSA's limited available land.

CMSA may consider piloting promising technology options should there be a strong driver to do so, such as limited track record under the proposed operating conditions. For relatively mature and established technology options, a pilot phase likely won't be required.

Existing Process Data and Process Studies

CMSA has completed limited nutrient sampling and process control studies related to nutrient loading and removal. Relevant facility process data and studies are included in the attachments. It is important to note that in 2023 CMSA relocated the original 1985 influent interceptor sample collection points from the bottom of the interceptor pipes to the sides. This resulted in a substantial reduction in measured influent Total Suspended Solids (TSS) and BOD concentrations, thus historic influent data collected prior to the summer of 2023 may not be reflective of current conditions. CMSA has also begun to collect limited nutrient data of the centrate side stream and primary effluent. As one of the first tasks in the Project, CMSA will seek the selected Consultant's guidance on how to enhance the nutrient sampling program to best meet the needs of this Project.

Existing Site Conditions

CMSA's facility is located on a compact site with limited available room for expansion. Most of the site is located on Bay Mud soils, increasing the complexity and cost of construction of new facilities.

Relevant Process Enhancement Efforts

Primary Clarifier Flow Optimization Baffles

In the summer of 2024, CMSA will be installing flow optimization baffles in one of the seven primary clarifier tanks with the intention of increasing the process performance of the clarifier. Should the baffle system perform as expected, CMSA may install similar baffles in the remaining primary clarifiers. The baffle installation may significantly enhance the removal efficiencies of the primaries and therefore alter the design criteria for the new nutrient removal system. CMSA will conduct an evaluation of the new primary baffles as soon as they are installed in 2024.

Chemically Enhanced Primary Treatment Study
In prior years, the Agency completed a Chemically Enhanced Primary Treatment (CEPT) Study which concluded, based on the then available data, only limited benefits of CEPT. However, as mentioned above, in 2023 the original 1985 influent interceptor sample collection point was relocated from the bottom of the interceptor pipe to the side. The CEPT study employed the older, likely misleading, influent data and therefore the CEPT Study conclusions may need to be reconsidered.

Biotower Operational Optimization
Over the years, CMSA has conducted various in-house biotower operational studies including operation of a single tower versus two towers, and a limited data collection effort which determined that limited nitrification may be occurring during low flow periods. Nitrification was observed during normal biotower operation (2 towers, 2 pumps online), and is increased during low flow periods. Current normal operation (implemented in 2019 to control Sludge Volume Index (SVI) is to run two pumps with two biotowers.

Capital Improvement Program
CMSA has a rolling 10-year Capital Improvement Program (CIP) and since the facility was originally placed into service in 1985, significant upgrades and corrective and preventative repair and rehabilitation work has been consistently completed. Projects such as coating and concrete repairs, and equipment, pipe, and gate replacements are completed frequently and proactively. The $65 million Wet Weather Improvements Project was completed in 2010 (information included in the attachments). Over the last 10 years, the Agency has also completed/is completing significant work to upgrade the anaerobic digesters, organic waste receiving, cogeneration, and dewatering systems. The Agency's main switchgear is from the original plant construction and has been extensively inspected in recent years to ensure continued performance. There is a significant amount of CIP budget available for an eventual switchgear replacement, which may need to be timed and/or combined with new electrical service requirements for new nutrient removal facilities. The current 10-year CIP is included in the attachments.

Recycled Water/Future Nutrient Limit Changes/Nature Based Solutions
The Agency has a modest but consistent existing recycled water program. In 2022, CMSA partnered with the Marin Municipal Water District (MMWD) to complete a tertiary recycled water fill station predesign and a direct potable reuse (DPR) feasibility evaluation, both are on CMSA's website. The findings of the DPR evaluation were incorporated into the MMWD strategic water supply assessment, which can be accessed through MMWD's website. CMSA has learned that potable reuse at CMSA is currently not part of MMWD's strategy to expand its water supply portfolio. Since the nutrient removal facilities are expected to remain in service for many decades, CMSA aims to ensure that the final selected nutrient removal option does not preclude a future potable reuse project, should MMWD water supply conditions change. To that effect, CMSA has recently retained a consultant to provide an update to the DPR feasibility study based on the final regulations that the State of California's Division of Drinking Water issued in late 2023.

Likewise, the selected alternative should be easily adaptable to even more stringent nutrient limits that may be promulgated in future regulatory permitting cycles.

Due to the limitations of CMSA's site, CMSA is not aware of any nature-based solutions that could be applicable to CMSA. If the Consultant is aware of nature-based solutions that could be relevant to CMSA based on its location, please highlight them in the proposal.

Organic Waste and Renewable Power Delivery Program

Consistent with California's SB1383 organic waste diversion goals and with support from its Board, CMSA has systematically expanded its organic waste and renewable power delivery program to nearly achieve energy neutrality and operate slightly energy positive for longer periods of time. Significant infrastructure, including a new cogeneration system and an expanded OWRF, has been constructed, and power export and sale agreements with PG&E and MCE are in place. CMSA has all infrastructure elements in place to consistently produce approximately 150% of its current power demands. Staff is currently working on procuring additional organic feedstocks to achieve the 150% milestone, which may be reached as early as 2025.

However, the Agency recognizes the potential conflicting goals between importing additional nutrient rich organic waste feedstocks and reducing its final effluent nutrient loads. Additionally, any future nutrient facilities would potentially increase its on-site power demands substantially, especially during the costly summertime electricity purchase window. Over the course of the project, CMSA intends to work collaboratively with the selected Consultant, the CMSA Board, and its organic feedstock partners to plan for different future scenarios of its organic waste program to balance these competing elements and to evaluate the impacts of additional co-digestion on nutrient removal facilities, and vice versa.

Significant Dry Weather Excess Capacity

Due to CMSA's significant wet weather peaking factor, there is excess tankage and treatment capacity during the dry season, including empty primary clarification tanks, headworks aerated grit basins, aeration basins, and secondary clarifiers. CMSA has considered operating a single biotower during the dry season. If feasible and allowable by regulatory entities, CMSA is open to the Consultant's creative suggestions for utilizing this excess tankage and capacity to remove nutrients, either in the mainstream or side stream.

Environmental Permitting

CMSA will separately contract with specialized permitting consultants (California Environmental Quality Act and Bay Area Air Quality Management District) to evaluate the permitting implications of selected nutrient removal alternatives. The Consultant should not include environmental permitting related efforts in their proposal at this time.

III. SCOPE OF SERVICES

The following scope is conceptual and represents a general outline of the expected services to be provided by the Consultant, it is not intended to be a complete list of services. The Consultant shall use their specialized knowledge and expertise to present a fully developed scope that effectively addresses the key project elements and considerations.

1. **Task 1 - Project Management**

    a. Consultant shall prepare project schedules for their services and shall track contract budget monthly. Monthly invoices must include itemized tasks, budget allocation, percent completion, remaining budget balance, summary of work completed during billing period for each task, anticipated work in next billing period, and any budget issues.

    b. Consultant to include effort for phone calls and emails as necessary for all work included in this scope and communicate decisions. Meetings are included under Task 2 below.

    c. Consultant shall maintain a decision log documenting key decisions made as the project progresses, and shall update the project schedule at key project milestones.

2. **Task 2 – Alternatives Evaluation and Facilities Plan**

    a. Task 2.1 – Background Review and Kickoff Meeting

        i. There are substantial amounts of relevant background data, reports, and studies, including the final Permit conditions applicable to CMSA. Consultant shall review these documents prior to the kickoff meeting and identify noteworthy items for group discussion. Consultant shall prepare and submit a data request to CMSA.

        ii. Consultant shall present an overall Project schedule, propose Project goals and objectives, introduce Consultant and CMSA project teams, and review roles, expectations, and procedures for the Project. Kickoff meeting will include a site visit to tour CMSA's treatment plant.

            1. Deliverable: Kickoff meeting presentation and minutes.

    b. Task 2.2 – Sampling Improvements Plan

        i. CMSA has completed only limited historic nutrient sampling. CMSA's current nutrient sampling plan is included in the attachments. For some of these sample points, only a few months of data exists. Consultant shall review the attached current nutrient sampling plan, including sampling locations and frequencies and, as part of their proposal, suggest immediate sampling improvements which CMSA should implement to better the Project planning and eventual design.

ii. During the kickoff meeting, the selected Consultant shall review the then most up-to-date CMSA nutrient sampling plan and available nutrient data, and also suggest any additional recommended improvements for implementation.

iii. Samplings Improvements Workshop:

1. Consultant shall present a sampling shortfall analysis and improvements plan indicating which sampling constituents/locations/frequencies are recommended to be improved and how.

2. Deliverable: Meeting presentation, minutes, and brief Technical Memorandum documenting key conclusions of this task.

c. Task 2.3 – Process Modelling

i. CMSA has not completed a liquid treatment process model in the past. For the purposes of the RFP, consultant shall include cost and scope for the process modelling task. During the interview and/or contract negotiation phase, CMSA will confirm the need for a process model with the selected consultant.

ii. If process modelling is selected, Consultant shall prepare a liquid treatment process model for use in nutrient removal alternatives evaluation. Model shall be developed using GPS-X, Biowin, or equivalent.

iii. The model shall be calibrated with available CMSA process data.

iv. The model shall be prepared in a way that it can be easily employed during the subsequent final design phase of the project, and all data for the model shall be packaged and transferred to CMSA if requested. Model shall be constructed in such a way that shall be easily compatible with AI/digital twin type computational processes.

v. Deliverables:

1. Meeting to coordinate and review inputs and parameters of existing conditions.

2. Meeting to review process model and confirm results reflect current operations before optimization efforts.

3. Process model of existing conditions, and various final and interim treatment process alternatives based on below tasks.

d. Task 2.4 – Interim Operational Optimization Options

i. The intent of this task is to suggest operational optimization options for CMSA compliance with the interim nutrient limits for the next 10 years, until the final limits take effect. Consultant shall request and review CMSA's historic treatment plant operating parameters and facilitate workshops with suggested solutions for CMSA to meet the interim permit limits with a reasonable factor of safety.

1. Operational Optimization Workshop #1

    - Review of existing CMSA process operations strategies and discussions of key criteria for potential operational improvements.

        i. Deliverable: Meeting presentation and minutes.

2. Operational Optimization Workshop #2

    - Consultant shall present feasible operational optimization strategies for CMSA's consideration along with high level evaluation of anticipated capital and operating costs (including staffing impacts), pros/cons, and other considerations for each option.

        i. Deliverable: Meeting presentations and minutes. Concise Operational Optimization Technical Memorandum (TM).

ii. Note: Depending on the outcomes of this task, CMSA may negotiate a separate Task with the Consultant to further develop the recommended operational optimization strategy, including potential pilot or full-scale testing and implementation at CMSA.

e. Task 2.5 – Design Criteria and Alternatives Evaluation Criteria Development

i. This task is to collaboratively develop the proposed criteria to be employed when screening nutrient removal alternatives.

ii. Criteria Workshop. Consultant shall facilitate a workshop to discuss and agree on key design and alternatives evaluation criteria to be employed during the alternatives evaluation. Tradeoffs and cost implications of various design criteria shall be clearly explained to CMSA staff.

iii. Deliverable: Meeting presentations and minutes. Design criteria TM.

f. Task 2.6 – Alternatives Evaluation

i. Consultant shall develop a range of viable nutrient removal options that are applicable to CMSA and quickly screen them down to a shorter list for more detailed evaluation in collaboration with CMSA. Options should be categorized by the Consultant into logical categories. Consultant shall rank options according to the criteria developed in the above tasks.

ii. Nutrient Limits. CMSA is currently aware of the proposed interim and final limits in the Draft Permit. The proposed nutrient removal alternatives shall at a minimum be able to meet all currently known nutrient limits. Proposed alternatives shall also consider the potential for the Water Board to issue future nutrient removal limits that may be more stringent than what is currently known. The proposed alternatives shall

be planned to be easily adaptable/flexible to accommodate such future, lower limits.

iii. Alternatives Evaluation Workshop #1

1. Consultant shall present the initial range of alternatives and the preliminary screening results yielding several final alternatives for further evaluation.
2. Deliverable: Workshop presentation and minutes.

iv. Alternatives Evaluation Workshop #2

1. Consultant shall evaluate the final alternative(s), including the following information for each final alternative:
   - High level capital and O&M cost estimate.
   - Layout drawings in CAD.
   - Implications of alternatives to the planned CMSA CIP projects.
   - Implications to O&M of current treatment plant.
   - Ranking of each alternative against each other using the criteria established in prior tasks.
   - Other important considerations including:
     i. Constructability.
     ii. Construction sequencing.
     iii. Space planning to consider the implications of the proposed new facilities on CMSA's traffic routes, available open land areas, and existing unit processes.
2. Present the information above to CMSA in a workshop.
3. Deliverable: Workshop presentation and minutes. Alternatives Evaluation TM including recommended alternative.

g. Task 2.7 – Solids Loading/Renewable Energy/Nutrient Nexus

i. CMSA has completed a limited excel based process model of the solids/digesters for various future organic loading scenarios (included in attachments).

ii. Additional important organic waste would increase the amount of renewable power CMSA can produce to power its Facilities and export to the grid. At the same time, it would increase the nutrient loading returning to the treatment plant via the side stream, which could increase the amount of overall power the Facilities consume.

iii. Process improvements such as primary clarifier baffles and nutrient removal can also alter future sludge loadings to CMSA's digesters.

iv. As part of the above process modelling and alternatives evaluation tasks, Consultant shall evaluate and consider the interconnected nature of digester solids loading from sludge and various organic waste loading scenarios together with CMSA's digester capacity, side stream nutrient loading scenarios, overall facility power demand scenarios, and renewable power generation scenarios.

h. Task 2.8 – Funding Opportunities

i. Consultant shall assist CMSA with identifying applicable funding opportunities (i.e. grants, low interest loans, etc.) for the final selected alternative(s). Provide a summary of each funding opportunity, a list of pros and cons for each opportunity and other noteworthy items.

ii. Note: Only include effort for the summary of applicable funding opportunities. Assistance with preparing funding applications (if any) would be under a separate negotiated scope with the Consultant.

1. Deliverable: Concise Funding Opportunities TM.

i. Task 2.9 – Facilities Plan

i. This task is to prepare a Facilities Plan for meeting the final nutrient limits for the final selected alternative above. The plan shall include the following elements at a minimum:

1. Pilot study implementation plan (if piloting is recommended).
2. Overall implementation schedule, broken out by key tasks including but not limited to permitting, pre-design, final design, construction, and commissioning. Use Microsoft Project.
3. Facility drawings in CAD, key design criteria, and estimated capital and O&M cost for the recommended alternative. Minimum CAD drawings for the selected alternative to include:
   - Site layout drawings including layouts of all major new unit processes.
   - Location drawings for major new mechanical equipment.
   - Elevation drawings for all new unit processes.
   - Flow schematic(s) for all new unit processes.
   - Single line diagram of entire CMSA facility with new unit processes and associated electrical improvements shown.
4. Co-digestion program impact assessment. CMSA has completed capacity studies to determine how much additional external

organic waste can be imported to enhance CMSA's renewable energy production. Once the final recommended nutrient alternative is selected, Consultant shall determine the impacts of the selected alternative to CMSA's co-digestion program, as well as the impacts of additional co-digestion on the nutrient removal facilities. Consultant shall estimate how much additional sludge is produced from nutrient removal processes and how much CMSA's overall power consumption/renewable power production may change. Consultant shall also coordinate those changes with the added nutrient loads to the treatment plant from co-digestion.

5. Summary of program delivery options.
    - CMSA has traditionally delivered projects via design-bid-build which has worked well for the past projects.
    - Consultant shall provide a summary of alternative delivery mechanism to consider, along with a descriptions or pros/cons associated with each delivery mechanism.
6. Facilities Plan Workshop.
    - Consultant shall present the proposed Facilities Plan to CMSA.
7. Deliverables: Workshop presentation and minutes. Facilities Plan TM.

j. Task 2.10 – Final Alternatives Evaluation and Facilities Plan Report

i. Consultant to prepare a concise technical report summarizing the results and conclusions of all the above tasks.

1. Deliverables:
    - Final Report
    - Presentation to CMSA Board

3. Optional tasks

a. Consultant may include additional optional tasks for CMSA to consider.

IV. CONSULTANT SELECTION AND PROJECT SCHEDULE

The schedule below is designed to have the Project's professional services agreement presented to and considered by the CMSA Board of Commissioners at their Board meeting on August 13, 2024. Based on the Board meeting discussion, the consultant's scope of work and fee will either be approved as presented or will be modified as directed. CMSA intends to execute the agreement by the end of August 2024. All dates are subject to change. CMSA aims to provide as much advanced notice of date changes as possible.

Anticipated Consultant Selection Schedule

Request for Proposal issued .....April 2024
Deadline to submit questions to CMSA .....June 26, 2024*
Due date for proposals (due by 2:00 p.m.).....July 8, 2024
Proposal evaluation, Interviews of top ranked firms, consultant selection,
Negotiation of scope of work and fee .....by August 7, 2024
CMSA Board of Commissioners meeting.....August 13, 2024
Execution of agreement.....August 15, 2024
**For full transparency, CMSA will attempt to inform all known proposers of the answers to any questions received by June 28, 2024.*

Anticipated Project Milestones

Consultant shall include at least the following milestones in their project schedule, and the milestones shall be completed no later than the indicated date.

Kick-off meeting.....August/September 2024
Samplings Improvements Plan .....September/October 2024
Process Model.....October 2024
Interim Operational Optimization Options TM .....November 2024
Design Criteria and Alternatives Evaluation criteria TM .....December 2024
Alternatives Evaluation TM.....February 2025
Funding Opportunities TM.....March 2025
Facilities Plan TM .....April 2025
Final Report.....May 2025
Presentation to CMSA Board .....June 2025

V. PROPOSAL REQUIREMENTS

1. General Requirements

The proposal submittal shall include one unbound, photocopy ready original, six (6) spiral-bound copies (on 8.5 x 11 paper), and one (1) electronic copy on flash drive in a searchable format submitted to the address below:

Central Marin Sanitation Agency
1301 Andersen Drive
San Rafael, CA 94901
Attn: Peter Kistenmacher, Technical Services Manager

2. Format for Proposal

Responses to this Request for Proposal shall include the following:

a) Cover Letter: General introduction and brief statement of the proposal services; the name(s) of the person(s) authorized to represent the consultant firm(s), including title, address, fax, email, and telephone number. Teaming arrangements (if any) must be clearly explained.

b) Approach: A clear description of the proposed approach to the work described in this RFP.

c) Qualifications and Experience:

   a. To qualify, the consultant must have experience evaluating and designing nutrient removal facilities at wastewater treatment facilities, and team members must have experience necessary to complete the Project tasks. Experience with operation optimization of nutrient removal processes in the United States (U.S.) within the last 10 years is also required.

   b. Consultant must also be experienced in the process analysis and modelling of nutrient removal systems. Experience must be within the last 10 years in the U.S.

d) References: Provide a description of at least three (3) and up to five (5) recent comparable nutrient removal evaluation and design projects completed in the last 10 years in the U.S., including the name of the organization, contact information for the responsible person within the reference's organization, project team members including principal-in-charge, subconsultant firms, roles and responsibilities of consultant team members for this Project, and project information including schedule and cost. Separately include a similar description of at least three (3) and up to five (5) nutrient removal operational optimization projects completed in the last 10 years in the U.S.

e) Key Project Staff Qualifications

   a. Project Manager: Project manager shall have experience managing projects of similar size and complexity for a minimum of ten (10) years and hold a valid California PE license. Project manager having managed at least three (3) nutrient removal Alternatives Evaluation and Facilities Planning projects is desirable. Project manager experience overseeing the design of nutrient removal facilities is not required for the Alternatives Evaluation and Facilities Planning phase of the Project. During subsequent design phases of the Project, a different project manager with nutrient removal design experience may be substituted.

   b. Process Engineering and Nutrient Removal Technology Evaluation Lead(s): A minimum of ten (10) years experience completing nutrient removal process models and nutrient removal technology alternatives evaluations for at least three (3) nutrient removal process. A PHD in wastewater/process engineering is desirable this lead role. For this lead and/or other supporting staff, experience

evaluating co-digestion and renewable power generation scenarios and their impacts to increase nutrient loading to the treatment plant is also desirable.

c. Operational Optimization Task Lead: A minimum of ten (10) years experience leading similar operation optimization tasks for at least three (3) nutrient removal projects is desirable for this task lead. Lead shall have experience operating municipal nutrient removal facilities and have experience developing and implementing operations SOPs for nutrient unit processes. A PHD in wastewater/process engineering and/or a CA wastewater operations license is desirable for this lead.

d. Lead Electrical Engineer: Due to the significant electrical work planned in the existing CIP over the next decade, and the potentially significant impacts of new nutrient facilities on the electrical system, the lead electrical engineer shall have experience managing electrical projects of similar size and complexity for a minimum of ten (10) years and hold a valid California PE license. Having managed at least two (2) wastewater treatment facility complete main switchgear and MCC replacement projects, and be familiar with complex cogeneration engine interconnection facilities, including equipment to allow power import/export and engine black start, islanding, and ride-through, is desirable for this lead.

e. Length of Proposal: Proposals shall be a maximum of 20 numbered pages, not including cover letter. Resumes for team members, cover letter, and estimated task and fee matrix, suggested sampling plan improvements and Project schedules shall not be included in the above numbered page limit.

3. Specific Information to be Provided with the Proposal

Proposals must contain the following information, which will form the basis for the proposal evaluations:

a) Firm size, general expertise, and location of the office(s) that will be providing the services.

b) Names of the proposed team members, their roles, and their resumes, specifically outlining experience in performing the work required to complete each of the Project's tasks along with the estimated percent availability of each of the top three proposed team members over the course of this project. CMSA must approve any changes in identified key personnel, after the Agreement's award, in writing before the change is made.

c) Identification of activities that will be performed in-house and which, if any, will be performed by subconsultants or contractors, together with the names and experience of the subconsultants and/or contractors proposed for those elements.

d) Teaming. If proposal is submitted by two firms teaming together, a clear description of the teaming arrangement is required, including but not necessarily

limited to, who is in the lead for each task, reporting structures and history of prior similar teaming arrangements. Required reference information must clearly describe which firm and team member it is applicable to.

e) Proposed project approach, scope of work, project schedule, and estimated fee matrix by task with billing rates. CMSA does not want to constrain consultant to the planned approach discussed in this RFP and the provided background documents. Submission of alternative approaches that meet CMSA's overall needs are encouraged.

f) Results of review of CMSA's nutrient sampling plan and suggestions for immediate sampling improvements (see Task 2.2 above).

g) Litigation. Provide litigation history for any claims filed by Consultant or against Consultant regarding provision of similar services within the last five (5) years.

h) Proposed exclusions and/or modifications to CMSA's Professional Services Agreement, if any. Exclusions and/or modifications are highly discouraged.

VI. EVALUATION PROCESS

Proposals will be evaluated using two sets of criteria. Proposals meeting the mandatory criteria will be evaluated based on the following technical elements. Proposals not meeting the mandatory elements may not be considered. The Agency may elect to interview top ranked firms via video conferencing platforms (e.g., Zoom) and/or in person. Interview details will be provided ahead of time and anticipated to last 1-2 hours. Invitations for the interview are only given to shortlisted proposers per Agency discretion.

1. Mandatory Elements

The firm follows the instructions set forth in the RFP and submits a complete proposal, including the minimum qualifications, experience, and references as outlined above.

2. Technical Elements

- Number of comparable and similar projects completed in the last 10 years.
- Experience with planning, designing, and optimizing nutrient removal facilities for municipal wastewater treatment plants including the various subtasks listed in the scope above.
- Project approach, including creative suggestions of alternative approaches not necessarily covered in this RFP that may better meet CMSA's overall goals.
- Experience to complete each of the Project's tasks.
- Experience of the project manager and key personnel as outlined above.
- Proposed availabilities of the top three team members.
- Clear description of teaming structure, work split etc. (if any).
- Positive references.

- Proposed fee schedule.
- Proposed project schedule.
- Creative ideas for improving project performance, cost, schedule, etc.
- Suggestions for other project alternatives/scope elements CMSA may not yet have considered.

Please list your assumptions when preparing the proposed fee and schedule.

VII. ADDITIONAL INFORMATION

Requests for a pre-proposal meeting, additional information, or any questions regarding this proposal should be directed to:

Peter Kistenmacher, Technical Services Manager
Central Marin Sanitation Agency
1301 Andersen Drive
San Rafael, CA 94901
(415) 459-1455, extension 122
pkistenmacher@cmsa.us

Note that the Agency does not assume any responsibility for the completeness, or the accuracy of the background documents attached in this RFP. If a Proposer believes there is a discrepancy in the RFP or background documents, it shall seek clarification in writing.

VIII. ATTACHMENTS

Attachment 1 – CMSA Professional Services Agreement

Attachment 2 – 2017 Facilities Master Plan
(See Chapter 4 for Nutrient Removal)
https://www.cmsa.us/assets/documents/administrative/2017FacilitiesMasterPlan_FINAL.pdf

Attachment 3 – 2018 BACWA Nutrient Reduction Study
(See pages 285 – 318 for CMSA Facility Report)
https://bacwa.org/wp-content/uploads/2018/06/BACWA_Final_Nutrient_Reduction_Report.pdf

Attachment 4 – Current CMSA 10-Year Capital Improvements Program
(see Section 8 for Capital Improvements Program)
https://www.cmsa.us/assets/documents/administrative/budget/FY24%20&%20FY25%20BUDGET%20ADOPTED%202023%2006-22%20GFOA%20WEBSITE.pdf

Attachment 5 – Selected Record Drawings from Original Plant Construction
(General, Mechanical)
Note: Significant changes have occurred in some process areas since original plant construction.

Attachment 6 – Carollo Centrifuge Loading Analysis Technical Memorandum

Attachment 7 – Relevant Process Data and CMSA Process Studies

- Historic nutrient loading graph
- Other studies TBD

Attachment 8 – Existing Sampling Locations and Frequencies

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners & Alternates

From: Jacky Wong, Associate Engineer
Peter Kistenmacher, Technical Services Manager

Approved: Jason Dow, General Manager

Subject: FY24 Pavement Repair Project – Construction Contract Award

Recommendation: Award the construction contract for the FY24 Pavement Repair Project to Always Paving for the total bid amount of $234,275, and authorize the General Manager to execute the contract agreement.

Summary: Bids for the construction of the FY24 Pavement Repair Project (Project) were publicly opened on March 19, 2024. Always Paving, located in Hayward, CA was the lowest, responsive, and responsible bidder with a total bid amount of $234,275. If the construction contract is awarded by the Board, construction is anticipated to be substantially completed by June 2024.

Fiscal Impact: The Agency's Capital Improvement Program (CIP) has $305,000 allocated for facility paving and site work in FY24. The engineer's revised estimate for the Project was $265,000. Always Paving's total bid is approximately $30,000 lower than the engineer's estimate.

Discussion: The Project includes a slurry seal treatment to extend the pavement's lifespan and reduce the future need for more expensive resurfacing methods. Slurry sealing involves applying a mixture of asphalt emulsion, aggregates, water, and additives onto the existing pavement surface. This process also includes road cleaning, crack sealing, and multiple sweeps post-application of the slurry to achieve a smooth and consistent finish. Slurry seal will be applied on the main plant road from the facility security access gate to the chemical storage building, and from effluent pump station to the solids handling building.

In several areas where pavement has significantly settled, compromising pavement integrity, the pavement will be rehabilitated using more extensive measures, such as grinding and asphalt overlaying or full-depth asphalt replacement. Existing wooden roadway edging that has deteriorated will also be replaced.

The Board adopted the Project's contract documents and authorized the General Manager to advertise the Project for public bidding at the February 2024 meeting. The Notice Inviting Sealed Bids was issued on February 14, and was published in the Marin Independent Journal, on the Agency's website, and various Builders' Exchanges. Three contractors attended the non-mandatory pre-bid meeting on February 29, and four sealed bids were received on March 19. Table 1 summarizes the bid opening results.

Table 1. Bid Opening Results

Contractor	Total Bid Amount	% Above/Below Estimate
Engineer's Estimate	*$265,000*	
Always Paving Inc.	$234,275	-11.6%
Michael Paul Co. Inc.	$261,550	-1.3%
Maggiora & Ghilotti	$281,182	+6.1%
Ghilotti Bros	$289,899	+9.4%

Staff has completed a detailed review of the submitted bid documents, including but not limited to bid prices, financial qualifications, and safety data. The lowest responsive and responsible bidder, Always Paving, has complied with the bid requirements and is recommended for contract award.

The remaining FY24 facility and paving site work budget, approximately $70,000, could be used to regrade the plant road's storm drainage v-ditches and for gravel placement.

Alignment with Strategic Plan: This Project aligns with the Agency's FY24 Business Plan to support Goal 1 – Objective 1.2 as shown below.

Goal One: CMSA will effectively operate and maintain its treatment facilities in compliance with changing regulations.

Objective 1.2: Manage the Agency's equipment and assets consistent with CIP and maintenance programs.

Attachment:
- FY24 Paving Repair Project Bid Opening Results

ATTACHMENT

Central Marin Sanitation Agency
FY24 Pavement Repair Project
CMSA Contract No. 24-21
Bid Opening Results
March 19, 2024 at 11:00 AM

Bidder	Bid Amount
Always Paving Inc	$ 234,275
Ghilotti Bros	$ 289,899
Michael Paul Co. Inc.	$ 261,550
Maggiora & Ghilotti	$ 281,182

Bids Opened By

Bids Read By

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners & Alternates

From: Jason Dow, General Manager

Subject: Resolution for the Marine Outfall Diffuser Cleaning Project

Recommendation: Adopt Resolution No. 361 to authorize the General Manager to represent the Agency on the Marine Outfall Diffuser Cleaning Project and sign the Dredging-Dredged Material Reuse/Disposal Application.

Discussion: Staff has nearly completed a Dredging-Dredged Material Reuse/Disposal Application for the Marine Outfall Diffuser Cleaning Project (Project). Once completed, the Application will be submitted to the San Francisco Bay Regional Water Board, U.S. Army Corps of Engineers (ACOE), and Bay Conservation and Development Commission for consideration of approval. Staff has spoken with representatives of each regulatory agency about the scope of the Project, and based on those discussions, believes that the Project will be approved.

The Project involves removing settled solids from the 1,035-foot-long diffuser section of the Agency's marine outfall, and disposing of the solids on the Bay floor around the diffuser section. After staff presented the Project to the Dredged Material Management Office on March 6, the ACOE sent a Tier 1 Exclusion letter for the Project, which doesn't require analysis of the removed solids and approved the side-cast method of solids disposal.

The Application requires the governing board of a public agency to adopt a resolution designating a representative of the agency for the Project and authorizing the representative to sign the Application. Staff has prepared the attached resolution for the Board to approve. Once approved, the attached Application and its attachments will be submitted to the above regulatory agencies and their respective application fees will be paid.

Attachments:
1. Resolution No. 361
2. Consolidated Dredging-Dredged Material Reuse/Disposal Application

ATTACHMENT 1

CMSA Resolution No. 361

RESOLUTION AUTHORIZING THE GENERAL MANAGER TO REPRESENT THE AGENCY FOR THE MARINE OUTFALL DIFFUSER CLEANING PROJECT

WHEREAS, the Central Marin Sanitation Agency (CMSA) is a joint powers agency located in San Rafael that owns and operates regional wastewater treatment facilities, including an outfall pipeline; and

WHEREAS, the outfall pipeline extends nearly 1.5 miles into the San Francisco Bay, and its last 1,035' is a diffuser section that discharges the treated wastewater into the Bay; and

WHEREAS, due to the large diameter of the outfall pipeline, designed to transport high wet weather flows, flow velocities are very low during most of the year resulting in deposition of some treated solids in the diffuser section; and

WHEREAS, solids have been removed from the diffuser in 1993, 1997, 2002, and 2009; and

WHEREAS, last fall, divers measured the height of settled solids in the diffuser section, and staff estimates that approximately 600 yards need to be removed and disposed; and

WHEREAS, staff has engaged regulatory agencies about the removal of the solids, and has completed an Interagency Dredging-Dredged Material Reuse/Disposal Application; and

WHEREAS, the Application required the governing board of a public agency to adopt a resolution authorizing the signer of the Application to represent the agency and bind the applicant.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners designates and authorizes its General Manager to represent CMSA for the Marine Outfall Diffuser Cleaning Project and sign the Application.

PASSED AND ADOPTED *at the meeting of the Central Marin Sanitation Agency Board of Commissioners, County of Marin, State of California, on April 9, 2024.*

AYES:
NAYS:
ABSTAIN:
ABSENT:

_____
Douglas T. Kelly, Commission Chair

ATTEST:_____
Dean DiGiovanni, Commission Secretary

CONSOLIDATED DREDGING-DREDGED MATERIAL REUSE/DISPOSAL APPLICATION

(Please completely follow instructions provided with application)

SECTION I - GENERAL INFORMATION

1. APPLICANT INFORMATION

☐ Individual ☐ Legal Entity ☑ Government ☐ Non-profit

Applicant Name: Jason Dow Title: General Manager

Company Name: Central Marin Sanitation Agency

Mailing Address: 1301 Andersen Drive

City: San Rafael State: Ca Zip: 94901

Phone: Main (415) 459 - 1455 Fax (415) 459 - 3971

Cell (415) 246 - 2268

E-mail jdow@cmsa.us

Applicant Business Type - Check One If Applicable (See Instructions)

☐ Sole Proprietorship ☐ Partnership ☐ Corporation ☑ Government Agency ☐ Other Association

Description

Regional wastewater agency that discharges treated water into the central SF Bay.

2. REPRESENTATIVE INFORMATION

Applicant's authorized agent, point of contact and/or representative ☑ None

Name: _____ Title: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone: Main ( ) _____ - _____ Fax ( ) _____ - _____

Cell ( ) _____ - _____

E-mail _____

I hereby authorize _____ to act as my representative and bind me in all matters concerning this application.

_____ _____ _____

Signature of Applicant Signature of Representative Date

_____ _____

Name Title (if different then box 1)

Who should receive correspondence relevant to this application?

☐ Applicant ☐ Representative ☐ Both

"This application shall serve as, and be functionally equivalent to, a Report of Waste Discharge, pursuant to Sections 13260, 13374 and 13377 of Article 4, Chapter 4 of the Porter-Cologne Water Quality Control Act."

SECTION II - PROJECT INFORMATION

3. DREDGING PROJECT

Project Name or Title: Outfall Diffuser Cleaning Project

Type of Dredging Project: ☑ Maintenance ☐ New Work (see instructions)

☐ Single Episode ☐ Multi-Episode ☐ Knockdown

Project Description:

Removal of approximately 600 cubic yards of settled solids from the interior of the 7' diameter marine outfall pipeline. The solids are located at the end of the outfall's diffuser section about 1.5 miles from the Bay shoreline. A diving contractor will be hired to remove the solids and side-cast them on the Bay floor.

Project Need and/or Purpose:

Removal of the solids is important periodic maintenance work to maintain the hydraulic capacity of the outfall, to convey high wet weather flows of treated water to the Bay.

Month and year work is proposed to begin: 08/2024, complete: 09/2024

Estimated total project cost: $450,000.00

Project Location:

County: Marin Nearest City: San Rafael

Latitude(s): 37 - 56.9' N Longitude(s): 122 - 27.7' W

Waterway: Central San Francisco Bay

Proposed type of equipment to be used:

The contractor will utilize a small barge or large boat with a suction pump. A diver inside the outfall will remove solids with a suction hose, and 2nd diver will be outside the outfall with a discharge hose.

Will the project result in the construction of temporary or permanent structures or other than normal dredging equipment? ☐ Yes ☑ No **If Yes**, describe:

Project depth information:

Proposed design depth (MLLW) - Overdredge depth tolerance (MLLW) -

Existing depth (MLLW) 30'-41' Proposed total depth (MLLW) - (design depth plus overdredge depth)

Volume of material to be dredged: 600 cy, area of dredging: 4,368 sq-ft acres/sq feet

Volume of material to be knocked down: _____cy

Type(s) of substrate being dredged: ☐ Subtidal Bottom ☐ Intertidal Bottom ☐ Wetlands

☑ Other (explain): settled treated wastewater solids

Does the project involve activities within the Suisun Marsh Protection Zone? ☐ Yes ☑ No

If Yes, complete Box 7

Please list agency and identification numbers of any previous permits for this activity:

SLC N/A RWQCB 2159.5116 BCDC ANO 9-01 USACE 2008-00448N

SECTION III - DISPOSAL SITE INFORMATION

4. DIRECTIONS (Please answer all questions)

Does the project involve unconfined aquatic disposal? ☑ Yes ☐ No
If Yes, complete box 5

Does the project involve upland, wetland or reuse disposal? ☐ Yes ☑ No
If Yes, complete box 6

Does the project involve disposal within the Suisun Marsh Protection Zone? ☐ Yes ☑ No
If Yes, complete box 7

5. AQUATIC DISPOSAL

Site	Proposed disposal volume
☐ SF-9 (Carquinez Strait)	_____cy
☐ SF-11 (Alcatraz)	_____cy
☐ SF-10 (San Pablo Bay)	_____cy
☐ SF- DODS (Deep Ocean Disposal Site)	_____cy
☑ Other (Explain): Side-cast on Bay floor	600 cy

☐ Have you completed a Small Dredger Programmatic Alternatives Analysis (SDPAA) form?
☐ Have you completed an Integrated Alternatives Analysis (IAA)?

Note: If you are considering multiple sites or have not yet determined a site, please comment in Box 12 ("Remarks")

6. PROPOSED UPLAND OR WETLAND REUSE/DISPOSAL SITE INFORMATION

Site Name: _____
Site Description (see instructions):
_____
_____
_____

Site Address: _____
City: _____ State: _____ Zip: _____
Latitude(s): _____ Longitude(s): _____
Owner's Name: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____
Phone: ( ) _____ - _____

Are there wetlands on the site? ☐ Yes ☐ No
If yes, has a jurisdictional delineation been done by the U.S. Army Corps? ☐ Yes ☐ No

Corps file #_____

SECTION III - DISPOSAL SITE INFORMATION (CONTINUED)

6. CONTINUED

Is the site an existing site that is permitted to receive dredged material? ☐ Yes ☐ No

Provide the year that the site last received dredged material: _____

Will the dredged material be sold or used for private purposes? ☐ Yes ☐ No

If Yes, estimated volume of material to be sold or used for private purposes:_____cy

If Yes, annual income received or projected: _____

If projected, please show basis of the projection (see instructions):

_____

_____

Estimated volume of dredged material to be reused (at the site): _____ cy

Volume to go upland: _____cy

Volume to go to wetland: _____cy

Will the disposal result in the construction of temporary or permanent structures or the use of other than normal dredged material disposal equipment? ☐ Yes ☐ No

If Yes, describe:

_____

_____

Will the proposed disposal affect existing public access or public recreational facilities ? ☐ Yes ☐ No

If Yes, describe how impacts would be mitigated:

_____

7. SUISUN MARSH DEVELOPMENT INFORMATION

ID number(s) of any previous local marsh development permit(s) issued for work at this site:

_____ ☐ None

Duck Club number(s) _____ ☐ None

Is the project consistent with the individual management plan for the property certified by the San Francisco Bay Conservation and Development Commission ? ☐ Yes ☐ No

If No, submit an explanation of how the project can be approved despite the inconsistency.

Is the project consistent with the U.S. Army Corps Regional General Permit (RGP) for Suisun Marsh?

☐ Yes ☐ No

SECTION IV - OTHER REQUIRED INFORMATION

8. ENVIRONMENTAL APPROVALS

a) Has an EIR or an EIS been prepared for the project? ☐ Yes ☑ No

b) Has the project been determined to be categorically exempt from the need for any environmental documentation by the lead environmental agency ? ☑ Yes ☐ No

If Yes, attach a statement from the lead agency supporting this categorical exemption

c) Was an EA prepared for previous dredging at this site? ☐ Yes ☑ No

d) If (a) is No, will an EIR or an EIS be prepared? ☐ Yes ☑ No

e) If (d) is No, has a negative declaration been prepared (or is one being prepared)? ☐ Yes ☑ No

f) If (d or e) is Yes, please answer the following:

(1) Who is the lead agency for the EIS, EIR, or negative declaration? _____

(2) Approximate date of completion: _____

g) Provide a copy of the project environmental documentation with your application

9. OTHER APPROVALS (see instructions)

CA DEPARTMENT OF FISH AND GAME - 1601 & 1603 Approval ☑ None Required

Number	Date of Application	Date of Issuance
_____	_____	_____
_____	_____	_____

LOCAL GOVERNMENT APPROVALS ☑ None Required

Approving Agency	Type of Approval	Date of Approval	Local Contact and Phone
_____	_____	_____	_____
_____	_____	_____	_____

10. DISCLOSURE OF CAMPAIGN CONTRIBUTIONS

Disclose any campaign contributions in excess of $250 to officials of the agencies using this application form: ☑ No such campaign contributions have been made

Contribution Made To:	Contribution Made By:	Date of Contribution:
_____	_____	_____
_____	_____	_____

11. ADJOINING PROPERTY OWNERS

Provide names and addresses of property owners, leases, etc., whose property adjoins the dredging project and disposal site (disposal site information not required for the designated aquatic sites). If there are more adjacent property owners than can be entered here, please attach a supplemental list:

12. REMARKS

On the DMMO project webpage is a letter to the DMMO committee that explains the proposed 2024 solids removal project, and the outfall solids analysis results from CalTest Analytical Laboratory.

13. CHECKLIST OF ADDITIONAL INFORMATION TO BE SUBMITTED

	Complete and Attached	or Expected Submission Date	Not Applicable
Sampling & Analysis Plan (SAP):	☐	_____	☑
Testing Data:	☐	_____	☑
Calculations:	☐	_____	☑
Organizational Document:	☑	_____	☐
Environmental Document:	☑	_____	☐
Drawings and Maps:	☑	_____	☐
Proof of Legal Interest:	☐	_____	☑
Statement of Consistency:	☐	TBD	☐
BCDC Posting Certification:	☐	TBD	☐
SDPAA or IAA :	☐	_____	☑

Fees: Expected submission date to: BCDC 04/12/2024 SLC _____ RWQCB 04/12/2024

14. CERTIFICATION OF ACCURACY OF INFORMATION

I hereby certify under penalty of perjury that to the best of my knowledge the information in this application and all attached exhibits is full, complete, and correct, and I understand that any misstatement or omission of the requested information or of any information subsequently requested shall be grounds for denying the permit, for suspending or revoking a permit issued on the basis of these or subsequent representation, or for the seeking of such other and further relief as may seem proper to the permitting agencies.

Signature of Applicant or Representative	Title	Date
	General Manager	4/10/2024

Jason Dow
Print name

Central Marin Sanitation Agency

BOARD MEMORANDUM

April 4, 2024

To: CMSA Commissioners and Alternates

From: Adrianna Iacoviello, Administrative Specialist

Approved: Jason Dow, General Manager

Subject: April Informational Items

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

A. Letter dated March 18, 2024 to Chairman Carper and Ranking Member Capito from local governments and private entities responsible for safeguarding public health and the environment
Re: Requesting PFAS legislation to include a specific provision ensuring that the responsible local governments and private entities are recognized as "passive receivers"

B. Letter dated March 27, 2024 to Ms. Kerry O'Conner, California Regional Water Quality Control Board
Re: Monthly Self-Monitoring Report (SMR) – February 2024

C. California Association of Sanitation Agencies Article
Re: Microplastics

A

March 18, 2024

The Honorable Tom Carper
Chairman
U.S. Senate Committee on Environment and Public Works
410 Dirksen Senate Office Building
Washington, D.C. 20510

The Honorable Shelley Moore Capito
Ranking Member
U.S. Senate Committee on Environment and Public Works
410 Dirksen Senate Office Building
Washington, D.C. 20510

Dear Chairman Carper and Ranking Member Capito:

The undersigned organizations represent local governments and private entities responsible for safeguarding public health and the environment, including drinking water, wastewater treatment, stormwater management, and water recycling facilities, municipal solid waste landfills, and composting facilities. We write to urge that any legislation on per- and polyfluoroalkyl substances (PFAS) that the U.S. Senate Committee on Environment and Public Works (EPW) considers include a specific provision to ensure that the organizations we represent are explicitly recognized as "passive receivers" of PFAS and afford these essential public services a narrow exemption from liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Absent such relief, designation of certain PFAS as CERCLA hazardous substances would shift the "polluter pays" principle of the law to that of a "community pays" model placing the burden of compliance and cleanup onto ratepayers and the public at-large.

The U.S. Environmental Protection Agency (EPA) has stated often, including during testimony to EPW, that the agency would use its "discretionary authority" in pursuing CERCLA enforcement actions against certain parties. However, this commitment offers little comfort to our sectors given the expansive rights of Potentially Responsible Parties under CERLCA to bring contribution litigation against other entities that are alleged to be additional sources of hazardous substances at a cleanup site.

EPA has stated that it has insufficient existing legal authority to provide relief to public service providers from the impact of CERCLA contribution litigation. Claims for contribution against passive receiver groups thus would generate significant litigation costs for lawful operations going back decades—costs that would lead to significant cost increases on essential public service providers and the communities and residents they serve.

It is important to highlight that our members deliver essential public services that do not involve the manufacture or use of PFAS. We are passive receivers of media containing PFAS that are ubiquitous in the water supply, wastewater treatment process, stormwater, biosolids management, and solid waste streams. Each of our sectors is interdependent: landfills rely on wastewater treatment facilities for their leachate discharge while water and wastewater treatment facilities depend on landfills and compost facilities for biosolids management, recycling of organics, and disposal of spent water filtration systems. Although our members carry-out the delivery of public health services consistent with the requirements of the Safe Drinking Water Act, Clean Water Act, and Solid Waste Disposal Act, among other federal and state mandates, CERCLA designation, absent Congressional action, would disrupt the interdependence of passive receivers by driving each sector to revisit the acceptance of influent streams that might contain PFAS concentrations and impacting our ability to recover resources that can contribute to significant reductions in greenhouse gas emissions.

Our sectors acknowledge our role as part of the long-term solution to PFAS management, recognize the need to protect public health and the environment, and share the goal of holding accountable those entities that are primarily responsible for PFAS contamination. Nevertheless, any action designating certain PFAS compounds as hazardous substances must be accompanied by relief that allows communities to continue to rely on the affordability of the essential public services our sectors provide. Accordingly, we urge the Committee to provide statutory relief from CERCLA liability for owners and operators of passive receiver facilities.

Sincerely,

American Public Works Association
Association of Compost Producers – California
Association of Washington Cities
California Association of Sanitation Agencies
California Waste Haulers Council
Clean Water Professionals of Kentucky & Tennessee
Coalition for Clean Water – Washington
Coalition of Recyclers of Residual Organics by Practitioners of Sustainability
Connecticut Water Environment Association
Green Mountain Water Environment Association
Illinois Association of Wastewater Agencies
Indiana Water Environment Association
Kansas Water Environment Association
League of Oregon Cities
Maine Water Environment Association
Massachusetts Water Environment Association
Michigan Waste & Recycling Association
Michigan Water Environment Association
Mid-Atlantic Biosolids Association
Midwest Biosolids Association
Municipal Environmental Group – Wastewater Division
Municipal Waste Management Association
National Association of Counties
National Association of Water Companies
National League of Cities
National Municipal Stormwater Alliance
National Waste & Recycling Association
National Water Resources Association
New England Water Environment Association
New Hampshire Water Pollution Control Association
New Jersey Water Environment Association
New York Water Environment Association
North East Biosolids & Residuals Association
Northwest Biosolids Association
Oregon Association of Clean Water Agencies
Oregon Refuse & Recycling Association
Resource Recovery Coalition of California
Rhode Island Water Environment Association
Solid Waste Association of North America
Southeast Biosolids Association
Special Districts Association of Oregon
The United States Conference of Mayors
U.S. Composting Council
Virginia Biosolids Council
Washington Association of Sewer & Water Districts
Washington Refuse & Recycling Association
WateReuse Association
Water & Wastewater Equipment Manufacturers Association
Water Quality Association
West Coast Refuse & Recycling Coalition
Wisconsin Counties Solid Waste Management Association

CC: Members of the U.S. Senate Committee on Environment and Public Works

CENTRAL MARIN SANITATION AGENCY

Jason R. Dow P.E.
General Manager

1301 Andersen Drive, San Rafael, CA 94901-5339 Phone (415) 459-1455 Fax (415) 459-3971 www.cmsa.us

March 27, 2024

California Regional Water Quality Control Board
San Francisco Bay Region
Ms. Kerry O' Conner, Water Resource Control Engineer
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Monthly Self-Monitoring Report (SMR) – February 2024

Dear Ms. O' Conner,

The SMR 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 #R2-2023-006, the Nutrient Watershed Permit Order #R2-2019-0017, the Mercury and PCBs Permit Order #R2-2022-0038, the Amendment of Monitoring and Reporting Requirements and Amendment of Alternate Monitoring and Reporting Program Permit Order #R2-2021-0028, and the Amendment Update to Total Residual Chlorine and Oil and Grease Requirement Permit Order R2-2023-0023.

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

Blending Events
The CMSA treatment facility did exceed the maximum secondary capacity of 30 MGD during this reporting period. CMSA blended over five (5) calendar days. Prior to blending initiation, all CMSA process equipment (primary, secondary system, and the effluent storage pond) were in service and remained in service throughout the blending periods. Table 1 below provides a summary of the blending activities.

Table 1: Blending Activities Summary (EFF-002b)

Monitoring Period	Flow (Total)	Blending Volume	Blending Start Time	Blending End Time	TSS	Blending pH Min	Blending pH Max	Enterococcus	Rainfall	Total Residual Chlorine
	MG	MG	-	-	mg/L	SU	SU	MPN/100mL	Inches	mg/L
2/1/24	52.629	21.9535	00:00	23:59	27	6.5	6.6	8.5	0.83	ND
2/2/24	30.4944	1.2624	00:00	14:59	8	6.6	6.9	6.3	0.08	ND
2/4/24	62.3694	32.4154	01:52	23:59	22	6.4	7.2	13.4	2.74	ND
2/5/24	37.5147	7.5302	00:00	22:11	10	6.6	6.8	4.1	0.25	ND
2/17/24	18.3718	1.2607	08:15	23:38	12	6.8	7.0	3.1	0.91	ND

Data Validation

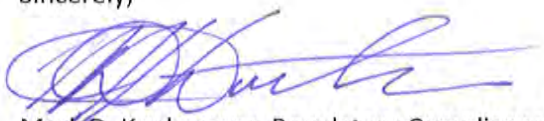
All regulatory daily, weekly, and monthly quality control calibrations/checks conducted during the month of February met established quality assurance acceptance criteria, except those data results indicated within the attached analytical reports.

Summary

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)).

Sincerely,



Mark D. Koekemoer, Regulatory Compliance Manager

F: Loren C. Finton, Treatment Plant Manager

Microplastics

CASA

What are microplastics?

Microplastics are solid polymeric materials smaller than 5 millimeters, or about a quarter of the width of a penny. There are multiple definitions, but the general consensus on their lower size limit is 1 nanometer in size. Microplastics most often result from the degradation of larger plastics in the environment or the shedding of fibers from textiles, but they also originate as purposefully designed microplastics such as microbeads in makeup or nurdles, which are plastic pellets used to manufacture plastic goods. Microplastics are diverse in their shape, color, and chemical composition, which has made it difficult to formally define and measure them.

Plastics (and microplastics) are everywhere in our environment.

As a society, we surround ourselves with plastics: we eat and drink from plastic containers, cook food with plastic utensils, clothe ourselves in synthetic fabrics made from plastic fibers, furnish our living and work areas with carpeting and furniture made from synthetic materials, cover our fields with plastic tarps, and apply synthetic paints to our roadways and boats. Even our air contains plastics: synthetic fibers found in indoor air are the primary source of microplastics that we consume or inhale. A 2019 study estimated that humans consume and inhale 74,000 to 121,000 microplastic particles annually, which is approximately twice the amount of plastic particles compared to when only food and drink are considered.[1] The study also determined that those who drink bottled water consumed twice the amount of plastic particles as those who drink tap water.

Where do microplastics come from?

Sources and pathways for microplastics entering the environment are as diverse as our use of those very same plastics. Wastewater facilities are just one of many pathways for microplastics to travel from their source to the environment. However, multiple studies have shown the overall contribution of microplastics from wastewater facilities are comparatively low. Recent studies concluded that discharge of treated wastewater from a municipal treatment plant plays a minor role in terms of microplastic emission to the aquatic environment, and that other sources such as stormwater runoff and atmospheric deposition likely are more important sources.[2]

What we know about health effects for humans and the environment.

Though microplastics are ubiquitous, reliable data on the effects on human health are limited and inconclusive. Recent studies have demonstrated the presence of microplastics in items we eat and drink every day, including drinking water and many common food items, and subsequently, they have been found in human stool and body tissues. However, in 2019 the World Health Organization released a seminal report that concluded that there was little evidence to indicate a human health concern from microplastics in drinking water, while acknowledging that more research was needed. Some early ecological research has indicated that there may be impacts of microplastics on aquatic life, but these experimental laboratory studies often used levels of microplastics that are not found in nature, and a nearly equal number of studies did not demonstrate such impacts. Without additional data, it is difficult to draw any firm conclusions about the health effects of microplastics on humans and the environment. High-quality, well-defined studies using repeated measurements and realistic exposure experiments are needed to address these inconsistencies.

[1] Human Consumption of Microplastics. Environmental Science & Technology (2019)

[2] Understanding ... port in the San Francisco Bay Region (2019). San Francisco Estuary Institute.

What are the comparative loadings of microplastics in wastewater effluent?

Relative to the everyday pathways, wastewater effluent and biosolids are not the most significant contributor to human exposure to microplastics. Wastewater treatment plants are pathways of microplastics and microfibers which enter from industrial, commercial, and residential waste streams, and the majority of microplastics are removed from effluent through primary and secondary wastewater treatment. Though there has been much focus in California on wastewater effluent as a significant pathway of microplastics to the environment, actual amounts found in wastewater are very low compared to other sources. As one example, a 2019 study found that stormwater contained

over 300 times the amount of microplastics that ended up in waterways when compared to wastewater effluent.[3]

Microplastics in biosolids are comparatively low as well.

While the majority of microplastics are removed during primary and secondary wastewater treatment, they do not simply disappear. Rather, they are removed from the wastewater stream and can be present in biosolids, leading to some concern that biosolids may be a pathway of microplastics entering the environment. However, in recent studies, biosolids were found to contribute low amounts of microplastics relative to other pathways such as agricultural use of plastics (like plastic mulch and tarps). Moreover, less than 0.5% of California agricultural land receives biosolids.[4] Similarly, a 2017 Danish study actually found higher concentrations of microplastic in soils where biosolids had not been added as fertilizer, indicating that biosolids are just one of many sources of microplastic emission to agricultural soils. [5] Despite any microplastics content, the land application of biosolids remains a beneficial way to recycle organic matter and nutrients, to improve the physical, chemical, and biological properties of soils, and to re-establish vegetation and restoration of degraded ecosystems.

Standardized measurement methods for microplastics are still evolving.

As we begin to better understand the diversity and characteristics of microplastics, the methods we use to find, detect and classify microplastics are also evolving. It is fundamentally important that researchers agree on a definition of this class of contaminants, as well as the methods to measure and count them, before thresholds and management actions are developed. Scientific reviews have highlighted that differences between protocols and contamination can lead to under- and over-estimation of microplastics in different samples. Beyond differences in collection and analytical approaches, there has been a lack of standardization in study design, field sampling, sample preparation, and sample analysis resulting in data that is difficult to interpret, challenging to use, and impossible to reproduce in subsequent studies. Therefore, it is incredibly important that methods be standardized across different samples and techniques, to ensure the appropriate focus of efforts on monitoring and solutions.

Reducing microplastics in the environment: focusing on source reduction and control.

Source reduction is the most important step that we can take as a society to reduce microplastics entering both the environment and our treatment plants. Actions to manage microplastics should be focused on limiting the use of plastic products that contribute the most pollution to the environment, including plastic bags, plastic bottles and caps, straws, food wrappers, and other single-use plastic items, while also incentivizing the use of alternatives to plastics. Reduction of microplastics should focus on sources of the most prevalent microplastics to the environment, including things like tire particles, plastic production, and textile capture. The most efficient and meaningful way for our society to reduce microplastics in the environment is to reduce and eliminate the production and use of plastics at its origins, rather than costly diversions or cleanup efforts after plastics have been released to the air and the environment.

[3] Understanding Microplastic Levels, Pathways, and Transport in the San Francisco Bay Region (2019). San Francisco Estuary Institute.

[4] Transport and fate of microplastic particles in wastewater treatment plants. Water research, 91, 174-182 (2016); A simple method for the extraction and identification of plastics from soil. Science of the Total Environment (2018).

[5] Microplastic in Danish wastewater: Sources, occurrences, and fate (2017). Denmark Environmental Protection Agency.

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