



Central Marin Sanitation Agency

**COMMISSION REGULAR MEETING AGENDA**

**Tuesday, October 10, 2017**

**at the Agency Office**

**7:00 p.m.**

**Closed Session at 6:00 p.m.**

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

**1. 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.*

**4. Adjourn to Closed Session**

**CONFERENCE WITH LABOR NEGOTIATOR**

California Government Code Section 54957.6

Agency Negotiator: Austris Rungis, Human Resources Consultant (I.E.D.A.),  
Jason Dow, General Manager

Employee Organization: SEIU Local 1021; and Unrepresented Employees

**PUBLIC EMPLOYEE PERFORMANCE EVALUATION**

California Government Code Section 54957

Title: General Manager

**5. 7:00 p.m.: Reconvene in Open Session**

*Report on any action taken or direction given to staff in Closed Session.*

**6. Roll Call**

**7. 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.*



**8. Revised General Manager Employment Agreement**

*Recommendation: Consider approving the revised General Manager Employment Agreement, and take other actions, as appropriate.*

**9. Consent Calendar**

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

- a) Minutes—Regular Board Meeting—September 12, 2017
- b) Treasurer’s Report—Operating Account—September 2017
- c) Schedule of Investments— September 2017
- d) NPDES, Process, and Maintenance Report— September 2017
- e) Performance Metric Report— September 2017
- f) FY 2018 Budget Status – First Quarter Report
- g) FY 2018 Asset Management Program – First Quarter Report

**10. Lystek Biosolids Reuse Presentation**

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

**11. Marin County Adult Offender Work Program**

*Recommendation: Consider authorizing the Agency’s participation in the Marin County Adult Offender Work Program.*

**12. Draft Sea Level Rise Assessment - 2017 Agency Facilities Master Plan**

*Recommendation: Receive the draft sea level rise assessment report, and provide comments and/or direction to the General Manager, as appropriate.*

**13. Draft MCE Power Purchase Agreement**

*Recommendation: Review and provide comments on the draft Small Generator Power Purchase Agreement with Marin Clean Energy.*

**14. North Bay Watershed Association (NBWA) Report\***

**15. Oral Reports by Commissioners/General Manager\***

**16. Next Scheduled Meeting**

*Tuesday, November 14, 2017 at 7:00 p.m. at the Agency office.*

\*Information not furnished with Agenda


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





**BOARD MEMORANDUM**

October 5, 2017

**To:** CMSA Commissioners and Alternates  
**From:** Jack Gow, , CMSA General Counsel  
**Subject:** Revised General Manager Employment Agreement

**Recommendation:** Consider approving the revised General Manager Employment Agreement, and take other actions, as appropriate.

**Summary:** General Manager Dow had his annual performance evaluation at the September 12<sup>th</sup>, 2017, Board meeting in closed session. I was instructed to prepare a revised employment agreement for the Board's discussion and consideration at the October 10 meeting in open session. The revised agreement is attached, with changes made pursuant to Board direction shown in red text. I made one other addition relating to an Indemnification Clause (Section IX). This is a standard clause that appears in many General Manager Contracts and reflects existing law. No other provisions in the contract were modified. The changes are:

- Agreement made on October 10, 2017.
- The Agreement's five year term begins October 11, 2017.
- Monthly compensation adjusted per the calendar year 2016 COLA.
- A 5% bonus for the past year's performance in noted in Section II.
- Indemnification provision for acts within the scope of the GM's employment

It should be noted that the COLA is effective at the same time and percentage as received by all Agency staff, effective July 1, 2017.

**Attachment:**

- Revised General Manager Employment Agreement

**CENTRAL MARIN SANITATION AGENCY (CMSA)**  
**GENERAL MANAGER EMPLOYMENT AGREEMENT**

This Agreement is made and entered into on **October 10, 2017**, by and between the Central Marin Sanitation Agency (hereinafter "CMSA" or "Commission") and Jason Dow (hereinafter "Dow" or "Manager").

CMSA desires to **continue to** employ the services of Dow as General Manager for CMSA on the terms pursuant to the express understandings more specifically set forth hereinafter.

**SECTION I - Employment and Term of Office**

CMSA agrees to employ Dow as General Manager to perform the functions and duties of said office. The Manager shall serve for a five year term. This term commences on **October 11, 2017**. CMSA shall have the option of extending the five year term at any time. Upon expiration of this Agreement or any Addendum hereto, the terms and conditions of this Agreement shall remain in effect until it is either terminated or renegotiated.

**SECTION II - Compensation**

Effective **July 1, 2017**, Manager shall receive a monthly salary of **\$21,163**, and for each successive year on July 1, shall receive a COLA. The COLA shall be the same percentage that is given to Agency staff. Commission may provide Manager with a bonus of up to 5% annually based upon Manager's performance. This additional benefit is the same benefit that Agency staff may receive. **Manager shall receive a 5% bonus for his past year's performance, effective immediately.**

**SECTION III - Annual Performance and Goal/Objective Review**

An annual evaluation of Manager's performance will occur in September of each year. During the evaluation, the Manager will present an updated performance plan and the status of the prior year's goals and objectives. At this time, the Commission and Manager shall develop written mutually acceptable goals and performance expectations for the Manager, which shall be used as objective criteria against which to assess Manager's performance.

**SECTION IV - Management Benefits**

Manager shall be entitled to receive identical benefits to those provided by CMSA to its management employees subject to those specific exceptions as to certain benefits detailed in this Agreement.



## **SECTION V - Life Insurance and Vacation- Buy Back**

Manager will be provided with life insurance coverage equal to his annual salary minus any bonuses. Manager is authorized to sell up to two weeks of accrued vacation time annually.

## **SECTION VI - Vehicle Use and Professional Benefits**

CMSA shall provide the Manager with a vehicle for his personal use, or upon Commission approval a vehicle allowance of \$450.00 per month. CMSA agrees to budget and pay for professional dues, conferences, and subscriptions on behalf of the Manager, which are reasonably necessary for his continuation and full participation in professional associations.

## **SECTION VII - Deferred Compensation Contribution**

CMSA shall contribute 4% of the Manager's annual salary, minus bonuses, to the Manager's 457 deferred compensation program.

## **SECTION VIII - Involuntary Termination and Severance**

Nothing contained in this Agreement shall in any way prevent, limit, or otherwise interfere with the right of the Commission to terminate services of Manager. The Manager at all times serves at the pleasure of the Commission. Termination of the Manager's services, however, is subject to the following provisions:

- A. In the event that Manager is involuntarily terminated by the Commission, CMSA shall pay to Manager at the time of receipt of his last pay check from CMSA, either: (1) a lump sum cash payment equal to twelve (12) months aggregate salary based upon Manager's then earned monthly salary at the date of involuntary termination, including all accrued leave balances; or (2) a lump sum cash payment equal to all accrued leave balances and bi-weekly checks for 26 pay periods equal to twelve (12) months aggregate salary based upon Manager's then earned monthly salary at the date of involuntary termination commencing with the pay period following the involuntary termination. It shall be Manager's decision as to what option he chooses between (1) and (2) above. In addition, CMSA shall also continue to provide and pay for the benefits listed in Section IV-Management Benefits for a period of twelve months following involuntary termination. Continued payment of Section IV benefits will cease if Manager obtains employment within 12 months following the involuntary termination.
- B. In the event that Manager resigns his position following a formal suggestion by Commission that he do so, the Manager may, at his

option, be deemed to have been involuntarily terminated and entitled to receive the above benefits.

- C. In the event that the Manager is terminated because of a conviction for any illegal act involving moral turpitude, or an event disqualifying Manager from public office pursuant to State Law, or causing a forfeiture of office under State Law, the commission shall have no obligation to pay any of the above termination benefits.
- D. In the event Manager voluntarily resigns his position with CMSA, Manager agrees to provide 30 days written notice.

The Commission, in consultation with Manager, may fix or amend any such other reasonable terms and conditions of employment as they may determine from time to time. The Parties hereto acknowledge having discussed and agreed upon all terms and Provisions contained herein.

**SECTION IX – INDEMNIFICATION**

The Agency agrees to defend, hold harmless, and indemnify Dow against any claims, demands, or legal actions, whether specious, frivolous, or otherwise, arising out of an alleged action or omission, direct or indirect, occurring within the scope and during the course of Dow's employment with the Agency. Dow will cooperate in good faith with the District with respect to the defense of such claims, demands or legal actions.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Diane Furst, Commission Chair

Dated: \_\_\_\_\_

\_\_\_\_\_  
Tom Gaffney, Commission Vice-Chair

Dated: \_\_\_\_\_

\_\_\_\_\_  
Jason Dow, General Manager

**Approved to as Form:**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Jack F. Govi, Assistant County Counsel





Central Marin Sanitation Agency

**COMMISSION REGULAR MEETING MINUTES**

**Tuesday, September 12, 2017**

**at the Agency Office**

**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](http://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 Hartzell called the meeting to order at 6:03 p.m. A quorum was present.

**2. Roll Call**

Present: Chair Diane Furst; Vice-Chair Thomas Gaffney; Commissioners Maribeth Bushey, Michael Boorstein, and Dan Hillmer; Alternate Commissioner Dean DiGiovanni (for Al Boro).

Absent: Secretary Al Boro

Staff present: Jason Dow, General Manager; Jack Govi, Agency Counsel, Kate Brouillet, Recording Secretary

Public present: None

**3. Open Period for Public Participation**

**00:01:00**

Operations Supervisor Al Fiore gave a statement regarding his CalPERS retirement benefits, and provided a hand-out to the Board.

**4. Closed Session was convened at 6:10 p.m.**

**00:10:00**

The recording secretary left the meeting.

**PUBLIC EMPLOYEE PERFORMANCE EVALUATION**

California Government Code Section 54957

Title: General Manager

**5. Open Session was reconvened at 7:35 p.m.**

**00:00:00**

Chair Furst reported that there was no action taken in closed session, and direction was given to staff.

**6. Roll Call** **00:00:10**

Present: Chair Diane Furst; Vice-Chair Thomas Gaffney; Commissioners Maribeth Bushey, Michael Boorstein, and Dan Hillmer; Alternate Commissioner Dean DiGiovanni (for Al Boro).

Absent: Secretary Al Boro

Staff present: Jason Dow, General Manager; Kate Brouillet, Recording Secretary; Mark Koekemoer, Laboratory Director; Jenny Bender, Laboratory Administrator; Mary Jo Ramey, Environmental Services Analyst; Jose Gutierrez, Environmental Services Analyst; David Ernst, Lead Operator; Nick Gaunt, Operator; Jeff Waters, Operator; Noel Rafalo, Operator; Mike Gardia, Lead Mechanic; Anthony Smith, Mechanical Technician; Lawrence Gould, Mechanical Technician.

Public present: Felicia Newhouse, Ross Valley Sanitary District; Michael Vioria, SEIU.

**7. Open Period for Public Participation** **00:05:44**

Dave Ernst, Lead Operator, and Nick Gaunt, Operator, read a statement regarding the CalPERS direction to CMSA to discontinue reporting EPMC as special compensation and how this affects employees who plan to retire by June 30, 2018.

Commissioner Bushey expressed her appreciation to the staff for their service and for attending the meeting to share their views. She stated that as this Board's most long-standing member, it was wonderful to see in person many of the men and women who have performed the hard work that they do every day. Chair Furst and the Board concurred.

**8. Consent Calendar** **00:06:40**

- a) Minutes—Regular Board Meeting—July 11, 2017
- b) Minutes—Special Board Meeting—August 10, 2017
- c) Treasurer's Report—Operating Account—July 2017
- d) Treasurer's Report—Operating Account—August 2017
- e) Schedule of Investments—July 2017
- f) Schedule of Investments—August 2017
- g) NPDES, Process, and Maintenance Report—July 2017
- h) NPDES, Process, and Maintenance Report—August 2017
- i) Performance Metric Reports—July and August 2017
- j) Accept Completion of the Solids Handling Building Ventilation Improvements Construction Contract
- k) Fiscal Year 2017 Green Business Report
- l) Revised Central Marin Food-to-Energy Program Agreement with Marin Sanitary Service

There was no discussion by the Board.



Comments from the Public:

There were no comments from the public.

Chair Furst asked for a motion on Consent Calendar items a-l.

**ACTION:** Commissioner Bushey moved to approve the Consent Calendar items a-l; second, Commissioner Boorstein.

**Ayes:** BOORSTEIN, BUSHEY, DIGIOVANNI, FURST, GAFFNEY, HILLMER

**Nays:** NONE

**Abstentions:** NONE

**9. Procurement of a Data Management System and a Laboratory Information Management System 00:07:30**

GM Dow stated that a project in the Agency's FY18 Capital Improvement Program is the purchase and implementation of two information management systems. He stated that since laboratory data and facility operational data have different requirements related to data processing and reporting, two information management systems are required. GM Dow stated that the Data Management System (DMS) and Laboratory Information Management System (LIMS) will each house data, perform calculations, and generate all future reports for process data and regulatory requirements.

GM Dow then introduced Mark Koekemoer, Laboratory Director, who gave a presentation on the DMS and LIMS.

Mr. Koekemoer stated that staff distributed request for proposals (RFPs) for both the DMS and LIMS systems, evaluated the proposals, and recommends the Board authorize the procurement of the Hach Water Data Management System for \$51,781, and the Promium Element Laboratory Information Management System for \$78,856.

The Board briefly discussed the two management systems, and asked various questions including the hosting and security of the software, maintenance contracts and software updates, compatibility with existing Agency systems, and staff training and implementation. GM Dow and Mr. Koekemoer answered the Board's questions.

Comments from the Public:

There were no comments from the public.

**ACTION:** Commissioner Boorstein moved to authorize the procurement of the Hach Water Data Management System for \$51,781, and the Promium Element Laboratory Information Management System for \$78,856; second, Commissioner Bushey.

**Ayes:** BOORSTEIN, BUSHEY, DIGIOVANNI, FURST, GAFFNEY, HILLMER

**Nays:** NONE

**Abstentions:** NONE

**10. Appointment of CMSA Representatives to the North Bay Watershed Association's Board of Directors 00:28:55**

GM Dow stated that the Board normally annually appoints a representative and alternate to North Bay Watershed Association's (NBWA) Board of Directors in July. He stated that at the July 2017 meeting, the Board postponed these appointments to the September meeting due to the absence of two regular Board members and their current NBWA representative, Commissioner Boorstein, indicating that he might be appointed by the Ross Valley Sanitary District as their NBWA representative.

Commissioner Boorstein stated that he has been appointed by RVSD as their representative to the NBWA, and could not serve as the CMSA representative.

Chair Furst asked for volunteers for the position, and there were none, due to the members' stating they had various conflicting time commitments. She then stated that she would be willing to serve as the representative, but may not be able to attend all the meetings.

GM Dow stated he would be willing to serve as the alternate, and could attend the meetings in Chair Furst's absence.

Comments from the Public:

There were no comments from the public.

**ACTION:** Commissioner Hillmer nominated Chair Furst as the NBWA representative and GM Dow as the alternate; second, Commissioner Bushey.

**Ayes:** BOORSTEIN, BUSHEY, DIGIOVANNI, FURST, GAFFNEY, HILLMER

**Nays:** NONE

**Abstentions:** NONE

**11. Renewable Energy Expansion Program – Clean Water State Revolving Fund Financial Assistance Agreement 00:33:30**

GM Dow gave a brief update on this project, and stated that the Board directed staff at its September 2016 meeting to submit an application for a Clean Water State Revolving Fund (CWSRF) Green Project Reserve (GPR) loan for the Renewable Energy Expansion Program (Project). He stated that staff received the approved GPR Agreement from the State Water Resources Control Board in late August 2017, and Legal Counsel Jack Govi has reviewed and approved it as to form and will submit a General Counsel Legal Opinion Letter with the executed Agreement. GM Dow stated that seventy-five percent (75%) of the loan principle (up to \$500,000) will be forgiven after the final Project Report is approved by the State Water Board staff. He stated that staff intends to execute the Agreement in accordance with CMSA Resolution No. 311, adopted by the Board at the September 2016 Board meeting,



granting him the authority to sign the Agreement. He stated that this item was informational, and asked for comments or direction, as appropriate.

The Board had a brief discussion and asked GM Dow several questions regarding the loan program forgiveness, potential construction projects that would be eligible for the funding, and applicable regulations.

Comments from the Public:

There were no comments from the public.

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

**12. Agency Responses to the Marin County Civil Grand Jury Report – 00:48:20**

***The Budget Squeeze: How Will Marin Fund Its Public Employee Pensions?***

GM Dow stated that Marin County's 2016/2017 Civil Grand Jury released a report on June 5, 2017, titled "The Budget Squeeze: How Will Marin Fund Its Public Employee Pensions?" He stated that at the June Board Meeting, the Board formed an ad hoc Grand Jury Response Committee, comprised of Commissioners Gaffney and Boorstein and alternate Commissioner DiGiovanni, to collaborate with staff on preparing draft responses for the Board's review and discussion at its September 12 meeting. He stated that he and the Committee prepared draft responses for the Board's consideration, and that CMSA must submit responses to the Grand Jury Foreperson and the Marin Superior Court Presiding Judge by September 30.

GM Dow stated that CMSA must respond to three of the Report's eight recommendations and include a summary explanation for each response. He stated that CMSA has partially implemented two recommendations and the third requires future analysis. GM Dow asked the Board to approve the draft Agency responses to the Grand Jury's Budget Squeeze Report as presented or with edits, and authorize staff to submit them to the Grand Jury Foreperson and Presiding Judge.

The Board briefly discussed the report and the recommendations, and asked GM Dow various questions regarding defined contribution programs, and prepayment or pay down options. GM Dow answered the Board's questions.

Chair Furst suggested that the Agency consider taking more aggressive measures to fund the unfunded liability in the future. GM Dow said this topic will be on the Finance Committee's agenda in the fall.

Comments from the Public:

There were no comments from the public.

**ACTION:** Commissioner Bushey moved to approve the draft Agency responses to the Grand Jury's Budget Squeeze Report as presented, and authorize staff to submit them to the Grand Jury Foreperson and Presiding Judge; second, Commissioner Hillmer.

Ayes: BOORSTEIN, BUSHEY, DIGIOVANNI, FURST, GAFFNEY, HILLMER

Nays: NONE

Abstentions: NONE

DIRECTION: Cover letter to be signed by both GM Dow and Chair Furst.

**13. Agency Responses to the Marin County Civil Grand Jury Report – 00:55:45**

**Marin's Retirement Health Care Benefits: *The Money Still Isn't There***

GM Dow stated that Marin County's 2016/2017 Civil Grand Jury released a report on May 17, 2017, titled "Marin's Retirement Health Care Benefits: *The Money Still Isn't There*". He stated that at the June Board Meeting, the Board tasked the newly-formed ad hoc committee to collaborate with staff on preparing draft responses for the Board's review and discussion at its September 12 meeting. He stated that he and the Committee prepared draft responses for the Board's consideration, and that CMSA must submit responses to the Grand Jury Foreperson and the Marin Superior Court Presiding Judge by September 30.

GM Dow stated that CMSA must respond to the Report's nine recommendations and provided a summary explanation for each response. He stated CMSA has either implemented or partially implemented each recommendation. He asked the Board to approve the draft Agency responses to the Grand Jury's Retirement Health Care Benefits Report as presented or with edits, and authorize staff to submit them to the Grand Jury Foreperson and Presiding Judge.

The Board briefly discussed the report and the recommendations, and agreed that the text for Agency response to R9, OPEB benefits for future employees, should be included in the cover letter to the Grand Jury to highlight the Agency's past cost containment decisions.

Comments from the Public:

There were no comments from the public.

**ACTION:** Commissioner Bushey moved to approve the draft Agency responses to the Grand Jury's Retirement Health Care Benefits Report as presented, and authorize staff to submit them to the Grand Jury Foreperson and Presiding Judge; second, Commissioner Hillmer.

Ayes: BOORSTEIN, BUSHEY, DIGIOVANNI, FURST, GAFFNEY, HILLMER

Nays: NONE

Abstentions: NONE

**DIRECTION:** Staff to include the text for Agency response to R9, OPEB benefits for future employees, in the cover letter.



**14. Ross Valley Sanitary District Field Operations Base Evaluation 01:00:00**

GM Dow stated that Ross Valley Sanitary District (RVSD) is evaluating options for the location of its field operations base, including collection system offices, maintenance staff, equipment, and supplies. He stated that RVSD General Manager Greg Norby and Board members Tom Gaffney and Michael Boorstein have expressed interest in evaluating CMSA's corporation yard as a potential site for the district's field operations. GM Dow stated for its field operation base, RVSD is currently evaluating making long term improvements at its Sir Francis Drake property or relocating to CMSA's corporation yard.

The Board had a brief discussion that included particulars such as parking availability, truck and equipment storage, potential number of buildings, rental fee and term of rental agreement, and use of Agency facilities and equipment.

Commissioners Boorstein and Gaffney recused themselves from the motion due to a possible conflict of interest.

Comments from the Public:

There were no comments from the public.

**ACTION:** Commissioner Hillmer moved to authorize the General Manager to work with RVSD on evaluating the feasibility of utilizing a portion of the Agency's corporation yard as the RVSD Field Operations Base; second, Commissioner Bushey.

**Ayes:** BUSHEY, DIGIOVANNI, FURST, HILLMER

**Nays:** NONE

**Abstentions:** BOORSTEIN, GAFFNEY

**DIRECTION:** GM Dow to consult with Agency Counsel regarding the need for Commissioners Boorstein and Gaffney to recuse themselves on this matter going forward, and advise the Board.

**15. North Bay Watershed Association (NBWA) Report 01:15:35**

GM Dow stated he attended the September 8, 2017 NBWA Board meeting. He said that there were two presentations, one by Rob Carson on Marin County's Stormwater Project and potential amendments to stormwater regulations, and one by the Sonoma County Resource Conservation District and the San Francisco Estuary Institute on Petaluma Historic Hydrology that featured reconstructing the watershed to show how it has changed from the 1830s to the present.

**16. Oral Reports by Commissioners/General Manager 01:22:19**

GM Dow referred to his handout and said he could answer any questions from the Board.

Commissioner Gaffney and Alternate Commissioner DiGiovanni referred to item #1 on GM Dow's handout, the LAFCO Wastewater Study, and stated that they generally did not agree with LAFCO's responses to CMSA's comments that were included in the September Informational Items packet.

The Board asked about the study development process and LAFCO's interaction with the Agency during the study. GM Dow answered the Board's questions.

Alternate Commissioner DiGiovanni referred to item #2 in the Informational Items, and commented favorably on the fact that FEMA has approved public assistance funds for slide damage that occurred during the storms this past February on the Andersen hillside.

Chair Furst commented on item #6 in the Informational Items, "SAM fine does not flush away all our troubles," and said it was an informative article.

**17. Next Scheduled Meeting**

**01:30.25**

Tuesday, October 10, 2017 at 7:00 p.m. at the Agency office.

Chair Furst adjourned the meeting at 9:05 p.m.

Respectfully submitted,

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Kate Brouillet, Recording Secretary

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Tom Gaffney, Vice-Chair



Central Marin Sanitation Agency  
Treasurer's Report - Operating Account  
For the Month of September 2017

**I. Accounts Summary: Bank & Investment Accounts**

Summary of Bank & Money Market Accounts

Westamerica Bank - Account Activity shown below	\$ 284,458.89
Local Agency Investment Fund (LAIF) - Refer to Schedule of Investments	14,190,878.76
California Asset Management Program (CAMP) - Refer to Schedule of Investments	361,201.94
Total Bank & Investment Accounts: Ending Balance on September 30, 2017	<u>\$ 14,836,539.59</u>

**II. Account Activity for Westamerica Bank**

Beginning Balance on September 1, 2017 626,073.67

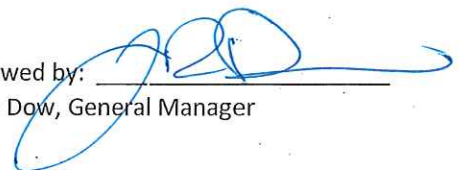
Cash Receipts (Deposits into Westamerica):

Transfers from LAIF	600,000.00
Connection Fees (Capacity Charges): SD#2 - 1 Residential Connection	5,932.85
Revenue from Haulers & RVs	8,428.26
Revenue from Organic Waste Programs	7,513.35
Health & Safety Program Revenue (NSD: FY18 1Q Salary/Benefits)	10,299.92
County-wide Public Education Program Reimbursement (FY17 4Q: SMCS; FY18 1Q: NSD)	22,730.41
SQSP Wastewater Services Contract (FY17: June; FY18: July)	198,146.58
SQ Village Operations & Maintenance Contract (FY17: June; FY18: July)	43,666.71
Expense Reimbursement from NSD for Defensive Driving Training	177.78
Total Cash Receipts	<u>\$ 896,895.86</u>

Cash Disbursements (Withdrawals from WestAmerica):

September 2017 Operating account disbursements register (see attached)	\$766,644.56
Regular Payroll paid 09/01/17	130,867.55
Regular Payroll paid 09/15/17	130,007.96
Regular Payroll paid 09/29/17	127,308.55
Transfers to EFTPS Federal Payroll Taxes (09/06, 09/20)	69,634.15
Merit Pay (6)	14,047.87
Total Cash Disbursements	<u>\$1,238,510.64</u>
Ending Balance on September 30, 2017	<u>\$ 284,458.89</u>

Prepared by:   
Kenneth Spray, Administrative Services Manager

Reviewed by:   
Jason Dow, General Manager

Central Marin Sanitation Agency  
 Operating Account Disbursements Register  
 For the Month of September 2017

Check Number	Date	Vendor/Payee	Amount	Description
15740				Last check # from prior month's register
15741	09/01/2017	California Public Employee	4,127.45	Contribution to Retiree Health Benefits Trust Fund, PPE 08/26/2017 (Note C)
15742	09/01/2017	California State Disbursement	314.76	EE Garnishment, PPE 08/26/2017 (Note A)
15743	09/01/2017	ICMA Retirement Trust-457	5,510.00	Deferred compensation contributions, PPE 08/26/2017 (Note A)
15744	09/01/2017	Navia Benefit Solutions	540.19	Flexible spending account, PPE 08/26/2017
15745	09/01/2017	Nationwide Retirement	4,469.30	Deferred compensation contributions, PPE 08/26/2017 (Note A)
15746	09/01/2017	SEIU Local 1021	1,082.78	Union dues, PPE 08/26/2017
15747	09/05/2017	Phillip Frye	225.63	Reimbursement for retiree health benefits by check
15748	09/05/2017	James L. Johnson	172.48	Reimbursement for retiree health benefits by check
15749	09/05/2017	Delta Dental Plan of Calif.	7,722.79	Dental Insurance, September 2017
15750	09/05/2017	Lincoln Financial Group	1,987.34	Life Insurance, September 2017
15751	09/05/2017	Vision Service Plan -(CA)	897.55	Vision Insurance, September 2017
15752	09/05/2017	Brown & Caldwell	2,824.69	Prof Svcs: Design Services, Solids Handling Building Ventilation Improvements, March-July 2017
15753	09/07/2017	CAL-CARD	8,896.54	State of California Purchase Card, July and August 2017
15754	09/07/2017	Jason Dow	76.00	Employee per diem advance: CASA Strategic Planning Retreat
15755	09/11/2017	Atmospheric Analysis	270.00	Maintenance parts & supplies
15756	09/11/2017	Carollo Engineers, Inc.	33,205.43	Prof Svcs: 2017 Facilities Master Plan Project, May-July 2017
15757	09/11/2017	East Bay Muni Utility District	40,595.00	FY18 BACWA membership and special program fees
15758	09/11/2017	Evoqua Water Tech LLC	18,290.80	Calcium Nitrate (2 deliveries)
15759	09/11/2017	Chris Finton	231.85	Employee per diem advance: Metropolitan Water Reclamation District of Chicago presentation
15760	09/11/2017	Forge Architecture	2,556.00	Prof Svcs-ESDC: Maintenance Building Modifications Project, July 2017
15761	09/11/2017	Hazen and Sawyer	5,193.58	Prof Svcs: Microscopic analyses, March-July 2017
15762	09/11/2017	JDH Corrosion Consultants, Inc.	8,150.00	Prof Svcs: Cathodic Protection Survey for SRSD (1 invoice) Note B; Field surveys and data analysis (1 invoice)
15763	09/11/2017	Koff & Associates, Inc.	746.75	Utility Worker Recruitment: background checks; Compensation data collection and analysis (2 invoices)
15764	09/11/2017	Lystek International LTD	12,680.28	Biosolids beneficial reuse fee, August 2017
15765	09/11/2017	Marin Office Supply	5,378.03	Office supplies and fireproof file cabinet, August 2017
15766	09/11/2017	Modular Space Corporation	626.65	Rental fee for mobile office and storage containers
15767	09/11/2017	Red Wing Brands of America Inc	194.10	Safety shoes (1 employee)
15768	09/11/2017	Thatcher Company of	4,661.28	Ferric Chloride (1 delivery)
15769	09/11/2017	Total Waste Systems, Inc.	10,320.82	Biosolids hauling fee, August 2017
15770	09/11/2017	Univar USA Inc	7,624.49	Sodium Bisulfite (1 delivery); Sodium Hypochlorite (1 delivery)
15771	09/11/2017	Waste Management	3,567.16	Redwood Landfill biosolids reuse fee, August 2017
15772	09/14/2017	Downtown SR Farmer's Market	40.00	Public Education Program: booth registration (Note B)
15773	09/18/2017	California Public Employee	4,127.45	Contribution to Retiree Health Benefits Trust Fund, PPE 09/09/2017 (Note C)
15774	09/18/2017	California State Disbursement	314.76	EE Garnishment, PPE 09/09/2017 (Note A)
15775	09/18/2017	ICMA Retirement Trust-457	4,910.00	Deferred compensation contributions, PPE 09/09/2017 (Note A)
15776	09/18/2017	Navia Benefit Solutions	590.19	Flexible spending account, PPE 09/09/2017
15777	09/18/2017	Nationwide Retirement	4,469.30	Deferred compensation contributions, PPE 09/09/2017 (Note A)
15778	09/18/2017	SEIU Local 1021	1,080.74	Union dues, PPE 09/09/2017
15779	09/18/2017	AlreSpring	699.37	Telephone service, August 2017
15780	09/18/2017	All Star Rents	126.19	Maintenance parts & supplies
15781	09/18/2017	Allied Fluid Products Corp	586.19	Maintenance parts & supplies (2 invoices)
15782	09/18/2017	Amazing Solutions, Inc.	150.00	Prof Svcs: Accounting software support, August 2017
15783	09/18/2017	American Battery Co.	618.32	Batteries for electric carts
15784	09/18/2017	AT&T	331.49	Fax and emergency phone service, August 2017
15785	09/18/2017	AT&T Dataplan	404.80	Wireless service, 08/02-09/01/2017



Central Marin Sanitation Agency  
 Operating Account Disbursements Register  
 For the Month of September 2017

Check Number	Date	Vendor/Payee	Amount	Description
15786	09/18/2017	Automation Direct Co., Inc.	101.50	SQPS maint: Spare pump motor starter (Note B)
15787	09/18/2017	BWS Distributors, Inc.	153.13	Maintenance parts & supplies
15788	09/18/2017	Caltest Analytical Laboratory	2,229.21	Lab analyses (9 invoices)
15789	09/18/2017	Centrisys	7,416.97	Preventive maintenance parts for centrifuges
15790	09/18/2017	Cole-Parmer Instrument Co.	407.89	Electrical supplies
15791	09/18/2017	Comcast	191.20	Internet service, 09/04-10/03/2017
15792	09/18/2017	Dealers Industrial Equipment	2,178.47	Spare variable frequency drive for centrifuge
15793	09/18/2017	Jon Farr	109.91	Employee per diem advance: Electrical PM training
15794	09/18/2017	Fisher Scientific	1,218.36	Lab supplies (7 invoices)
15795	09/18/2017	Grainger	1,493.75	SQPS maint: LED floodlight (1 invoice) (Note B); Electrical/Maintenance parts & supplies (7 invoices)
15796	09/18/2017	Hagel Supply Co.	426.34	Utility supplies, August 2017
15797	09/18/2017	Harrington Industrial Plastics	461.51	Maintenance parts & supplies (2 invoices)
15798	09/18/2017	Home Depot Credit Services	528.52	Maintenance parts & supplies, August 2017
15799	09/18/2017	IEDA, Inc.	782.00	Labor relations consulting, September 2017
15800	09/18/2017	Jackson's Hardware	371.11	Maintenance parts & supplies, August 2017
15801	09/18/2017	Kaman Industrial Technologies	709.99	Channel blower replacement pullies
15802	09/18/2017	Ken Grady Co., Inc.	506.50	Replacement oxygen sensor
15803	09/18/2017	Kone Inc	131.59	Elevator Service, September 2017
15804	09/18/2017	Marin Sanitary Service	1,808.39	Yardwaste and grit disposal service, August 2017
15805	09/18/2017	McInerney & Dillon, P.C.	3,360.00	Legal services, construction/contract law, August 2017
15806	09/18/2017	McMaster-Carr Supply Co.	1,636.42	Maintenance parts & supplies (15 invoices)
15807	09/18/2017	Metal Service Center	2,359.86	Replacement deck plating
15808	09/18/2017	Marin Municipal Water District	42.65	SF Drake facility water service, 06/08-08/09/2017
15809	09/18/2017	Ongaro & Sons, Inc.	536.00	Annual backflow preventer testing
15810	09/18/2017	Orchard Business/SYNCB	153.61	Maintenance parts & supplies, August 2017
15811	09/18/2017	Platt	986.45	Electrical/Maintenance parts & supplies, August 2017
15812	09/18/2017	Praxair Distribution, Inc.	98.13	Acetylene cylinder rental
15813	09/18/2017	Ryan Herco Flow Solutions	244.75	Lab supplies
15814	09/18/2017	Ricoh USA Inc	317.99	Admin copier lease, 08/23-09/22/2017
15815	09/18/2017	Safety-kleen Systems, Inc	257.20	Parts washer service
15816	09/18/2017	Calmat Co./Shamrock Materials	85.66	Propane
15817	09/18/2017	Thomas Fish Company	139.50	Lab supplies
15818	09/18/2017	ULINE	974.91	Utility supplies (2 invs)
15819	09/18/2017	Univar USA Inc	2,870.57	Sodium Hypochlorite (1 delivery)
15820	09/18/2017	V & A Consulting Engineers	6,325.00	Prof Svcs: SQPS FY18 CIP-Dry Well Piping Evaluation (Note B)
15821	09/18/2017	Valley Power Systems-North	1,120.91	Cogeneration engine parts
15822	09/18/2017	VWR International	1,381.13	Lab supplies & pipettes (2 invoices)
15823	09/18/2017	Water Components & Bldg. Supp.	22.42	Maintenance parts & supplies
15824	09/18/2017	Western Exterminator Co., Inc.	163.50	Pest control, July 2017
15825	09/18/2017	Woodland Center Auto Supply	1,570.74	Auto parts & supplies, July-August 017
15826	09/22/2017	Amazon	2,089.57	Computer equipment & electrical supplies, August 2017
15827	09/22/2017	Aramark Uniform Services	1,216.37	Uniform service, August 2017
15828	09/22/2017	Carollo Engineers, Inc.	16,735.46	Prof Svcs: 2017 Facilities Master Plan Project, August 2017
15829	09/22/2017	Dee Consultants LLC	12,880.00	Prof Svcs: Construction management support, August 2017
15830	09/22/2017	Env. Lab Accreditation Program	851.00	ELAP certification amendment application
15831	09/22/2017	Evoqua Water Tech LLC	28,282.31	Calcium Nitrate (2 deliveries); Hydrogen Peroxide (1 delivery)
15832	09/22/2017	Watson-Marlow Inc	7,591.85	Spare parts and equipment for OWRF
15833	09/27/2017	CWEA TCP	70.00	TNI Standards training (1 employee)
15834	09/27/2017	Environmental Dynamics, Inc.	17,560.83	Aeration diffuser membranes and clamps
15835	09/27/2017	Galco Industrial Electronics	518.09	Maintenance parts & supplies
15836	09/27/2017	Give Something Back Inc	3,213.22	Deposit for replacement Admin/Board Room chairs
15837	09/27/2017	Hach Company	621.55	Process control network module

Central Marin Sanitation Agency  
 Operating Account Disbursements Register  
 For the Month of September 2017

Check Number	Date	Vendor/Payee	Amount	Description
15838	09/27/2017	Harrington Industrial Plastics	3,117.97	PVC pipe fittings stock replenishment; maintenance parts & supplies (2 invoices)
15839	09/27/2017	Kaman Industrial Technologies	231.06	Maintenance parts & supplies
15840	09/27/2017	Monica Oakley	14,217.80	Prof Svcs: Regulatory consulting, 07/29-09/01/2017
15841	09/27/2017	NACWA	10,400.00	FY18 membership
15842	09/27/2017	North Bay Watershed Assoc.	5,936.03	FY18 membership
15843	09/27/2017	Synagro West, Inc.	3,753.75	Biosolids land application fee, August 2017
15844	09/27/2017	Univar USA Inc	11,032.02	Sodium Bisulfite (1 delivery); Sodium Hypochlorite (2 deliveries)
15845	09/27/2017	Van Bebbler Bros., Inc.	101.37	Maintenance parts & supplies
15846	09/27/2017	Western Exterminator Co., Inc.	163.50	Pest control, August 2017

Payments by Automatic Clearing House:

9/1/2017	EDD	12,580.16	State & SDI Taxes, PPE 08/26/2017
9/1/2017	CalPERS	34,984.88	Retirement Pension Contribution: Agency and Employees, PPE 08/26/2017 (Note C)
9/5/2017	Payments to 23 retirees	7,122.45	Reimbursement for retiree health benefits
9/5/2017	Cal Public Employee Retirement	61,926.46	Medical Insurance, August 2017
9/15/2017	Buhler Commercial	195,343.63	Solids Handling Building Ventilation Improvements; Progress Payment #6
9/19/2017	NRS	8,680.68	MARA contributions, June-September 2017
9/27/2017	CalPERS	31,247.48	Retirement Pension Contribution: Agency and Employees, PPE 09/09/2017 (Note C)
9/27/2017	CalPERS	3,307.93	Retirement Pension Contribution: Agency and Employees, PPE 09/09/2017 (Note C)
9/20/2017	EDD	12,804.88	State & SDI Taxes, PPE 09/09/2017
9/18/2017	Michael Owen Boorstein	100.00	Stipend for 09/12/2017 Special Board meeting
9/18/2017	Maribeth Bushey	100.00	Stipend for 09/12/2017 Special Board meeting
9/18/2017	Dean DiGiovanni	100.00	Stipend for 09/12/2017 Special Board meeting
9/18/2017	Diane L. Furst	100.00	Stipend for 09/12/2017 Special Board meeting
9/18/2017	Thomas E Gaffney	100.00	Stipend for 09/12/2017 Special Board meeting
9/18/2017	Dan Hillmer	100.00	Stipend for 09/12/2017 Special Board meeting

**Grand Total** 766,644.56

Notes:

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



Central Marin Sanitation Agency  
 Schedule of Investments  
 As of Month Ending September 30, 2017

Description (1)	Book Value (2)	Market Value (3)	Agency Reserve Target for September 30, 2017
<b>I. Investments managed by California Asset Management Program (CAMP)</b>			
Money Market Funds (< 1 year in maturity)			
CAMP Cash Reserve Pool, 1.15%			
b1. Agency Unrestricted Reserve: Operating	\$ 11,201.94	\$ 11,201.94	See LAIF
b2. Agency Unrestricted Reserve: Emergency	\$ 250,000.00	\$ 250,000.00	\$ 250,000
b3. Agency Unrestricted Reserve: Insurance	\$ 100,000.00	\$ 100,000.00	\$ 100,000
<b>Total with CAMP</b>	<b>\$ 361,201.94</b>	<b>\$ 361,201.94</b>	
<b>II. Investments managed by Local Agency Investment Fund (LAIF)</b>			
Money Market Funds (< 1 year in maturity)			
Local Agency Investment Fund (LAIF), 0.92% (estimate)			
a. Current Year Operating	\$ 2,215,915.85	\$ 2,215,915.85	
b1. Agency Unrestricted Reserve: Operating	\$ 2,854,448.06	\$ 2,854,448.06	\$ 2,865,650
c1. Capital Reserves (Restricted)	\$ 990,477.00	\$ 990,477.00	\$ 990,477
c1. Capital Reserves (Restricted-Capacity/Connection Fees)	\$ -	\$ -	
c2. Capital Reserves (Unrestricted)	\$ 8,130,037.85	\$ 8,130,037.85	\$ 6,175,485
<b>Total with LAIF</b>	<b>\$ 14,190,878.76</b>	<b>\$ 14,190,878.76</b>	
<b>TOTAL INVESTMENTS</b>	<b>\$ 14,552,080.70</b>	<b>\$ 14,552,080.70</b>	
Amount designated for Capital Reserves			
1. CAMP	\$ -	\$ -	\$ 7,165,962
2. LAIF	\$ 9,120,514.85	\$ 9,120,514.85	\$ 7,165,962
<b>Total</b>	<b>\$ 9,120,514.85</b>	<b>\$ 9,120,514.85</b>	

**COLUMN DEFINITIONS:**

- (1) Description - the issuer, type of security and interest rate
  - (2) Book Value - The sum of Original Cost and Accumulated Amortization
  - (3) Market Value - An estimate of the value at which the principal would be sold from a willing buyer as-of the close of the last business day
- Market values are per the fiscal agent's respective monthly statements.

**NOTES:**

Capacity connection fees collected each fiscal year are the initial source of funding for capital projects. Capital reserve restricted and unrestricted balances reflect amounts remaining after expenditures for CIP to date, including \$5,932.85 in capacity charges collected to date. Beginning balances for both reserves were determined by the FY 17-18 Adopted Budget.

**Statement of Compliance**

The above portfolio of investments is in compliance with the Agency's investment policy, adopted at the July 22, 2015 Commission meeting, and California G Section 53600. In addition, the Agency does have the financial ability to meet its cash flow requirements for the next six months.



**BOARD MEMORANDUM**

October 5, 2017

To: CMSA Commissioners and Alternates

From: Chris Finton, Treatment Plant Manager *CF*

Approved: Jason Dow, General Manager

Subject: **September 2017 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report**

**Recommendation:** Accept the September 2017 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report.

**I. NPDES Permit Compliance**

Our NPDES permit testing for September showed that the CMSA treatment plant effluent was in compliance with all permit limits. The Monthly Compliance Summary Table shows the results by permitted parameter, the sample's frequency, the sample results, and the permit limit. We successfully passed the September 96-hour flow through bioassay test.

The Agency's NPDES permit specifies monitoring for enterococcus bacteria to verify compliance with established effluent limits. The enterococcus monthly geometric mean for September was <1.0 MPN, which is well below our monthly limit of 35 MPN.

**II. Influent Flow**

In September, the daytime temperatures in central Marin County averaged 81°F. It remained very dry with no precipitation recorded by the Agency's rain gauge. The CMSA treatment plant and each satellite collection agency's daily average and total monthly influent flows are shown in the table below:

September Monthly Influent Flows	San Rafael (SRSD)	Ross Valley (SD#1)	San Quentin (SQSP)	Corte Madera (SD#2)	CMSA Plant Total
Average Daily (MGD)	3.0 MGD	3.9 MGD	0.49 MGD	0.88 MGD	8.3 MGD
Total for Month (MG)	91.3 MG	117.4 MG	14.6 MG	26.4 MG	249.7 MG
Percent of Flow	37.0 %	47.0 %	5.0 %	11.0 %	100 %

### **III. Treatment Process**

The treatment plant continues to operate in the dry weather mode with a majority of its processing equipment offline for annual maintenance or ready to be placed into service. The Mixed Liquor Suspended Solids (MLSS) inventory averaged 1,033 mg/l, a 1.0% increase in biomass from last month. The biomass inventory essentially remained constant throughout the month which aligned with the process control decision to carry between 1,000 and 1,100 mg/L to manage our biomass and effectively meet our permit limits. This past month there was a significant amount of secondary system equipment and process manipulation that was required in to complete repairs to Secondary Clarifier No. 3 and to replace a leaking effluent gate in Aeration Basin No. 4 prior to their return to service.

Graph #3 shows the Total Suspended Solids (TSS), which is a good indicator of the effluent quality. The TSS monthly average in September was 4.7 mg/l, which is 31.0% of our Key Performance Indicator (KPI) of 15 mg/l, and is 16.0% of our permit's monthly average limit of 30 mg/l.

Graph #4 shows the coliform most probable number (MPN), which represents the effectiveness of the disinfection process. All sixteen coliform samples collected in September were below our KPI range of 30 MPN, and well below our daily limit of 10,000 MPN. The total coliform monthly geometric mean for September was 2.8 MPN, well below our permit's monthly limit of 240 MPN.

### **IV. Maintenance Activities**

The cogeneration system produced 95.7% of the Agency's power in September, and Marin Clean Energy (MCE) supplied the balance. The generator, as indicated on Graph #8, was in service and produced green power for the entire month. There was one occasion on September 25 when the cogeneration system was temporarily removed from service to perform a scheduled 2,000 hour preventative maintenance procedure.

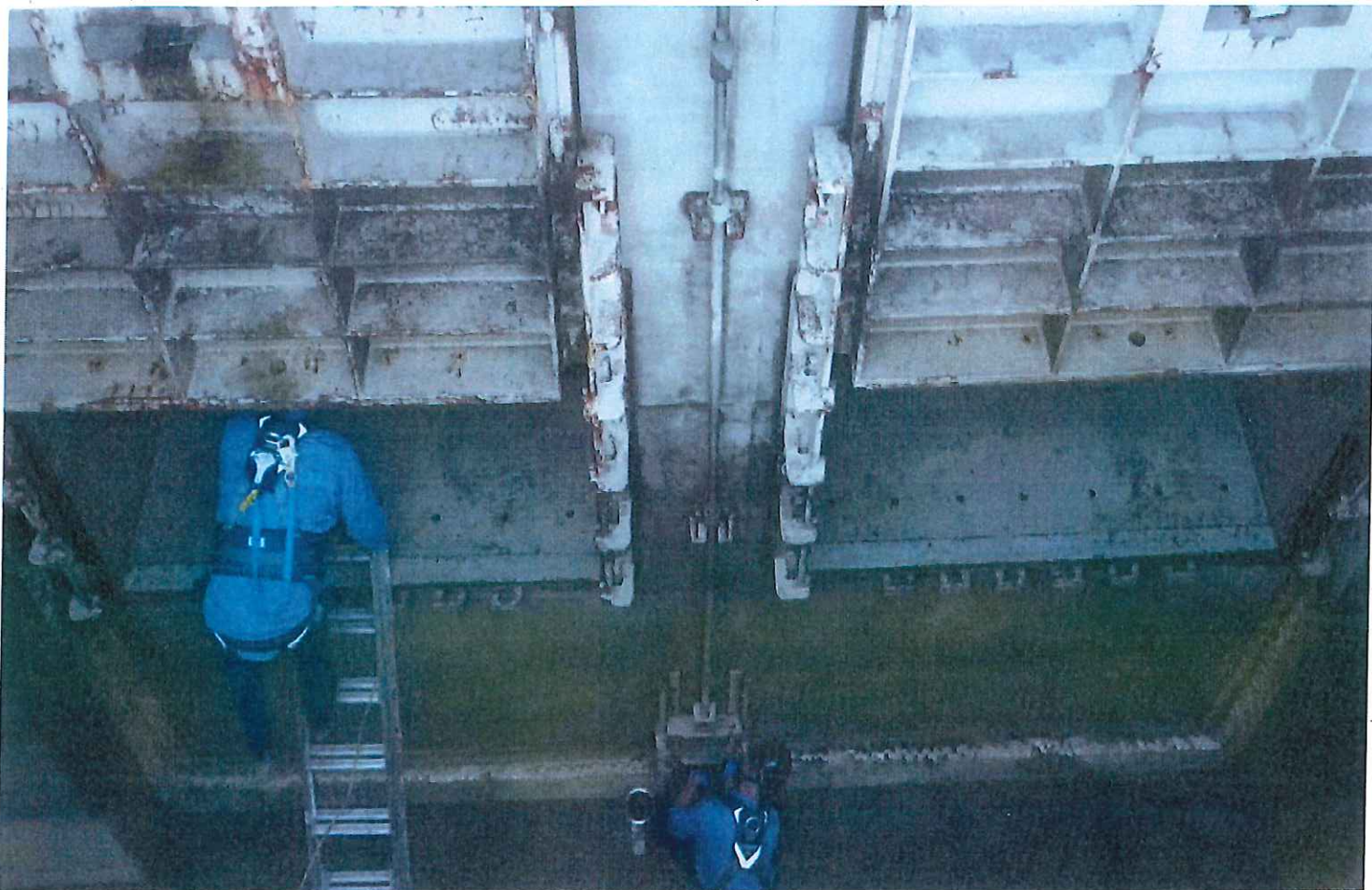
In addition to the activities surrounding the cogeneration system, staff was also able to complete scheduled project work and monthly preventative maintenance tasks. Work included replacement of a leaking isolation gate within the Aeration area, and replacement of consumable parts in disinfection pump no. 217, a ruptured hose and lubricant on pump no. 21.5, a ferric chloride metering pump in the solids handling area, and several board feet of toe-kicks around the secondary and disinfection system tanks. Also completed was the installation of a new control board into the variable drive of pump no. 3 at Paradise Pump Station.

### **Attachment**

- September 2017 NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report



**NPDES Permit Compliance, Treatment Process, and Maintenance Activities Report**  
**September 2017**



**Agency Technicians Performing Annual Maintenance on Effluent Pump Station Influent Gates**

## Monthly Compliance Summary Table

Central Marin Sanitation Agency

September 2017

Final Effluent Monitoring

Parameter	Frequency	Units	Results	Limit
Carbonaceous BOD Highest Weekly Average	Weekly	mg/L	7.1	Maximum 40
Carbonaceous BOD Monthly Average	Monthly	mg/L	5.9	Maximum 25
Carbonaceous BOD Monthly Removal Rate	Monthly	%	98.3	Minimum 85
Total Suspended Solids Highest Weekly Average	Weekly	mg/L	6.8	Maximum 45
Total Suspended Solids Monthly Average	Monthly	mg/L	4.7	Maximum 30
Total Suspended Solids Monthly Removal Rate	Monthly	%	99.1	Minimum 85
Chlorine Residual Instant Limit	Instant	mg/L	<0.1	Maximum 0.0
Ammonia Monthly Average	Monthly	mg/L	32.3	Maximum 60
Ammonia Maximum Daily	Daily	mg/L	32.5	Maximum 120
pH Lower Limit	Continuous	SU	7.2	Minimum 6
pH Upper Limit	Continuous	SU	7.7	Maximum 9
<b>Bacteriological Analysis</b>				
Total Coliform Monthly Geometric Mean	3 X Week	MPN/100mL	2.8	Maximum 240
Total Coliform Daily Maximum	3 X Week	MPN/100mL	7.8	Maximum 10,000
Enterococcus Monthly Geometric Mean	Monthly	MPN/100mL	ND	Maximum 35
<b>Flow Through Bioassay</b>				
Acute Toxicity 11 Sample 90th Percentile	Monthly	% survival	100	Minimum 70
Acute Toxicity 11 Sample Median	Monthly	% survival	100	Minimum 90
<b>Metals Analysis</b>				
Copper Daily Limit	Monthly	ug/L	6.3	Maximum 85
Copper Monthly Average	Monthly	ug/L	6.3	Maximum 49
Cyanide Daily Limit	Monthly	ug/L	DNQ (2.8)	Maximum 41
Cyanide Monthly Average	Monthly	ug/L	DNQ (2.8)	Maximum 21
Mercury Weekly Average	Weekly	ug/L	0.004	Maximum 0.072
Mercury Monthly Average	Monthly	ug/L	0.004	Maximum 0.066
Mercury Monthly Loading	Monthly	kg/mo	0.00345	
Mercury Annual Loading (watershed permit)	Jan-Dec	kg/yr	0.13097 <sup>(b)</sup>	Maximum 0.11
<b>Permit Analysis</b>				
Dioxin - Total Equivalents (TEQ) Daily Maximum	1/Permit Cycle	ug/L	*	Maximum 2.8E-08
Dioxin - Total Equivalents (TEQ) Monthly Average	1/Permit Cycle	ug/L	*	Maximum 1.4E-08
Polychlorinated Biphenyls (PCBs) Daily Limit	1/Permit Cycle	ug/L	*	Maximum 0.017
Polychlorinated Biphenyls (PCBs) Monthly Limit	1/Permit Cycle	ug/L	*	Maximum 0.012
<b>Quarterly Analysis</b>				
Oil and Grease Daily Limit	Quarterly	mg/L	*	Maximum 20
Oil and Grease Monthly Average	Quarterly	mg/L	*	Maximum 10
Chronic Bioassay Toxicity	Quarterly	Tuc	*	Maximum 20
Chronic Bioassay Toxicity (3 sample median)	Quarterly	Tuc	*	Maximum 10
<b>Flow Analysis</b>				
	Daily Max	Hourly Max	5 minute Max	Monthly Average
Effluent Flow <sup>(a)</sup>	7.9	13.1	20.1	7.3
Influent Flow <sup>(a)</sup>	9.8	13.4	21.9	8.3
# Days Blended				0

(a) Influent & Effluent flow values are currently being reviewed to assess daily variability between values.

(b) Although annual mercury loading is above the watershed mercury annual loading limit, historical annual loading of all dischargers have typically been well below the threshold limit of 11 kg/yr. As such it is highly unlikely that this CMSA's annual mercury loading will result in a violation.

\* Monitoring Not Required This Month

X Data not available at report time

ND = None Detected

DNQ = Detected but Not Quantified

**Glossary of Terms**  
**NPDES Permit Compliance Summary Table**

- **Ammonia:** CMSA's NPDES permit requires that we analyze the final effluent for ammonia due to its toxicity to aquatic organisms and potential for providing nutrients for algae in the San Francisco Bay. The permit has a maximum daily limit of 60 mg/L and a monthly average limit of 120 mg/L. The maximum daily limit is the number that cannot be exceeded on any sample and the monthly average applies to all samples collected in any month (although typically we are required to take only one sample).
- **Biochemical Oxygen Demand (BOD):** The amount of dissolved oxygen needed by microorganisms (biomass) to stabilize organic material in the effluent. The permit limits for our effluent require that removal of 85% influent BOD, and meet a weekly average of less than 40 mg/L and a monthly average of less than 25 mg/L BOD.
- **Chlorine Residual:** The secondary effluent is disinfected with hypochlorite (chlorine "bleach"), and then the residual chlorine is neutralized with sodium bisulfite to protect the Bay environment. The final effluent chlorine residual limit is 0.0 mg/l, which is monitored continuously.
- **Bacteria:** Coliform and enterococcus bacteria are the indicator organisms for the determination of the effectiveness of the disinfection process.
- **Dioxin - Total Equivalents:** These are 17 dioxin-like compounds that we analyze for twice per year which have permit limits.
- **Fats, Oils, and Grease:** We are required to monitor our effluent for Fats, Oils, and Grease quarterly.
- **Flow Through Bioassay:** A 96-hour test in which we test the toxicity of our effluent to young rainbow trout (15-30 days old) in a flow-through tank to determine their survivability under continuous exposure to CMSA effluent. The permit requires that we maintain a 90<sup>th</sup> percentile survival of at least 70% and an 11-sample median survival of at least 90%. In layman's terms, this means that out of the last 11 samples, only one bioassay may fall below 70% survival, and the middle value—when all 11 samples are placed in numerical order—must be at least 90%.
- **Metals Analysis:** Our permit requires that we analyze our effluent for many different metals on a monthly basis. We have permit limits for three of the metals. The limits are stated as a maximum daily limit and a monthly average limit.
- **pH:** pH is a measurement of acidity, with pH 7.0 being neutral and higher pH values being basic and lower pH values being acidic. Our permit effluent pH must stay within the range of 6.0 to 9.0, which we monitor continuously.
- **Total Suspended Solids (TSS):** Measurement of suspended solids in the effluent. Our permit requires that we remove at least 85% of the influent TSS and that the effluent limit is less than 45 mg/L as a weekly average and less than 30 mg/L as a monthly average.



**Executive Summary Process Performance Data**  
**September 2017**

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

**Primary Clarifier Performance**

Average Total Suspended Solids (TSS) in:	484	mg/l
Average TSS out:	133	mg/l
Average Percent Removal Achieved:	72.5	%
Average Total Biochemical Oxygen Demand (BOD) in:	352	mg/l
Average BOD out:	173	mg/l
Average Percent Removal Achieved:	50.8	%
Average Plant Influent Flows:	8.3	MGD

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

Design 50-70% Removal

Design 25-40% Removal

**Biotower Performance**

Average TSS out:	108	mg/l
Average BOD out:	74	mg/l
Average Percent BOD Removal Achieved:	57.6	%

Design 25-30% Removal

**Aeration Tanks/Activated sludge**

Dissolved Oxygen set point:	2.0	mg/l
Average MLSS:	1,033	mg/l
Average MCRT:	3.7	Days
Average SVI:	153	

**Secondary Clarifiers**

Average WAS concentration: 6,372 mg/l

**Final Effluent**

Average Effluent TSS for the month was:	<u>4.7</u>	mg/l	(Maximum Limit: 30mg/l)
Week #1 weekly average	<u>6.0</u>		(Maximum Limit: 45mg/l)
Week #2 weekly average	<u>4.3</u>		"
Week #3 weekly average	<u>3.2</u>		"
Week #4 weekly average	<u>6.8</u>		"
Week #5 weekly average	<u>4.4</u>		
Monthly average TSS removal efficiency through the plant was:	<u>99.1</u>	%	(Minimum Limit: 85%)
Average Effluent BOD was:	<u>5.9</u>	mg/l	(Maximum Limit: 25mg/l)
Week #1 weekly average	<u>7.1</u>		(Maximum Limit: 40mg/l)
Week #2 weekly average	<u>6.3</u>		"
Week #3 weekly average	<u>5.0</u>		"
Week #4 weekly average	<u>6.3</u>		"
Week #5 weekly average	<u>5.3</u>		
Monthly average BOD removal efficiency through the plant was:	<u>98.3</u>	%	(Minimum Limit: 85%)
Disinfection Dosing Rate:	<u>4.1</u>	mg/l	Monthly average
Total Coliform Monthly Geometric Mean:	<u>2.8</u>	MPN	(Maximum 240)
The Daily Maximum Total Coliform Count for the month was:	<u>8</u>	MPN	(Maximum 10,000)
Enterococcus Monthly Geometric Mean:	<u>ND</u>	MPN	(Maximum, 35 MPN)
Effluent pH for the month was: Min	<u>7.2</u>		(Min 6.0)
Effluent pH for the month was: Max	<u>7.7</u>		(Max 9.0)

**Digester Treatment**

Average Thickened Waste Concentration from the RDT was:	<u>6.76</u>	%	
Average percent of Volatile Solids destroyed was:	<u>70.6</u>	%	
Cubic feet of biogas produced was:	<u>8,298,640</u>	(Total)	<u>276,621</u> (Daily Average)
Average temperature of the digester was:	<u>101</u>	degrees Fahrenheit	

## Executive Summary Process Performance Data

September 2017

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

### Dewatering

Average Centrifuge Feed concentration was:	<u>2.6</u>	%
Average Biosolids concentration was:	<u>26.4</u>	%
Average TSS of the Centrate was:	<u>0.02</u>	%
Solids capture of the Centrifuge was:	<u>99.18</u>	%
Polymer use per Dry ton of biosolids was:	<u>15.78</u>	#/dry ton
Average polymer feed rate per run was:	<u>3.40</u>	gpm
Average concentration of the polymer batches was:	<u>0.328</u>	%
Average sludge feed rate per run was:	<u>55</u>	gpm

### Comments:

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

#### **Graph #1:**

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

The red graph line represents total influent flows; and the blue graph line depicts the Agency's rain gauge recordings for the month.

#### **Graph #2:**

Depicts individual collection member agency flows.

The Y-axis is in the Dry Weather flow range of 0-10 MGD.

#### **Graph #3:**

Depicts the total suspended solids in the effluent.

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

#### **Graph #4:**

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

The monthly Total Coliform Geometric Mean was 2.8 MPN through September, which is less than our KPI median of 30 MPN and permit limit of 240 MPN.

#### **Graph #5:**

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

The September effluent CBOD average was 5.9 mg/l, well below our NPDES limits of 40 mg/l weekly and 25 mg/l for the month.

#### **Graph #6:**

Depicts the degree to which the biosolids have been dewatered.

Our biosolids % concentration exceeded our KPI of 25% for the entire month of September. Dewatering operations did not occur on September 3.

#### **Graph #7:**

Depicts the amount of Biogas that is produced in the digesters, and then used to produce electricity.

Biogas production in September averaged 276,621 cubic feet per day, which exceeded 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 Marin Clean Energy (MCE) for Agency operations.

The cogeneration engine was online for the entire month of September producing 95.7% of the facility's power needs. The engine was temporarily removed from service as depicted on Graph 8, for a scheduled 2,000 hour maintenance procedure.

## Glossary of Terms

### Process Performance Data Sheet

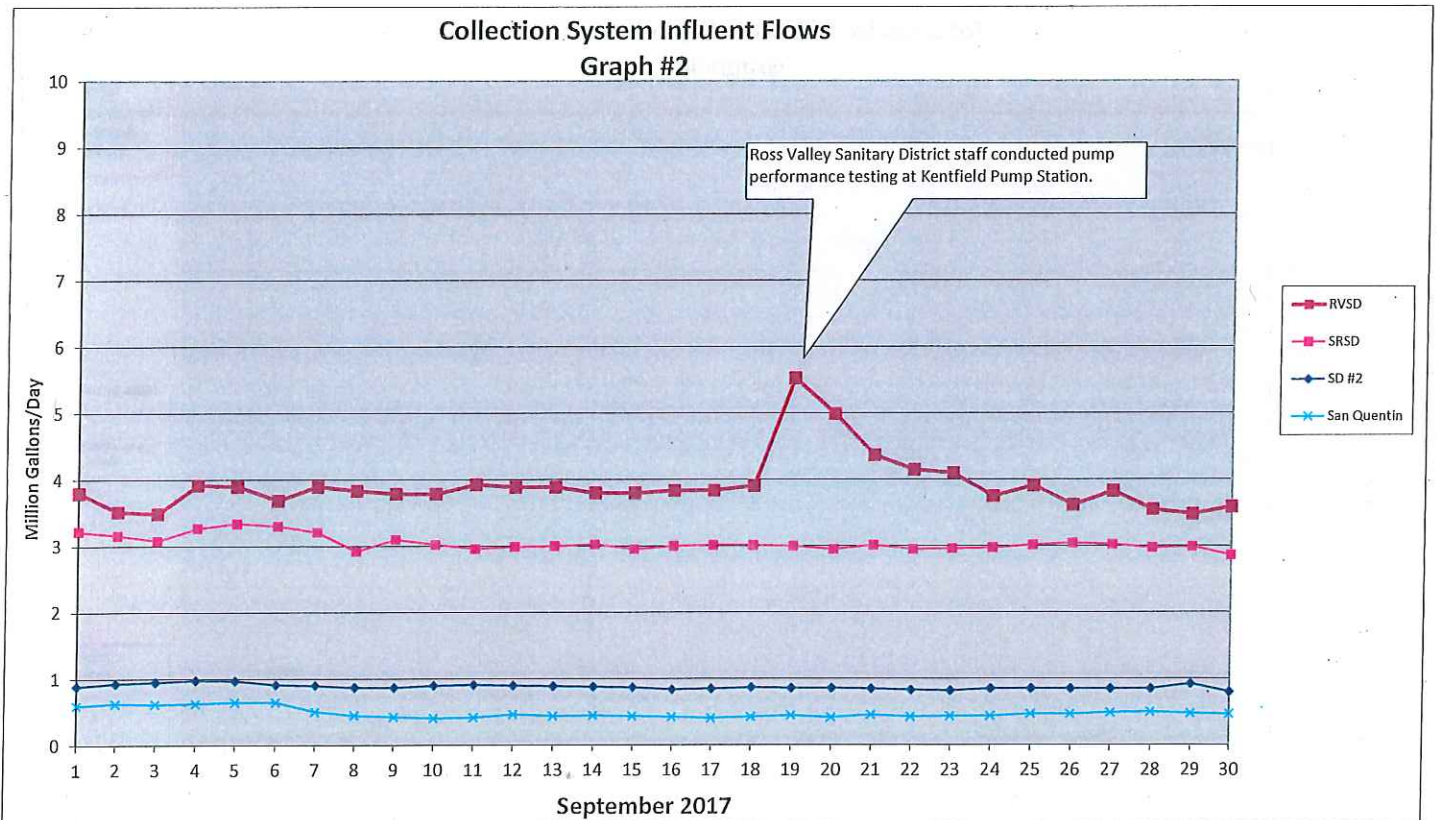
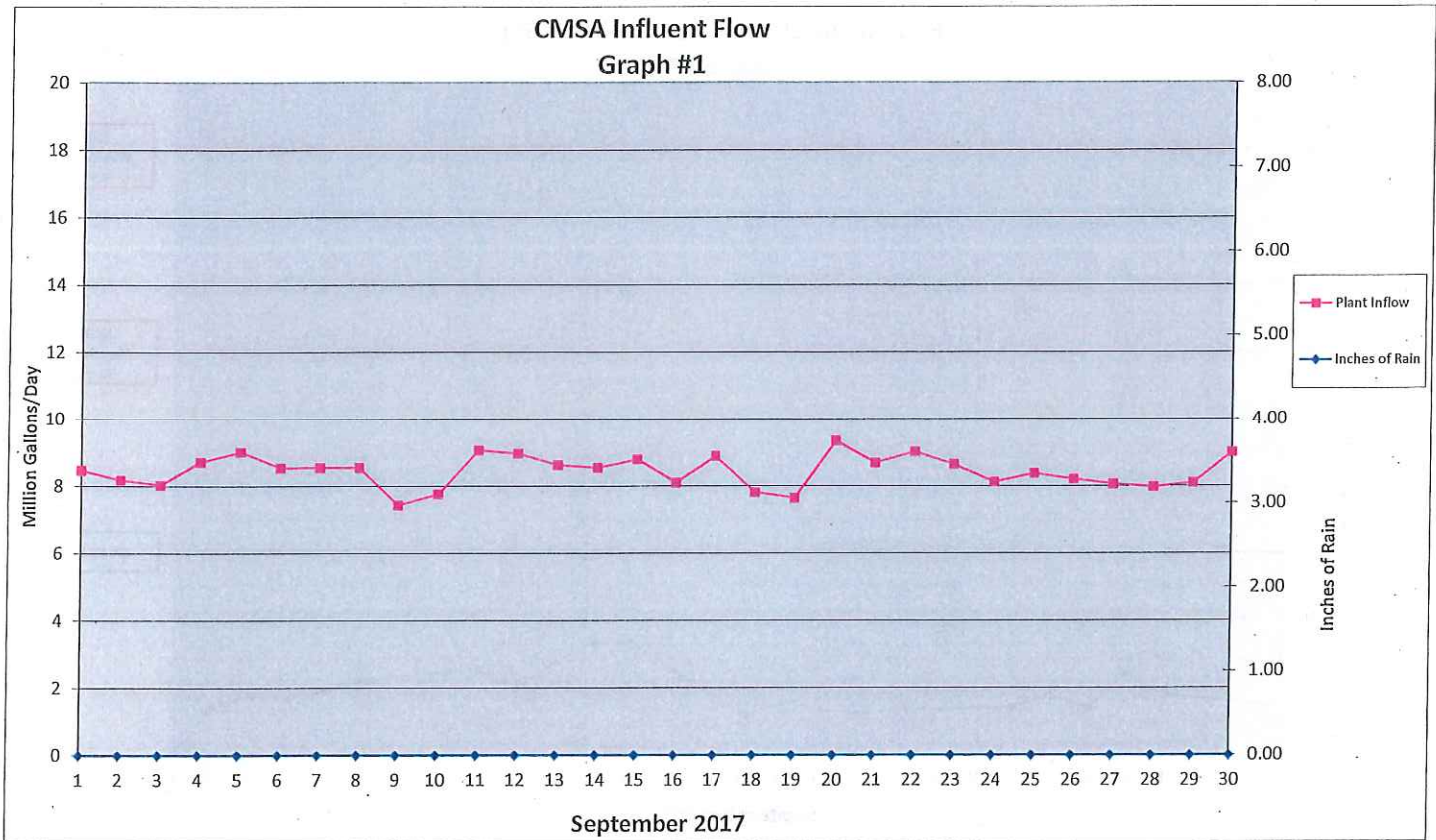
- **Aeration Tanks:** A biological process that takes place after the biotowers, where biomass (microorganisms) is mixed with the wastewater to feed on dissolved and suspended organic material. High speed blowers are used to provide compressed air to mix the tank contents.
- **Anaerobic Digesters:**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

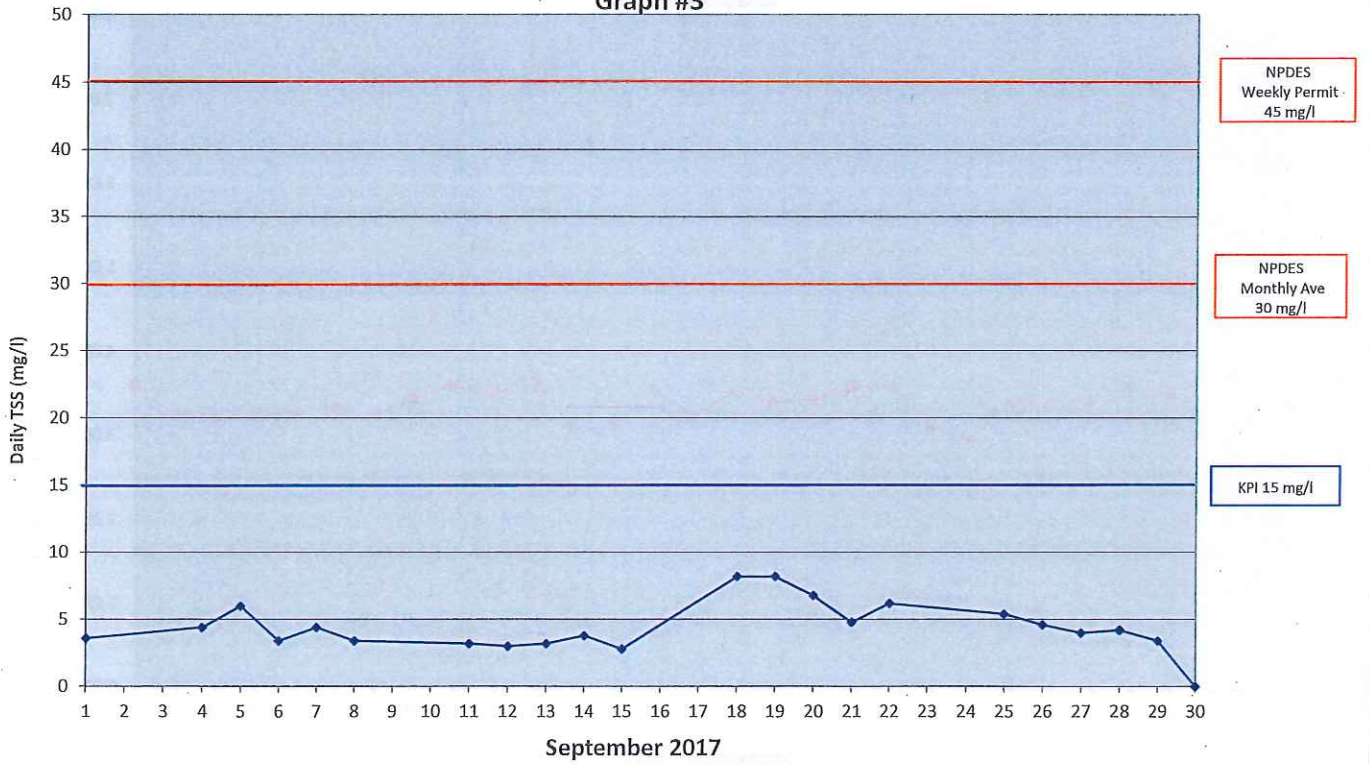
#### Units of Measurement

- 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.



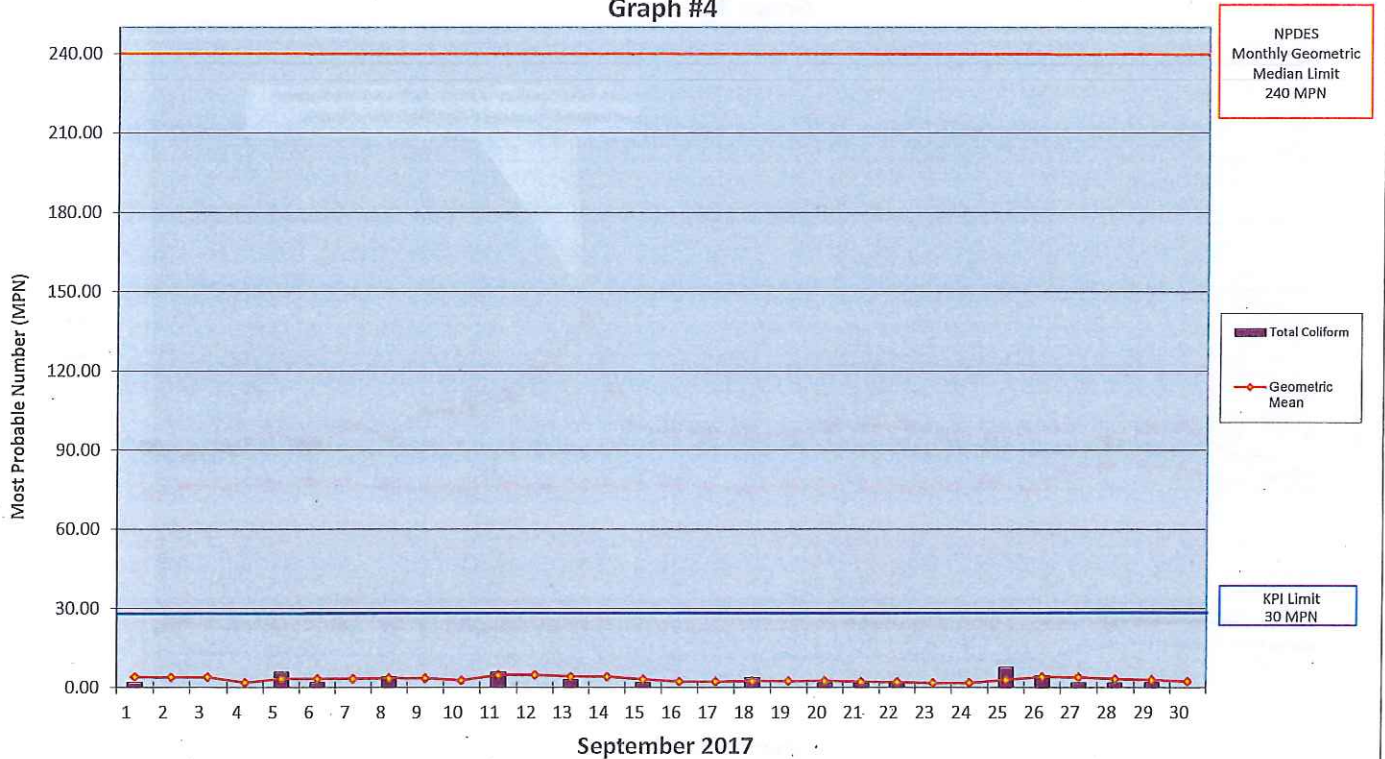
### Effluent Total Suspended Solids (TSS)

Graph #3



### Total Coliform & Monthly Geometric Mean

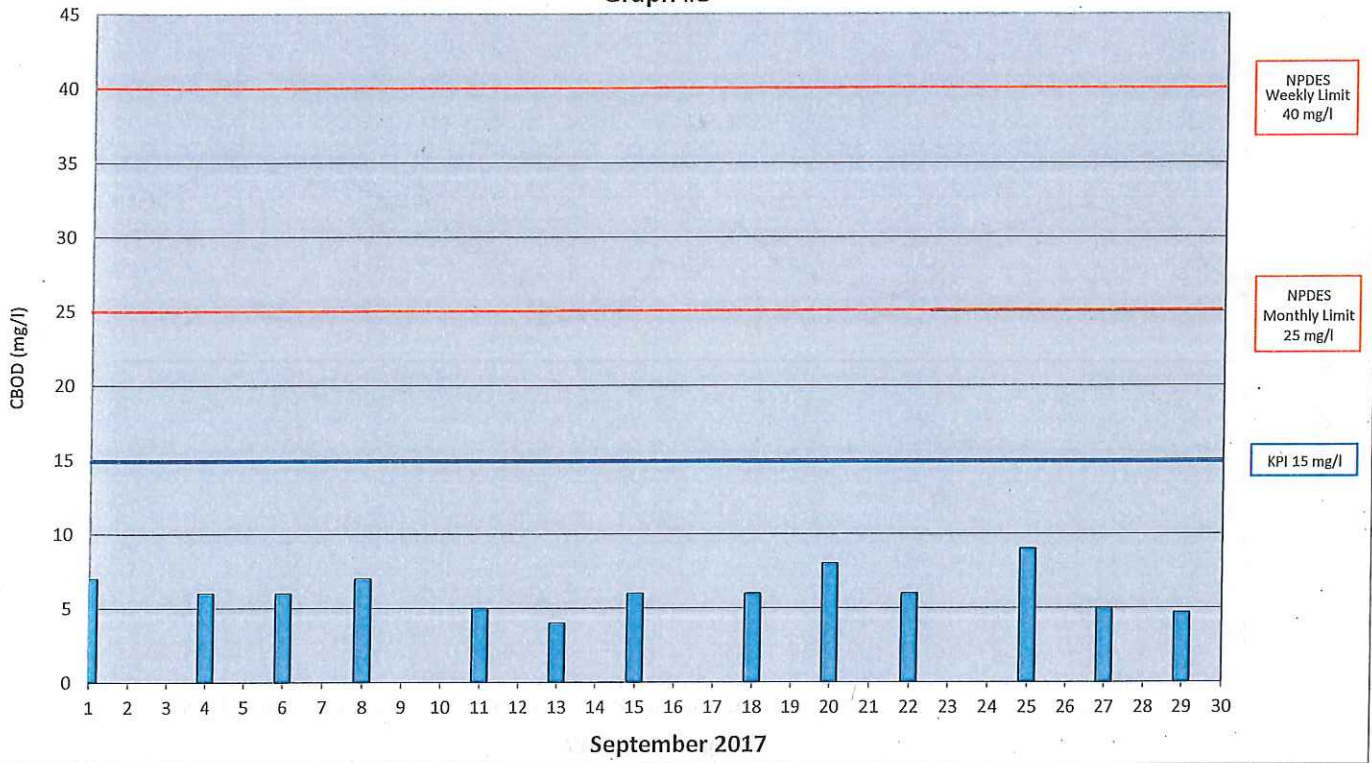
Graph #4





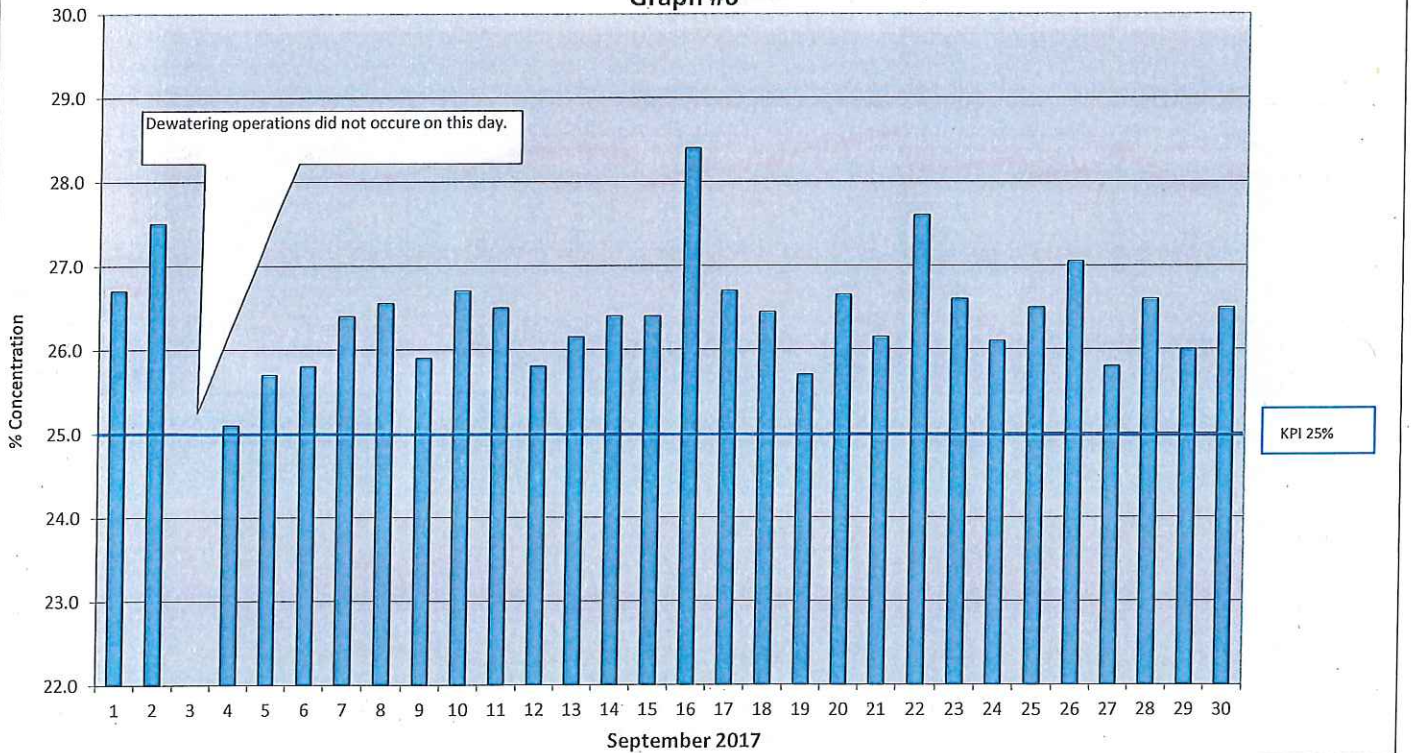
### Effluent Carbonaceous Biological Oxygen Demand (CBOD)

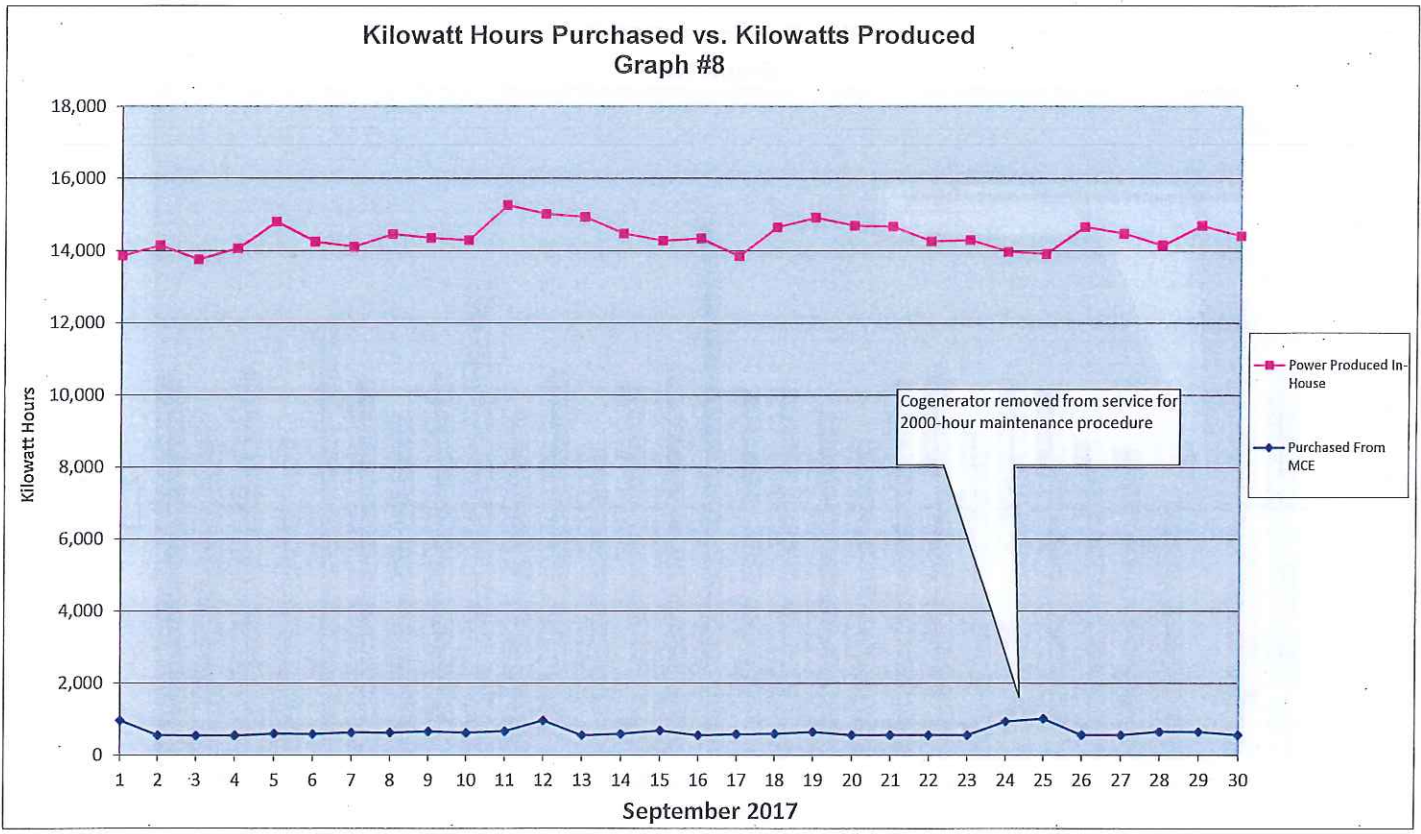
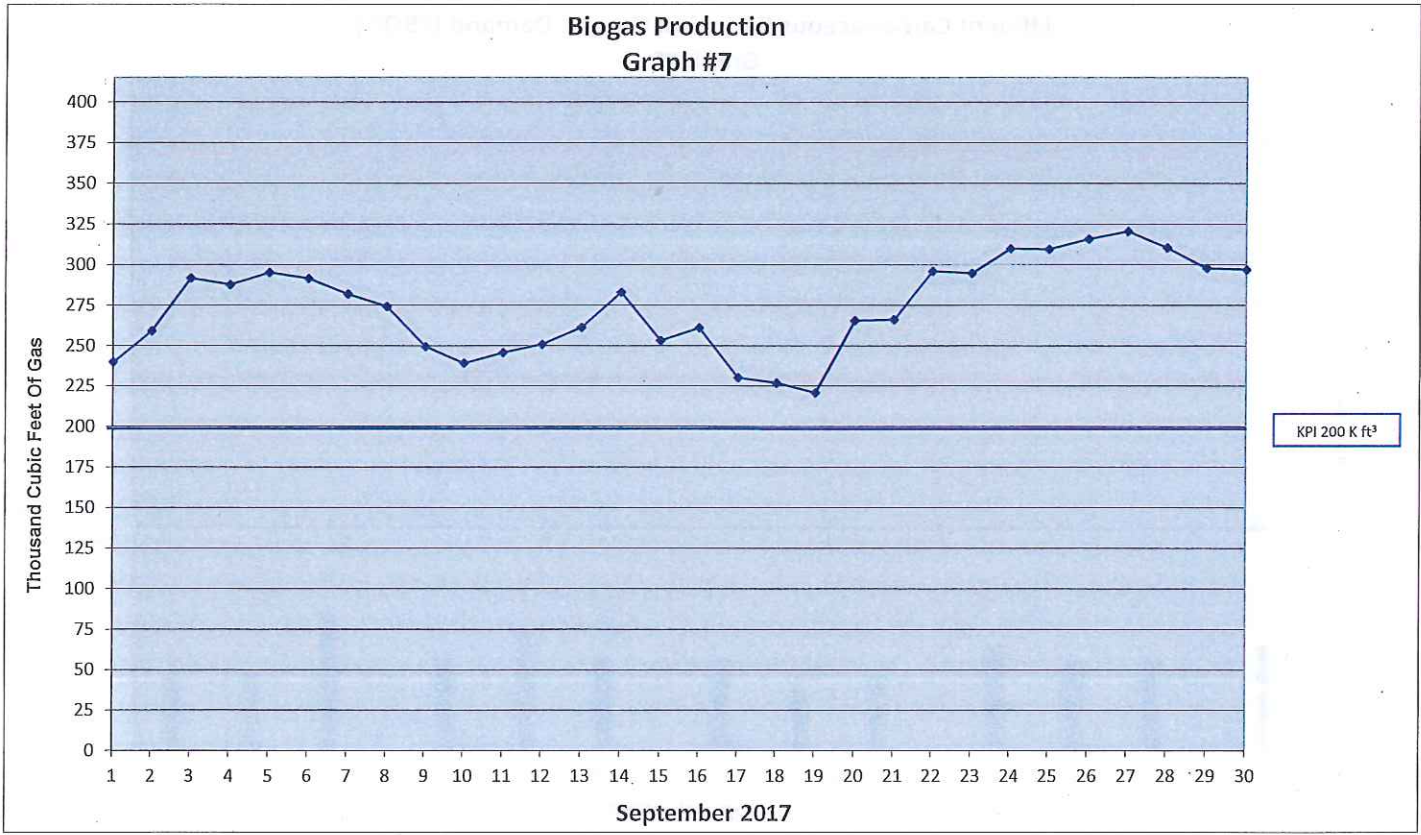
Graph #5



### Biosolids Concentration

Graph #6










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**BOARD MEMORANDUM**

October 5, 2017

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager *JD*

Subject: **Performance Metric Report – September 2017**

**Recommendation:** Accept the September 2017 Performance Metric report.

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

Table I – Treatment/Process Metrics

Maintenance staff completed nearly all of the annual preventative maintenance for the individual treatment process systems and their equipment, in preparation for the wet weather season. The remaining maintenance will be completed in October, and beginning in late-October the treatment plant will be transitioned to its wet weather operating mode and land application of biosolids will cease until next April.

Table II – Employee Metrics

Training highlights included Workplace Violence prevention training for most staff; a toxicity workshop and BACWA committee meetings for laboratory staff; supervisory staff attendance at employment law training by Liebert Cassidy Whitmore; and several staff toured the Lystek biofertilizer facility in Fairfield.

Table III - Environmental and Regulatory Compliance Metrics

There weren't any NPDES permit exceedances in September, and laboratory and pollution prevention activities were performed as scheduled.

Table IV - Public Outreach

There were two odor alerts posted to the Agency website in September, and one odor complaint. Alerts were for taking chlorine contact tanks out of service form periodic cleaning and secondary system process adjustment to accommodate maintenance work. The odor complaint was from a person in the Canal Area of San Rafael (Vista Del Mar), quite a distance from CMSA. Operations staff verified normal process operations and that odor control systems were operating, and visited the site and met with the complainant. During the first site visit and a second the following day, staff did not detect or measure any odors.



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

Public Outreach Events

Senior retirement talk in Novato - 38 individuals (occurred in August but not reported)

9/19 - Novato Farmers Market - 50 visitors

9/21 - San Rafael Farmers Market - 20 visitors

School Events – Juggler Show Presentation

9/13 - Timothy Murphy School - 50 kids

CMSA Tours

9/25 - CH2MHill consultants - 2 people

9/26 - Bay School of San Francisco - 13 people

**Attachment:**

- September 2017 Performance Metric Report

**CMISA CY17 PERFORMANCE METRICS – September 2017**

**TABLE I - TREATMENT/PROCESS METRICS**

Metric	Definition	Measurement	Range/Target/Goal
1) Wastewater Treated	Volume of wastewater influent treated and disposed, in million gallons (Mg)	249.7 Mg	165 – 820 Mg
2) Biosolids Reuse	Alternate Daily Cover (ADC) at the Redwood Landfill, in wet tons (wt) Fertilizer and soil amendment at land application sites, in wet tons (wt) Bio-Fertilizer production at the Lystek facility, in wet tons (wt)	125 wt 210 wt 145 wt	360 – 665 wt
3) Conventional Pollutant Removal	Removal of the conventional NPDES pollutants - Total Suspended Solids (TSS) and Biological Oxygen Demand (BOD) a. tons of TSS removed; % TSS removal b. tons of organics removed (BOD); % BOD removal	507.3 tons; 99.1% 367.2 tons; 98.3%	> 85% > 85%
4) Priority Pollutants Removal	Diversion of priority NPDES metals from discharge to the S.F. Bay: a. % Mercury b. % Copper	97.8% 92.7%	88 – 99% 84 – 98%
5) Biogas Production	Biogas generated in our anaerobic digesters, in million cubic feet (Mft <sup>3</sup> ) Natural gas (methane) equivalent of the biogas, in million cubic feet (Mft <sup>3</sup> )	8.29 Mft <sup>3</sup> 5.31 Mft <sup>3</sup>	6.0 to 9.5 Mft <sup>3</sup> 3.8 to 6.1 Mft <sup>3</sup>
6) Energy Produced	Energy produced from cogeneration of generated biogas and purchased natural gas - in kilowatt hours Cogeneration system runtime on biogas, in hours (hrs.); % time during month Biogas value (natural gas cost equivalent)	432,133 kWh 630 hrs; 87.5% \$24,198	380 to 480,000 kWh 540 hrs.; 75% \$7,000 to \$24,000
7) Efficiency	The cost to operate and maintain the treatment plant per million gallons of wastewater treated, in dollars per million gallons Energy used, kilowatt hours, per million gallons treated	\$1,441/Mg 1,809 kWh/Mg	\$451-\$1,830/Mg (wet - dry) 670 - 2,400 kWh/Mg

**Table II – EMPLOYEE METRICS**

Metric	Definition	Measurement	Target/Goal
1) Employee Training	Hours of internal training – safety, web-based, project, vendor, etc. Hours of external training – employment law, technical, regulatory, etc.	Internal = 101 hrs External = 90 hrs	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);	573.5 hrs 427.5 hrs (93.0%) 31.5 hrs (5.0%) 1.25	300 – 500 hrs ≥ 70% total CM hrs ≤ 30% total hours ≥ 0.45
3) Overtime Worked	Monthly hours of OT worked; Year to date hours of OT (YTD) % of normal hours worked; % Year to date (YTD)	115 hrs; (1,313 hrs.) 1.8%; (2.0%)	< 5%

## CMSA CY17 PERFORMANCE METRICS – September 2017

**Table III - ENVIRONMENTAL AND REGULATORY COMPLIANCE METRICS**

Metric	Definition	Measurement	Range/Target/Goal
1) Permit Exceedances	# of NPDES permit exceedances	0	0
2) NPDES Analyses	# samples analyzed by the CMSA laboratory for NPDES compliance monitoring	224	150-250
3) Process Analyses	# samples analyzed by the CMSA laboratory for process control reporting and monitoring	618	400-600
4) Quality Control Testing	# of CMSA performed laboratory analyses for QA/QC purposes Accuracy of QA/QC tests	331 99.7%	150-300 > 90%
5) Water Quality Sample Analyses	# of ammonia, coliform (total and fecal), enterococcus, and/or sulfide analyses performed for the CMSA member agencies (SSOs, etc.)	8	as-needed
6) Pollution Prevention Inspections	Inspections of industrial and commercial businesses in the Agency's pretreatment and pollution prevention programs and Novato Sanitary District's Mercury Reduction Program – 277 businesses regulated	0	variable
7) FOG Program Inspections	Inspections of food service establishments (FSEs) in the Almonte, TCSD, SD2, RVSD, SRSD, and LGVSD service areas – approx. 500 FSEs are in programs; 310 are regulated – either permitted or have waivers.	4	20 – 50
8) Permits Issued/Renewed	Permits issued for the pretreatment, pollution prevention, and FOG source control programs, and for groundwater discharge	3	variable

**Table IV- PUBLIC OUTREACH**

Metric	Definition	Measurement	Target/Goal
1) Public Education Events	Attendance at public education outreach events; # of booth visitors; (YTD)	108; (3,581)	3,000/year
2) School Events	Participation or sponsorship in school outreach events; attendees; (YTD)	50; (1083)	variable
3) Agency Tours	Tours given to students and the public; # of people; (YTD)	15; (244)	variable
4) Odor Notifications	Number of odor alerts posted to the Agency website due to process or operational changes	2	1-10
5) Odor Complaints	Number of odor complaints received from the public	1	0





BOARD MEMORANDUM

October 5, 2017

To: CMSA Commissioners and Alternates

From: Kenneth Spray, Administrative Services Manager  
Heidi Lang, Financial Analyst

Approved: Jason Dow, General Manager

Subject: **FY 2018 Budget Status - First Quarter Report**

**Recommendation:** Review and accept the Agency's First Quarter Budget Status Report for Fiscal Year 2017-18 (FY 18).

**Summary:** We are pleased to present the Agency's First Quarter Budget Status Report for FY 18. As of September 30, 2017, the Agency received 22.6% of budgeted operating revenues (Table I) and incurred 28.2% of budgeted operating expenses (Tables III & IV). Revenues and expenditures were within reasonable operating parameters with respect to 25% straight line year-to-date performance for the first quarter. Expenditures are measured by actual expenses and encumbrances for goods and services received or in the process of being procured.

**Summarized Financial Performance Highlights**

Revenues	FY 18 Budget	YTD Actual Received	Outstanding	Total Revenue	Total Received as % of Budget	Total Revenue Billed as % of Budget
Agency Revenues	12,654,365	2,855,517	97,889	2,953,406	22.6%	23.3%
Contributions for Debt Service	4,952,382	3,634,901	31,759	3,666,660	73.4%	74.0%

Expenditures	FY 18 Budget	YTD Actual Expenditures	Encumbrances/ Pending Payments	Total Expenditures	% Spent
Operating Expenses	11,462,600	2,829,077	408,914	3,237,991	28.2%
Capital Improvement Program	3,817,600	509,918	984,800	1,494,718	39.2%

- JPA Member Agencies paid their first quarter Regional/Sewer Service Charges and first FY 18 semi-annual debt service installment for the Refunding Revenue Bonds, Series 2015.
- The Agency retired \$2.25M in outstanding debt and paid \$872.8K in interest for the

Refunding Revenue Bonds, Series 2015 that was due on September 1, 2017. An \$839K interest only payment is due on March 1, 2018.

- Total capital program expenditures and encumbrances were \$1.49M.

**Table I – Agency Revenues**

Description	FY 18 Budget	YTD Actual Received	Outstanding Receivables (Invoices)	Total Revenue	Budget Remaining	Total Received as % of Budget	Total Actual & Outstanding as % Budget
Sewer Service Charges	10,893,165	2,723,291	-	2,723,291	8,169,874	25.0%	25.0%
Contract Services	1,228,950	80,653	84,965	165,618	1,063,332	6.6%	13.5%
Capacity Charges	29,300	5,933	-	5,933	-	20.2%	20.2%
Program Revenues*	143,200	16,229	-	16,229	126,971	11.3%	11.3%
Haulers, Permits & Inspection Fees	226,250	28,362	12,924	41,286	184,964	12.5%	18.2%
Other Non-Operating Revenues	20,000	359	-	359	19,641	1.8%	1.8%
Interest Income	113,500	690	-	690	112,810	0.6%	0.6%
<b>Total Agency Revenues</b>	<b>12,654,365</b>	<b>2,855,517</b>	<b>97,889</b>	<b>2,953,406</b>	<b>9,677,591</b>	<b>22.6%</b>	<b>23.3%</b>
<b>Contributions for Debt Service</b>	<b>4,952,382</b>	<b>3,634,901</b>	<b>31,759</b>	<b>3,666,660</b>	<b>1,285,722</b>	<b>73.4%</b>	<b>74.0%</b>
<b>TOTAL REVENUE</b>	<b>17,606,747</b>	<b>6,490,418</b>	<b>129,648</b>	<b>6,620,066</b>	<b>10,963,314</b>	<b>36.9%</b>	<b>37.6%</b>

\*Countywide Education Program participants have been invoiced and have paid the Agency 100% of the FY18 Budget. Revenue will be recognized as program expenditures are incurred.

The Agency received 36.9% of total budgeted revenues and budget performance was at 37.6% of budget when outstanding receivables were included. Table 1 - Agency Revenues identifies the sources of revenue received. Agency Revenues and Contributions for Debt Service received year-to-date total \$6.49M. Of this amount, \$2.7M represents the first quarter service charge and \$3.6M debt service payments received from all JPA members and San Quentin Prison (SQP) with \$31.7K debt service outstanding from SQP.

The remaining \$132.2K in operating receipts and \$97.9K in operating revenues outstanding represents the following:

**Contract Services:** Receipts totaled \$80.6K and outstanding receivables totaled \$84.9K for services provided by the Agency under contract to sanitary districts and other government entities for pump station and collection system operations and maintenance, and for source control program services. Budget performance for revenues received was 6.6% and less than straight line year-to-date performance as it reflects two months of invoices to SD#2 and SQP pump stations, two months for San Quentin Village (SQV) wastewater services, and no FOG

program invoice activity. In October, staff will prepare and send out September's contract service invoices, and the first quarter FOG source control program invoices.

**Capacity Charges:** CMSA received \$5.9K in capacity charges through September 2017 for one residential connection from SD#2.

**Program Revenues:** Receipts totaled \$16.2K and there were no outstanding receivables. CMSA administers the Health & Safety (H&SP) and Countywide Education (CWP) programs. Budget performance was at 11.3% and was less than straight line year-to-date as the Agency will recognize revenue for actual CWP program expenses the month following each quarter.

Health & Safety Program: The Agency invoices Novato Sanitary District (NSD) for its share of the Health & Safety Manager salary and benefit costs at the beginning of each quarter and invoices incidental program expenses and outside safety training costs at the end of each quarter. There were \$16.2K in receipts and no outstanding receivables. The second quarter invoice will be sent out in early October.

Countywide Education: Program participants are invoiced annually at the beginning of the fiscal year in accordance with each program participant agreement. The Agency has invoiced 100% of the FY18 budget and has received \$51.7K with no outstanding receivables. Revenue will be recognized the month following the end of each quarter for program expenses incurred during that quarter. The frequency and amount of expenditures are a function of the events that are scheduled throughout the year. For example, promotional items are purchased in the third and fourth quarter of the prior fiscal year for the upcoming fiscal year's program events. As of September 30th \$4.8K was spent on the Countywide Education program.

**Haulers, Permits and Inspection Fees:** There were \$28.3K in receipts and \$12.9K in outstanding invoiced revenues. Revenues are for septic receiving facility use charges, organic waste disposal, industrial waste discharge permit fees, reimbursement of costs for pollution prevention program inspections, and other services through August 2017.

**Other Non-Operating Revenue:** The Agency received a total of \$359 for a dividend payment from Metropolitan Life, and a prompt payment incentive rebate from CalCARD. Other types of non-operating revenues can include CSRMA workers' compensation and pooled liability dividends, the occasional sale of used assets, SDI disability reimbursements, and funds from other miscellaneous revenue sources

**Interest Income:** The Agency budgeted interest earnings assuming a 0.8% rate earned at LAIF and a 0.5% interest rate earned at CAMP. Year-to-date interest income totals \$690. Interest rates earned on the Agency's short term investments with CAMP was 1.15% on September 30th. The first quarter does not include LAIF earnings as the State Treasurer posts interest earned 15 days after the end of each quarter.



**Debt Service:** Debt service contributions were received from member agencies in the first quarter FY 18 for payment on the CMSA Refunding Revenue Bonds, Series 2015. SQP is invoiced \$89.9K each month. Of this amount, \$31.8K is for debt service, the remaining \$58.1K is for SQP wastewater treatment and pump station maintenance contract services. There was \$31.8 outstanding receivable for debt service on September 30th. Principal and interest debt service was paid for the obligation due September 1st (principal \$2.25M, interest \$872.8K). An \$839K interest only payment will be due March 1, 2018.

**Table II – Revenues & Expenditures for Contracted Agency Services**

Table II shows the revenue and expenditure status for services CMSA provides under contract to other local agencies. The presentation of the information is similar to the revenue information in Table I. The actual expense incurred by CMSA excludes the contract administration overhead charge that ranges from 5%-22% depending on each specific contract. The SQP wastewater service contract’s treatment fee does not include an overhead charge as it is based on wastewater flow and strength; however, the SQP pump station maintenance operations fee does include an overhead charge. Invoices for services during the first quarter and the month of September will be prepared and mailed in October.

Service Contract	FY 18 Budgeted Revenue	Actual Revenue Received	Invoiced Outstanding	Total Revenue	Actual CMS Expenses	Frequency of Invoicing
SQSP Wasterwater Services	589,690	49,141	56,578	105,719	105,719	Monthly through August
SQSP Pump Station Maintenance	108,110	9,009	9,009	18,018	14,906	Monthly through August
SD#2 Pump Stations	403,400	21,563	18,526	40,088	33,575	Monthly through August
SQ Village Wastewater Services	49,950	940	853	1,793	1,468	Monthly through August
Revenue for Health & Safety Program	91,500	16,229	-	16,229	14,961	Quarterly through September
Countywide Education Program	51,700	-	-	-	-	Annual through June 2018*
LGVSD - FOG & Pollution Prevention	16,500	-	-	-	-	Quarterly
RVSD - FOG	21,500	-	-	-	-	Quarterly
SRSD - FOG	25,600	-	-	-	-	Quarterly
TCSO - FOG	2,200	-	-	-	-	Quarterly
SD #2 - FOG	7,500	-	-	-	-	Quarterly
NSD - Dental Amalgam	3,000	-	-	-	-	Quarterly
Almonte SD-FOG	1,500	-	-	-	-	Quarterly
<b>TOTAL SERVICE CONTRACT REVENUE</b>	<b>1,372,150</b>	<b>96,882</b>	<b>84,965</b>	<b>181,848</b>	<b>170,629</b>	

\*Countywide Education Program participants have been invoiced and have paid the Agency 100% of the FY18 Budget. Revenue will be recognized as program expenditures are incurred.

**Table III – Operating Expenditures by Category**

Description	FY 18 Budget	1st Quarter Budget (25%)	Year- to-Date Actual Expenditures	PO Encumbrances		Budget Remaining	% Spent
				Pending Payments	Total Expenditures*		
Salaries & Wages	5,401,800	1,350,450	1,178,574	-	1,178,574	4,223,226	21.8%
Benefits	2,561,100	640,275	908,993	17,968	926,961	1,634,139	36.2%
Chemicals & Fuel	1,069,500	267,375	248,062	72,141	320,204	749,296	29.9%
Biosolids Disposal	387,700	96,925	56,647	32,308	88,955	298,745	22.9%
Permit Testing & Monitoring	179,500	44,875	21,987	20,022	42,008	137,492	23.4%
Repairs & Maintenance	382,500	95,625	38,248	39,648	77,896	304,604	20.4%
Insurance	261,200	65,300	184,608	19,201	203,809	57,391	78.0%
Utilities	350,500	87,625	36,527	44,746	81,273	269,227	23.2%
General & Administrative	868,800	217,200	155,432	162,879	318,311	550,489	36.6%
<b>TOTAL OPERATING EXPENSES</b>	<b>11,462,600</b>	<b>2,865,650</b>	<b>2,829,077</b>	<b>408,914</b>	<b>3,237,991</b>	<b>8,224,609</b>	<b>28.2%</b>

\* Actual and Encumbered

**Table IV – Operating Expenses by Department**

Description	FY 18 Budget	1st Quarter Budget (25%)	Year- to- Date Actual Expenditures	PO Encumbrances		Budget Remaining	% Spent
				& Pending Payments	Total Expenditures*		
Administration**	4,554,500	1,138,625	1,481,848	169,273	1,651,121	2,903,379	36.3%
Maintenance	2,008,700	502,175	369,041	41,708	410,749	1,597,951	20.4%
Operations	3,150,600	787,650	654,892	117,005	771,898	2,378,702	24.5%
Technical Services	1,748,800	437,200	323,297	80,927	404,224	1,344,576	23.1%
<b>TOTAL OPERATING EXPENSES</b>	<b>11,462,600</b>	<b>2,865,650</b>	<b>2,829,077</b>	<b>408,914</b>	<b>3,237,991</b>	<b>8,224,609</b>	<b>28.2%</b>

\* Actual and Encumbered

\*\* Fringe benefits for CMSA staff and the Agency's insurance expense are reflected in this department

Total operating expenditures were 28.2% of budget at the end of September 2017. This included \$2.82M for actual expenses and \$408.9K for open purchase orders, contracts, and other obligations. With the exception of Benefits, Chemicals & Fuel, Insurance, and General & Administrative, year-to-date expenditures for the other categories of expense were less than the straight-line projected budget performance target of 25% at the end of September. Budget performance by each department, except Administration, was less than or equal to the 25% performance target.

**Salary & Wages and Benefits:** Total salary and benefit expenses were respectively 21.8% and 36.2% of budget and represented expenditures through the pay period ending September 23, 2017 (6 of 26 payrolls or 23%). The Agency paid its FY 17 CalPERS \$481K

employer unfunded accrued liability (UAL) in full at the beginning of the fiscal year. The annual lump sum prepayment option saved the Agency \$17.7K when compared to the monthly remittance option.

**Chemicals & Fuel:** Expenditures are 29.9% of budget with \$248K of actual and \$72K in pending payments for chemicals delivered through September 30, 2017. Nitrate usage has been higher due to dry weather flows and continued warm weather conditions through September.

<u>Chemicals</u>	<u>Expenditures as % of Budget</u>	<u>Comments</u>
Ferric Chloride	29%	4 deliveries through September 2017
Polymer-Cationic	35%	1 delivery through August 2017
Odor Control	16%	no deliveries through September 2017
Nitrate	47%	17 deliveries through October 2, 2017
Hydrogen Peroxide	27%	6 deliveries through September 2017
Sodium Hypochlorite	21%	12 deliveries through September 2017
Sodium Bisulfite	17%	5 deliveries through September 2017

**Biosolids Management:** Expenditures were 22.9% of budget and included \$56.6K actual expenditures and \$32.3K in estimated encumbrances for hauling services and tipping fees at beneficial reuse sites through September 2017. Management expenses vary, and are primarily dependent upon seasonal weather-related circumstances: 1) land application during the months of May to November results in lower reuse tipping fee costs when compared to alternate daily cover at the Redwood Landfill, and 2) the volume for disposal is lower during the warmer weather spring and summer months.

**Permit Testing & Monitoring:** Expenditures were 23.4% of budget and included \$21.9K in actual expenditures and \$20K in encumbrances for NPDES permit sampling and other contract laboratory analyses costs. Expenditures for this category vary; sampling costs can range widely from \$150 to \$3,000 each based on the type and frequency of analyses performed. Billing delays often occur during the wet weather season when it takes longer to receive test analyses due to a work back-log at the contracting labs. When the outside laboratory does not provide test analyses in the timeframe specified in the contract, a fee reduction is received for the tests performed.

**Repairs & Maintenance:** Expenditures were 20.4% of budget and included \$38.2K in actual expenditures and \$39.6K in open PO encumbrances. Expenditures alone are not necessarily a good indicator of the repair and maintenance activities that are taking place. For example, periods of high expenditures reflect the purchasing of materials and supplies to prepare for upcoming planned maintenance, while periods of low expenditures can relate to staff performing planned maintenance utilizing available parts inventory.

**Insurance:** This category was at 78% of budget. The below schedule provides the payment

status for insurance coverage. Insurance premiums are paid when policies are renewed and the expenses are prorated between fiscal years based on the policy's coverage time period.

Description	FY 18 Premium	Status
Property Insurance	49,921	FY 18 paid in full
General Liability & Auto	18,246	FY 18 paid through December 2017
Pollution Liability	809	FY 18 paid through April 2018
Employee/Commissioners Bond	2,200	FY 18 paid in full
Workers Compensation	133,593	FY 18 paid in full

**Utilities:** Expenditures were 23.2% of budget with \$36.5K in actual payments and \$44.7K of pending payables and prorated estimates for electricity (purchased from Marin Clean Energy through PG&E), natural gas, water, and solid waste through September 2017.

**General & Administrative (G&A):** Expenditures were 36.6% of budget and included \$155.4K actual expenses and \$162.8K in open POs. The G&A expense category includes professional services (legal, financial, regulatory, etc.), operating permits, memberships in local, state and national wastewater organizations, employee certifications, conferences, training, telephone, and office expenses.

**Table V – Capital Improvement Program**

Description	FY 18 Budget	Actual	PO Encumbrances	Total Expenditures	Budget Remaining	% Spent*
Salaries & Benefits	185,200	11,476	-	11,476	173,724	6.2%
Facility Improvements	1,740,600	395,082	657,911	1,052,993	687,607	60.5%
General Equipment	584,300	68,180	184,729	252,909	331,391	43.3%
Liquids Treatment Equipment & Systems	635,700	30,698	85,760	116,458	519,242	18.3%
Solids Treatment & Energy Generation Equipment & Systems	671,800	4,481	56,400	60,881	610,919	9.1%
<b>TOTAL</b>	<b>3,817,600</b>	<b>509,918</b>	<b>984,800</b>	<b>1,494,718</b>	<b>2,322,882</b>	<b>39.2%</b>

\*Actual and Encumbered

CIP expenditures\* were 39.2% of budget. Actual expenditures totaled \$509.9K and encumbrances totaled \$984.8 for executed purchase orders and contracts for the following activities Agency Facilities Master Plan, the Maintenance Facility Modification project, laboratory equipment, and for various other capital improvement activities The attached first quarter Capital Improvement Program report includes project expenditures, encumbrances, and activity status.





**BOARD MEMORANDUM**

October 5, 2017

To: CMSA Commissioners and Alternates

From: Kevin Lewis, Assistant Maintenance Supervisor *KL*  
Chris Finton, Treatment Plant Manager *CF*

Approved: Jason Dow, General Manager *JD*

**Subject: FY 2018 Asset Management Program – First Quarter Report**

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

**Summary:** Staff prepares quarterly Asset Management (AM) reports to highlight the progress made on implementing the Agency’s Asset Management Program (Program) in October, January, and April, and the annual report is presented in July.

**First Quarter Highlights**

1. Aeration Tank Effluent Gate Replacement – This past quarter, staff worked to realign, adjust, and apply a spot repair to a large sluice gate that is used to isolate flow leaving Aeration Tank No. 4. But as water was still leaking back through the gate after the repair, technicians installed a spare gate from inventory at the same time Secondary Clarifier No. 4 was out of service for annual maintenance. Completing both tasks at the same time allowed the Agency to avoid a process flow diversion as both the basin and clarifier are designed to work in conjunction as part of normal operations.
2. Sodium Bisulfite (SBS) Metering Pump Refurbishments – Over a five month period this past winter, the Agency successfully dechlorinated ~3.1 billion gallons of water prior to discharge into San Francisco Bay. Our dechlorination system pumps are required to work under very high demand in conjunction with other system pumps, especially during storm events, and they need to be periodically examined to verify their integrity. This task coincidentally aligned with an Agency improvement project to completely rehabilitate these pumps. Five SBS metering pumps were removed from their mounting bases, one at a time, and the pump heads were completely disassembled, inspected for wear and corrosion, and new replacement parts were installed. After rebuilding the

heads, the pump housings were coated with chemical resistant coating, reassembled, and new lubricants added.

3. Fine Bubble Diffuser Replacements – The aeration tanks’ air delivery systems have multiple diffusers with perforated membranes that distribute air evenly across the tanks to the biological organisms. These diffusers have a service life of approximately five years, after which they are replaced. Membrane diffusers were procured earlier this year, and the task of removing and replacing them was carried out in-house. There are 90 diffusers per tank, and it takes approximately four hours to replace the membranes in each tank. At the same time, staff also inspected the air-supply piping and performed preventative maintenance on the tank’s isolation gates.
4. SQ Prison Pump Station Flow Meter Replacement - The originally installed San Quentin Prison (SQPS) pump station flow meter was recently replaced. Over the past year this meter had become less reliable and staff was spending additional maintenance time to keep the unit operating properly. The meter replacement was performed during the night, in coordination with prison engineering and two specialty contractors, to limit disruptions to prison operations. Agency staff performed the removal and installation of the new meter as vacuum trucks removed water from the upstream collection system. The vacuum trucks were also on site to maintain a low wet well level within the station. Once the old meter was removed, V&A Engineering performed wall thickness evaluations on the piping surrounding the meter, and determined the pipe thickness was sound.
5. Secondary Clarifier Pipe Corrosion Repair - During this summer’s annual maintenance cycle, technicians discovered severe corrosion on the Return Activated Sludge (RAS), Scum, and Tank Drain pipes attached to Secondary Clarifier No. 3. All three pipes are located in an extremely small corner sump in the pump room below the clarifier. Corrosion experts from V&A Engineering were called in to evaluate the extent of the corrosion, and their report of findings recommended immediate corrective action. Pacific Infrastructure, a mechanical contractor, was contracted to perform the rehabilitation work. The severely corroded metal was removed, and concrete around the outside of the pipes was chipped back and removed to expose sound metal for welding. Agency staff was charged with developing short- and long-term system operating plans and overseeing the work. The pipes were successfully repaired and the clarifier is ready for wet weather operations.

### **Asset Inventory**

The Asset Parts Inventory is comprised of critical spare parts for Agency equipment, and consumable items designated for CMSA’s contract collection agencies—Sanitary District #2 (Corte Madera), San Quentin State Prison, and San Quentin Village Sewer Maintenance District. Spare parts for CMSA and San Quentin Village are kept at CMSA site-specific parts rooms, Sanitary District #2 parts and equipment are stored at Paradise pump station, and San Quentin State Prison parts and equipment are stored at the San Quentin pump station.

Staff conducted a thorough review of Agency assets tracked within the computerized maintenance management systems (CMMS). 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 valued under \$5,000, the Agency's established tracking limit for assets within the CMMS system. In all, a total of 48 items were entered, reclassified, or removed from the CMMS asset tree this past quarter.

Asset Locations	Total Assets
CMSA	2,323
Sanitary District #2	241
San Quentin Prison	27
San Quentin Village	4

Parts Inventory	Parts Quantity	Total Value
CMSA	17,373	\$1,743,266
Sanitary District #2	1,437	\$155,062
San Quentin Prison	23	\$46,590
San Quentin Village	2	\$1,134

### **Asset Improvements, Repairs, and Refurbishment Work**

#### **1) CMSA Capital Improvement Project Work**

Projects in the table below are capital projects that were completed or were in progress over the past quarter.

Project Name	CMSA Staff Cost	Total Cost	Status
Maintenance Facility Modifications	\$49,670	\$1,150,456	In process
Secondary No. 3 Corrosion Repairs	\$3,826	\$36,938	Complete
Headworks Odor Scrubber Fan Replacement	\$2,456	\$2,943	In process

#### **2) CMSA Asset Management Improvements**

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

Area	Equipment	Improvement	Total Cost	Comments
Facility-wide	Storage Sumps	Hatch cover replacements	\$4,423	Corroded covers were replaced with aluminum diamond plates. Sump frames cleaned and painted.



Area	Equipment	Improvement	Total Cost	Comments
Headworks	Site Sump	Impeller and control switches	\$3,193	The worn pump impeller and level control float switches were replaced.
Headworks	Influent Screens	Annual preventive maintenance	\$6,414	Inspection, changed lubricants, and replaced missing retaining clips.
Primary Clarifiers	Primary Clarifier No. 1	Effluent weirs	\$16,000	Installed new FRP V-notch weirs. Leveled and set elevation per Agency specifications.
Aeration	Air Diffuser System	Membrane replacement	\$33,336	Replaced EPDM diffuser membranes and clamps. Replaced leaking saddle O-rings.
Aeration	Effluent Isolation Sluice Gate	Gate replacement	\$8,685	Replaced existing gate with a fabricated stainless steel gate from inventory.
Secondary Clarifiers	Clarifiers (All)	Annual preventative maintenance	\$10,950	Replaced lubricants and wear parts, and inspected drive motors and gear boxes.
Organic Waste Receiving Facility	Hose Pumps	Regular maintenance procedure	\$3,953	Replaced EPDM hose and hose lubricant twice.
Dechlorination	Sodium Bisulfite Metering Pumps	Pump refurbishment	\$22,945	Replaced diaphragms, check balls, housings, seals, and lubricants in all SBS pumps. Applied chemically-resistant coating and repaired piping leaks.
Energy Generation	Cogenerator	2,000 hour maintenance procedure	\$3,391	Replaced oil, air filters, and lubricants. Adjusted intake and exhaust valves.
Energy Generation	Boiler No. 2	Level control switch replacement	\$2,942	Replaced failed level control safety switch.
Solids Handling	TWAS Pump No. 1	Annual preventative maintenance	\$3,852	Replaced lobes, wear plates, cartridge seals, housings, and lubricants.
Solids Handling	Centrifuge Feed Pump No. 2	Pump replacement	\$8,485	Replaced pump with a refurbished unit from inventory.
Solids Handling	Ferric Feed Pump No. 1	Digester ferric feed pump	\$3,750	Replaced pump with a new style PulsaFeeder gear pump.

**3) CMSA Maintained Assets (San Quentin Prison, Sanitary District #2, 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	Comments
Sanitary District No. 2	Fifer Pump Station	Pump replacement	\$41,220	Replacement of both station pumps.
San Quentin Prison	Grinder Cartridge	Replaced in-service cartridge	\$22,568	Installed factory-refurbished channel grinder and new motor.
San Quentin Prison	Effluent Flowmeter	New meter	\$15,017	Flowmeter replacement and drain valve replacement.
San Quentin Prison	Standby Emergency Generator	Annual service	\$3,389	Performed annual service, replaced water pump and front oil seal.

**Work Orders – First Quarter FY 2018**

A work order is a written request that a preventive, planned 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 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)	36	10.71%	1,283.00	14.72%
Corrective-Planned	156	46.43%	1,373.50	15.76%
Corrective-Unplanned	44	13.10%	155.00	1.78%
Improvement Project Work	4	1.19%	206.75	2.37%
Coating Projects	1	0.30%	239.00	2.74%
Safety	23	6.85%	115.00	1.32%
Professional Development/Staff Meetings	18	5.36%	337.50	3.87%
Facilities Administration/Housekeeping	27	8.04%	620.00	7.11%
Process Control and Facility Operations	23	8.04%	4,388.00	50.33%
<b>Total</b>	<b>336</b>	<b>100%</b>	<b>8,717.75</b>	<b>100%</b>



**BOARD MEMORANDUM**

October 5, 2017

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager *JD*

Subject: **Lystek Biosolids Reuse Presentation**

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

**Summary:** CMSA began delivering dewatered biosolids to the Lystek biofertilizer facility in October 2016 when it began commercial operations. Delivering biosolids to Lystek diversifies the Agency's reuse portfolio and provides the Agency with a year-round sustainable biosolids management solution. Jim Dunbar, Lystek's General Manager of California Operations, will attend the October 10 Board meeting and give a presentation on the highlights from Lystek's first year of operations.

**Discussion:** Since the early 1990s, CMSA has been transporting its dewatered biosolids to beneficial reuse sites. During the wet weather season, generally late October to early May, biosolids are transported to the Redwood Landfill in Novato where they are used as alternate daily cover material (ADC). From May through late October, the biosolids are used as a fertilizer and soil amendment on agricultural land application sites in either Sonoma or Solano County.

Due to the increasing limitations and restrictions on the land application of biosolids throughout the state over the past fifteen years, the Agency has been participating in various programs to explore biosolids diversification options, such as the Bay Area Biosolids to Energy Coalition, whose efforts have led to implementation of regional and agency specific biosolids management projects. These projects include the preliminary design of the regional SCFI/Synagro facility at the Dublin San Ramon Services District, conceptual design of a SCFI/Synagro facility at the West County Wastewater District, construction and operation of the Bioforce Tech facility at Silicon Valley Clean Water, and construction and operation of the regional Lystek facility at the Fairfield Suisun Sewer District (FSSD).

Lystek has the capacity to receive and process up to 150,000 wet tons of dewatered biosolids per year, and it's currently receiving biosolids from several wastewater agencies in the San Francisco Bay Area, including CMSA, FSSD, City of Santa Rosa, City of Petaluma, East Bay Municipal Utilities District, and the San Francisco Public Utilities Commission.

A recent development that will significantly impact biosolids management programs throughout the state was the enactment of SB1383 – Short Lived Climate Pollutants, which targets a 50% reduction in the landfill disposal of organic wastes by 2020, and a 75% reduction by 2025. Biosolids is included in the definition of organic wastes, and well before 2025 the wastewater industry predicts biosolids landfill ADC and disposal will be either prohibited or significantly reduced. To position the Agency for this outcome, staff recommended the Board approved increasing funding for biosolids management in the Agency’s FY17 operating budget, to allow for delivery of up to two loads of biosolids to the Lystek facility. In September 2016, the Board approved the Biosolids Reuse Agreement with Lystek, and CMSA began delivering biosolids in October 2016. The Reuse Agreement’s term is through December 31, 2020, and allows for CMSA to deliver up to six loads of biosolids per week.

CMSA produced approximately 6,700 wet tons of biosolids in FY 17, and the table below shows the amount of biosolids delivered to each reuse location.

Biosolids Reuse Location	Biosolids Amount, wet tons
Redwood Landfill - ADC	3,692
Solano County Land Application	1,645
Lystek Biofertilizer Facility	1,306

**Alignment with Strategic Plan:** This activity supports Goal 3 in the Agency’s FY18 Business Plan as shown below.

*Goal Three: CMSA will further incorporate green business principals and consider renewable resource opportunities in its short-and long-term planning.*

**Attachment:**

- April 7, 2017 letter from Lystek, titled “Lystek OMRC Facility Update”





JW 4/11/17  
Lystek Organic Materials Recovery Center  
1014 Chadbourne Road  
Fairfield, Ca 94534-9700  
Phone: 707-419-0084

April 7, 2017

Jason Dow  
General Manager  
Central Marin Sanitation Agency  
1301 Andersen Drive  
San Rafael, CA 94901



Subject: **LYSTEK OMRC FACILITY UPDATE**

Dear Jason Dow:

Lystek International is proud to be a service provider to the Central Marin Sanitation Agency (CMSA) for the acceptance, treatment, and beneficial use of biosolids material.

I want to take this opportunity to update you on the first year activities of the Lystek OMRC facility in Fairfield.

- Lystek began receiving and processing biosolids from the Fairfield-Suisun Sewer District into our biofertilizer product
- Delivery of biosolids was initiated from regional wastewater plants under multi-year agreements; these facilities included Central Marin Sanitation Agency and the City of Santa Rosa
- Lystek served as an emergency provider of biosolids acceptance as a result of service disruptions during winter/rainy season conditions; these facilities included the City of Petaluma and East Bay MUD
- Lystek received registration from the California Department of Food and Agriculture that its product is a bulk fertilizer material
- Lystek initiated application of its biofertilizer product (LysteGro-Class A-EQ) to Solano County farms; it is expected that approximately 1,000 acres of farmland will be applied with LysteGro in Spring 2017; additional farmland will be applied in Fall 2017

We have had a successful start-up to our operation and we are pleased that CMSA is one of our first customers. Your confidence in Lystek is very much appreciated and we will continue our mission to be a quality and reliable service provider to the San Francisco Bay Area.

If you have any questions or need additional information, please contact me at [jdunbar@lystek.com](mailto:jdunbar@lystek.com) or 707-419-0084.

Sincerely,



James E. Dunbar, P.E.  
General Manager  
California Operations






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**BOARD MEMORANDUM**

October 5, 2017

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager 

Subject: **Marin County Adult Offender Work Program**

**Recommendation:** Consider authorizing the Agency's participation in the Marin County Adult Offender Work Program.

**Summary:** CMSA's Maintenance Supervisor, Paul Bruemmer, has experience with the San Mateo County Adult Offender Work Program (AOWP) with his previous employer, Daly City's Water/Wastewater department, and has recommended that CMSA consider participating in the Marin County AOWP. Staff has contacted the AOWP administrator, the Marin County Probation Department, and local agency AOWP references to learn more about the program, and believe CMSA's participation will provide the Agency with several benefits. Staff informed SEIU Local 1021 about our interest in participating in the program, provided program materials, and offered to meet and confer on the Agency's participation. SEIU responded that they did not have concerns with the AOWP. Mr. Bruemmer will attend the October 10 Board meeting to provide a brief summary of the AOWP program and its administration, and how CMSA will utilize the program participants to support the Agency.

**Discussion:** The AOWP is designed to provide low-level, non-violent offenders the opportunity to perform community service work for the County of Marin, local public agencies, and non-profit organizations. Offenders who have been sentenced by Marin Superior Court to less than 29 days of jail time are eligible for the AOWP. According to the Marin County Probation Department, the program participants are thoroughly screened before being accepted into the program and dispatched to an agency. Additionally, an agency can determine its own screening criteria for its AOWP participants, such as requesting specific skill sets and/or for not committing specific crimes. Marin County provides the participants with Worker's Compensation insurance, and participants are required to provide appropriate clothing for their jobs.

AOWP participants are required to arrive at their work site on time, work an 8-hour day which includes a lunch period and breaks, and follow the Agency supervisor's directions. Any issues associated with a participant's inability or unwillingness to perform assigned work, not comply with job site safety, being under the influence of drugs or alcohol, leaving CMSA property



during the day, or not following direction will result in the participant being dismissed from the program.

The Marin County Probation Department can provide program participants with varying skill sets, as requested by the local agency. CMSA would request participants who could perform the essential job functions in the Agency's Utility Worker classification, such as landscape and grounds maintenance, various custodial activities, irrigation system design and repair, commercial painting, and minor equipment repair and rehabilitation. Maintenance staff has identified the following routine and periodic tasks for AOWP participants who work at CMSA.

- Trim ice plant on the perimeter of the Agency roads and on its hillsides
- Pressure wash treatment plant walkways, tanks, and parapet walls
- Clean the underground galleries
- Remove vegetation from the effluent storage pond and Andersen Drive hillsides
- Paint sidewalk curbs, bollards, gallery and interior walls, parking stall striping, process piping, and fire hydrants
- Clean stormwater culverts and channels
- Weed whack the area around the Andersen Hill radio antenna
- Assist with large landscape improvement projects
- Perform various landscape maintenance work

Staff believes there are several benefits to the Agency by participating in the AOWP. Benefits include an opportunity for Utility Worker staff to develop supervisory and project planning skills; allows Utility Workers to assist the maintenance and operations department with preventative and corrective maintenance tasks to increase each department's productivity, reduces CMSA use of contractors for certain periodic landscape management activities; reduces the backlog of landscape projects and maintenance work; and the expanded landscaping work will enhance the appearance of the Agency facilities and grounds.

**Attachments:**

- Three AOWP informational handouts (A, B, and C) from the Marin County Probation Department



# HANDOUT A

The Adult Offender Work Program (AOWP) coordinates the exchange of a court ordered jail sanction of up to 29 days, for 8 hours for each day of work in the community. The main purpose of this jail alternative program is to reduce the costs of housing an inmate in the Marin County Jail, as well as contributing with free labor to non-profit agencies throughout the County of Marin and beyond.

The AOWP Program has become a popular program processing several hundred applications each year. The Court has relied on AOWP staff to evaluate each eligible defendant's jail order. The AOWP Program has built strong relationships with Marin County Superior Court and the Marin County Sheriff's Office that has resulted in an excellent program.

The philosophy behind the AOWP Program is to provide an opportunity to low risk defendants to serve their jail obligation in a variety of worksites throughout our Marin County departments and local non-profit agencies. As Maria Teresa Cozzi, the AOWP, Coordinator, describes: "The AOWP Program is an employment agency with a twist," the twist being the fact that the work is to satisfy a court order; on the other hand, the AOWP staff, evaluates each participant's skill, education background, experience, and uniqueness of each defendant, in order to match them to the most beneficial assignment for both, the defendant and the worksite.

The Adult Offender Work Program assigns participants to a variety of work environments, from general labor and landscaping jobs to work tasks that require more specific skills. The mutual collaboration between the AOWP Program and the agencies permits to assign the people using their advance skills, expertise and knowledge, giving a meaningful experience to our participants and giving added value to the department or agency receiving the work. Our workers have earned praise, job recommendations, and in many instances permanent employment as a result of their participation in AOWP.

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The AOWP Program fee collection for work from our department as follows:

Fiscal Year 2014-2015 \$ 46,313.01 (3,008 Days – 24,064 Work Hours)

Fiscal Year 2015-2016 \$ 50,834.50 (2,861 Days – 22,888 Work Hours)

At a meager \$11 and hour, these non for profits have gained well over a half million dollars of free labor!

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## Testimonials:

Community Action Marin: "It has been a great deal of help to have AOWP workers assisting in our busy office. Thank you AOWP!" Carol Hamel, Office Manager.

Goodwill, Novato: "I would like to say that the AOWP program is a great help to the Novato Store. Recently we were short staffed and had a hard time getting everything done in the store that needed to be done. People from the AOWP program helped us to still run the store

*efficiently. I can honestly say that because of the AOWP program, our sales are doing great and our store is clean and organized."* Monica Mitchell, Store Manager.

Law Library: *"I appreciate the people you send me; they have all been hard workers with pleasant dispositions. For instance, when you sent me the gentleman with the financial background, I had him create some sophisticated spreadsheets for us in Excel."* Laurie Vaala Olsen, Law Library Director.

Marin Municipal Water District: *"The Marin Municipal Water District (MMWD) has a long and successful working relationship with the County of Marin Adult Offender Work Program (AOWP). AOWP work crews have completed important labor-oriented natural resource projects on the Mt. Tamalpais Watershed."* Carl Sanders, Watershed Maintenance Supervisor.

Marin Performing Stars: *"My organization has been involved with the AWOP program for several years, but in the last three years, I expressed to Maria Teresa Cozzi very specific needs and skills that we need in order to raise the level of professionalism. Maria carefully selects people with certain expertise, such as computer engineers to help with data presentation or our new website which is awesome and both areas we are able to generate more funding for our non-profit. Even when the AWOP worker is complete with their project, many of them have continued to volunteer with Performing Stars! She is a true matchmaker!"* Felecia Gaston, Executive Director.

# HANDOUT B

## +Adult Offender Work Program GUIDELINES FOR PARTICIPATING WORKSITES

AOWP is an administrative jail alternative program, which is run by the Marin County Probation Department. The law allows an individual to work off jail days by performing manual labor at a work site assigned by the AOWP staff. The cost of the program is borne by the participants and the work performed benefits the community. Uniform enforcement of our rules and guidelines will insure that this program will continue to benefit our agencies, the workers and the community at large.

### Minimum Requirement for participation:

Participants must work at least one day per week until completion of the program and may not skip or postpone any part of the sentence

- The site must allow for 8 hours of work, supervised by site employees, and determine a fixed schedule.
- Participants must work a minimum of an 8-hour shift to get credit for one day of jail.
- Partial days cannot be credited toward jail.
- A job description will be provided by the Site.
- Participants must not be dismissed early.
- Latecomers must not be permitted to work.
- AOWP Workers are not to leave the site during the workday, even during breaks.
- Any problems must be promptly reported to the AOWP staff, and documented in writing.

### Worker Suitability:

- The site can provide guidelines for suitability of workers.
- If your agency has agreed to use the services of individuals with any physical or other limitations, site management will be notified of the specifics of those limitations and should not request that the participant exceed those limitations.
- No participant should be permitted to remain at the work site if believed to be under the influence of alcohol or drugs. Site Staff will be notified if a worker has a legitimate need for prescribed medication; in some cases reassignment may be necessary.
- **In the event that an AOWP worker becomes unable or unwilling to function appropriately at the site, or for any reason causes concern for the regular functioning of the site, or for the safety of the work crew, that individual should be asked to leave the site. No explanation to the AOWP worker by the site staff is required.** The worker should be referred back to the AOWP staff for further action. The situation must be documented and AOWP staff notified immediately. Maria Teresa Cozzi, AOWP Coordinator (415) 473-6687.

### Notes:

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Site staff is encouraged to contact AOWP staff with any questions about procedure or policy, or with any other concerns. (415) 473-6687- We thank you in advance for your cooperation and look forward to a continuing successful partnership with your agency.

## Conduct Expectations of Workers

- Each AOWP participant is expected to conduct him/herself in a manner suitable for a safe, comfortable, and professional place of employment. All participants must comply with policies and guidelines as instructed by the Site and AOWP, including policies regarding anti-harassment, anti-discrimination, and appropriate workplace conduct.
- Each participant should be expected to be a productive member of your agency's crew, with regard to performance, attitude and attire.
- Each is expected to follow your directions for his or her assignment.
- Each participant is responsible for abiding by the rules of the AOWP. We have attached a copy for your information.
- We expect our participants to be an asset to your work crew, and to be accorded the same respect as regular paid employees.
- No electronic music / business / entertainment equipment may be brought by the worker. Cell phones may be brought, but during the ENTIRE workday must be turned OFF.
- Any serious issues should be documented in writing on a supervisors incident report form

## Assignments, and Reporting of Work.

**Our office must authorize all assignments, including additions, deletions and changes of workdays.**

Because of the special relationship between program participation and the jail obligation, and because scheduling depends on the fulfillment of fee payments or documentation of illness, our office must do all scheduling and will require accurate and timely recording and reporting of time worked.

**We ask that you are consistent in following these rules. In the long run it will make your jobs and ours much easier:**

- The site management is not authorized to make any schedule changes, nor to permit work on any day not previously scheduled.
- Workers have been advised that they may not "drop in" for work or otherwise work without AOWP authorization.
- Excuses, fee payments, and requests for rescheduling may be dealt with by AOWP staff **only**.
- We will advise you in advance of any authorized schedule changes.
- Any questions about scheduled days can be addressed to our staff at (415)-473-6687-(415)-473-7171 Monday-Friday 9:30am – 5pm. AOWP staff is not available on weekends or holidays. In the event of concerns that arise during weekend or holiday shifts, Site staff should proceed according to AOWP and Site policies, using their best professional judgment. A message should be then left on the AOWP voice mail, followed by a call to AOWP at the beginning of the next business day.

AOWP will provide YELLOW time sheets for each worker, showing the days he or she is to work. (Sample is attached)

- Changes as authorized by AOWP staff may be handwritten on the timesheet.
- Site staff is requested to check that each scheduled worker has arrived to the site on time and has worked until the shift is over.
- Site staff is to sign or initial next to the appropriate date.
- If the worker does not show, is late, leaves early or is sent away for any reason, a "0" (zero) is to be recorded and initialed for that date, and the AOWP office is to be called.
- Notes of explanation are helpful and welcome.



- Time sheets are to be returned by mail or fax: 1) when all the scheduled days are past or 2) when a worker has missed 2 authorized days, unless otherwise advised by AOWP staff or 3) upon request of the AOWP staff.
- Workers will also request a signature on their copy of the timesheet, for their records. They should keep this timesheet in their possession.

AOWP will provide a supply of weekly roster forms, on which all workers scheduled should be listed by the Site, and on which workers can sign in. These should be faxed to our office on a weekly basis, so that we can follow up with those who have not completed a scheduled workday. (Sample is attached)

Site Timesheets and Rosters are sensitive documents, and should be kept in a secure place by site management. They should only be delivered by mail or fax directly to our office. They should never be left in the possession of a worker, or be available to workers without Site staff control.

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Site staff is encouraged to contact AOWP staff with any questions about procedure or policy, or with any other concerns. (415) 473-6687 We thank you in advance for your cooperation and look forward to a continuing successful partnership with your agency.

**Worksite Safety:**

- All workers should be orientated as to any safety concerns and policies of your agency, and should be expected to follow these rules.
- Please honor any worker's request to NOT do an assigned task, specifically for fear of exposure to injury. If possible, the worker can be assigned an alternate task. If not the worker can be sent home. He/she should not be permitted back at the worksite without AOWP staff approval. **An incident report must be completed and AOWP staff must be notified.**

**Worksite Injuries:**

All injuries, regardless of how minor, MUST be reported to AOWP staff, documented on *Supervisors Workplace Injury Incident Report Form*, and the worker should be instructed to contact AOWP staff as soon as possible

- First Aid should be handled according to your agency policies and your best professional judgment.
- Emergencies should be brought to nearest medical facility
- If non-emergency medical attention is necessary, *the Kaiser Occupational Medicine* should be the facility of first choice.
- Contact AOWP as soon as possible, and prepare and submit *Supervisors Workplace Injury Incident Report Form*
- AOWP Staff will complete the Worker's Comp forms and submit to County of Marin Risk Management.
- Workers should not be permitted to return without AOWP staff approval if the injury:
  1. Requires him/her to stop work for any significant amount of time
  2. Requires him/her to leave the site for treatment
  3. Is considered significant

**Incident Reports:**

Incident reports should be submitted to AOWP for all of the following reasons:

1. A worker is asked to leave the site for any reason.
2. A worker is known to be injured or reports an injury (use Supervisors Workplace Injury Incident Report Form)
3. A worker comes to the site with an injury.
4. A worker exhibited odd or dangerous behavior.
5. Any other reason that you or we think important to document.

**Notes:**

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Site staff is encouraged to contact AOWP staff with any questions about procedure or policy, or with any other concerns. We thank you in advance for your cooperation and look forward to a continuing successful partnership with your agency.

# HANDOUT C

Marin County Probation Department  
Adult Offender Work Program  
Phone: 415-473-6687 \* Fax: 415-473-3787 \* ATTN: AOWP

Roster/Sign-in for week of \_\_\_\_\_ - \_\_\_\_\_

Monday	

Friday	

Tuesday	

Saturday	

Wednesday	

Sunday	

Thursday	

Site: \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Fax: \_\_\_\_\_

Ph: \_\_\_\_\_

e-mail: \_\_\_\_\_




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**BOARD MEMORANDUM**

October 5, 2017

To: CMSA Commissioners and Alternates

From: Jason Dow, General Manager 

**Subject: Draft Sea Level Rise Assessment - 2017 Agency Facilities Master Plan**

**Recommendation:** Receive the draft sea level rise assessment report, and provide comments and/or direction to the General Manager, as appropriate.

**Summary:** Carollo Engineers has submitted the draft Sea Level Rise Assessment Technical Memorandum (TM). Staff is currently reviewing the draft TM and, in the near future, will provide our comments to Carollo for incorporation into the final draft TM. Findings from the assessment are:

- 1) CMSA's treatment processes and equipment will not be impacted by the projected sea level rise in 2030, 2050, or 2100, including the 100-year flood event.
- 2) Portions of Andersen Drive leading to CMSA will be flooded at the projected 2030 sea level elevation with the 100-year flood.
- 3) Gravity and pumped outfall discharge to the central San Francisco Bay is not significantly reduced for the projected 2030 sea level elevation with the 100-year flood.

**Discussion:** In September 2016, the Board approved the 2017 Agency Facilities Master Plan (Plan) contract with Carollo Engineers that is comprised of eleven specific technical tasks to assist the Agency with planning for potential future operational, capital, resource recovery, and regulatory compliance activities. When the final draft Plan report is prepared, a Carollo representative will attend a Board meeting and present each TM's findings and recommendations to the Board, after which the final Report will be submitted.

To keep the Board briefed on the Plan's development, staff intends to present noteworthy information from draft TMs at Board meetings over the next several months. This began at the June 2017 meeting where staff presented a Plan status report that focused on the findings from the final draft Blending Alternative Analysis, Facility Condition Assessment, and Dewatering Alternative Evaluation TMs. Staff also reported that the Plan schedule was extended for several reasons, with the new substantial completion date scheduled for early 2018.



The Sea Level Rise Assessment utilizes information from the Marin Bay Waterfront Adaptation and Vulnerability Evaluation (BayWAVE) project for the eastern Marin shoreline from the Golden Gate Bridge to the county line north of Novato. Scenarios evaluated by BayWAVE, using the USGS Coastal Storm Monitoring System, were for sea level rise projections with and without 100-year flooding for 2030 (near-term), 2050 (mid-term), and 2100 (long-term). Results of the BayWAVE evaluation show that CMSA's treatment facilities are not impacted by the sea level rise scenarios (see Figures 10.3 and 10.5). However, Anderson Drive east of the Agency is flooded for each of the scenarios, which may impact staff commuting to work and delivery of treatment chemicals, equipment, and supplies. In the upcoming years, staff will keep in communication with the City of San Rafael to learn how the Andersen Drive flooding will be addressed or minimized.

A major analysis in the Assessment was to determine if, and by how much, the Agency treatment plant's discharge to the San Francisco Bay is reduced as a result of projected sea level rise by 2030 with the 100-year flood event. CMSA's treated effluent is transported through a marine outfall that extends over 8,000 feet into the S.F. Bay, and discharged through a 1,000 foot long diffuser section that is comprised of 176 diffuser ports spaced every six feet on center (see Figure 10.1). Carollo evaluated the outfall's hydraulic capacity for pumped flow scenarios, with up to 60 diffusers buried under the bay floor. Results from the draft analyses are shown on the graph in Figure 10.7, and indicate that the 139.7 MGD design pumped discharge is reduced by approximately 6 MGD under the 2030 scenario. Design flow also decreases by about 1.5 MGD if 60 diffusers are buried.

After the Plan contract was approved, staff asked Carollo to calculate how the outfall's gravity discharge is reduced, at high and low tides, with up to 60 diffusers buried. Those results are shown in Figure 10.6, and for the final draft TM, staff will ask Carollo to perform similar calculations for the 2030 sea level rise scenario.

**Alignment with Strategic Plan:** This activity is a strategic action to support Goal 1 – Objective 1.4 in the Agency's FY18 Strategic Business Plan as shown below.

*Goal One: CMSA will continue to operate and maintain its wastewater facility to produce high quality effluent and biosolids, within a changing regulatory environment.*

*Objective 1.4: Prepare an Agency Facilities Master Plan.*

*Actions: Complete the tasks in the plan's scope of work.*

*Present Master Plan Findings and Recommendations to the Board*

**Attachments:**

- 1) TM Figure 10.1 – Location of Agency's WWTP and Outfall
- 2) TM Figure 10.3 – Near-Term (2030) Potential Flooding
- 3) TM Figure 10.5 – Long-Term (2100) Potential Flooding
- 4) TM Figure 10.6 – Gravity Outfall Capacity vs. Number of Buried Diffusers
- 5) TM Figure 10.7 – Pumped Outfall Capacity vs. Number of Buried Diffusers

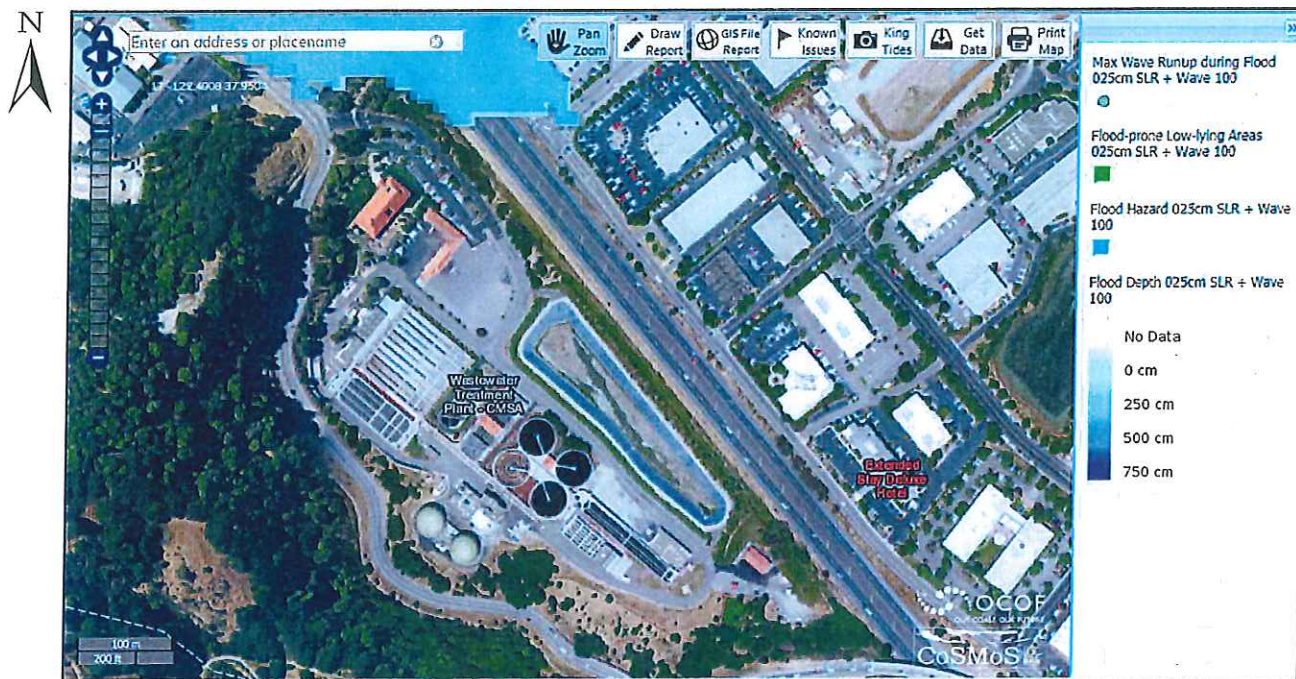
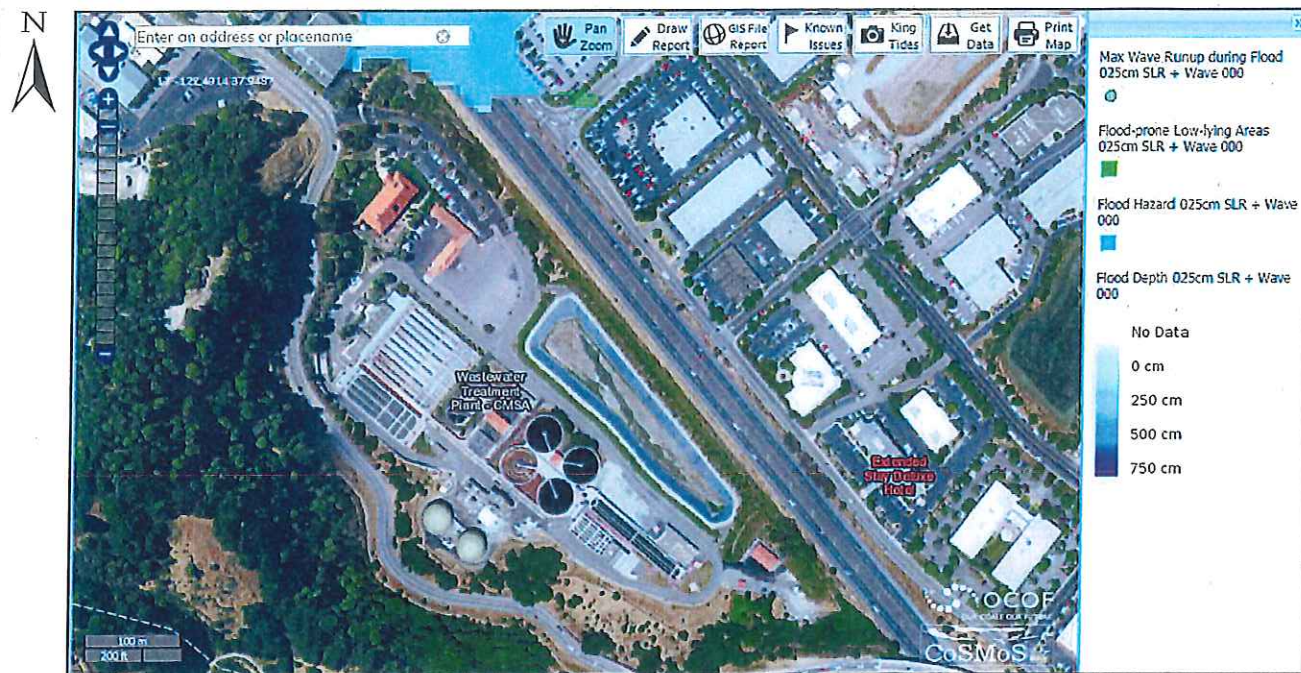


**LOCATION OF THE AGENCY'S WWTP  
AND OUTFALL**

FIGURE 10.1

CENTRAL MARIN SANITATION AGENCY  
2017 FACILITIES MASTER PLAN



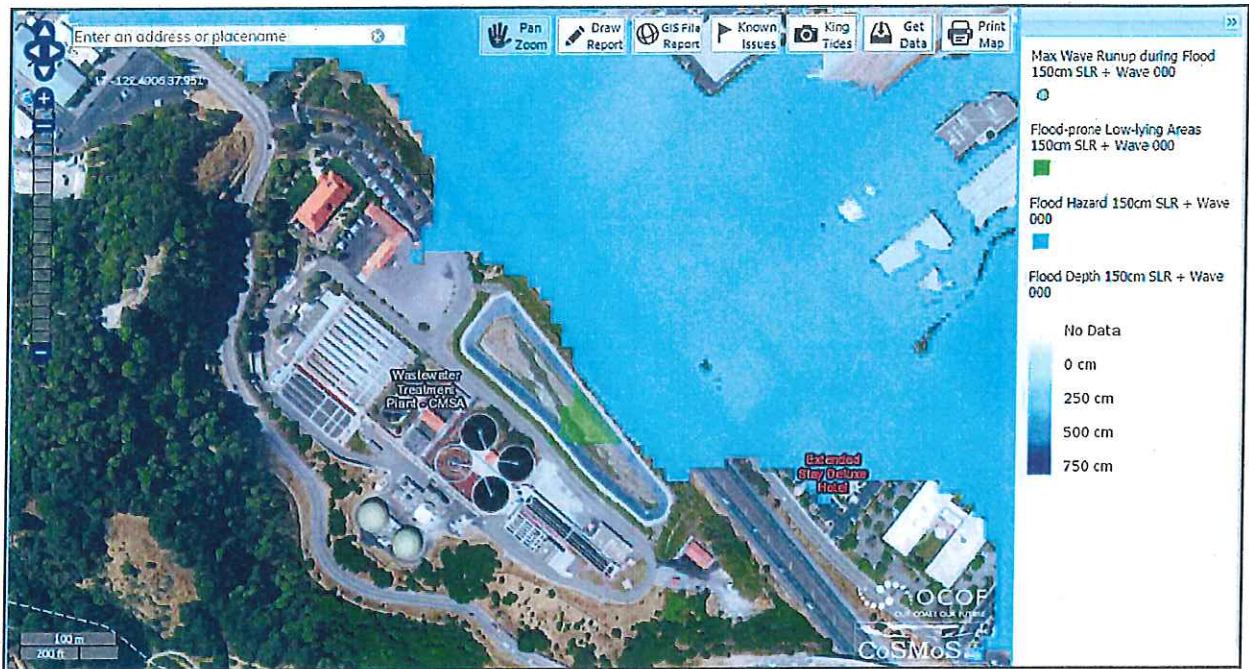


**NEAR-TERM POTENTIAL FLOODING  
CONSIDERING SEA LEVEL RISE ONLY (TOP)  
AND SEA LEVEL RISE DURING A 100-YEAR  
FLOOD EVENT (BOTTOM) BY 2030**

FIGURE 10.3

CENTRAL MARIN SANITATION AGENCY  
2017 FACILITIES MASTER PLAN



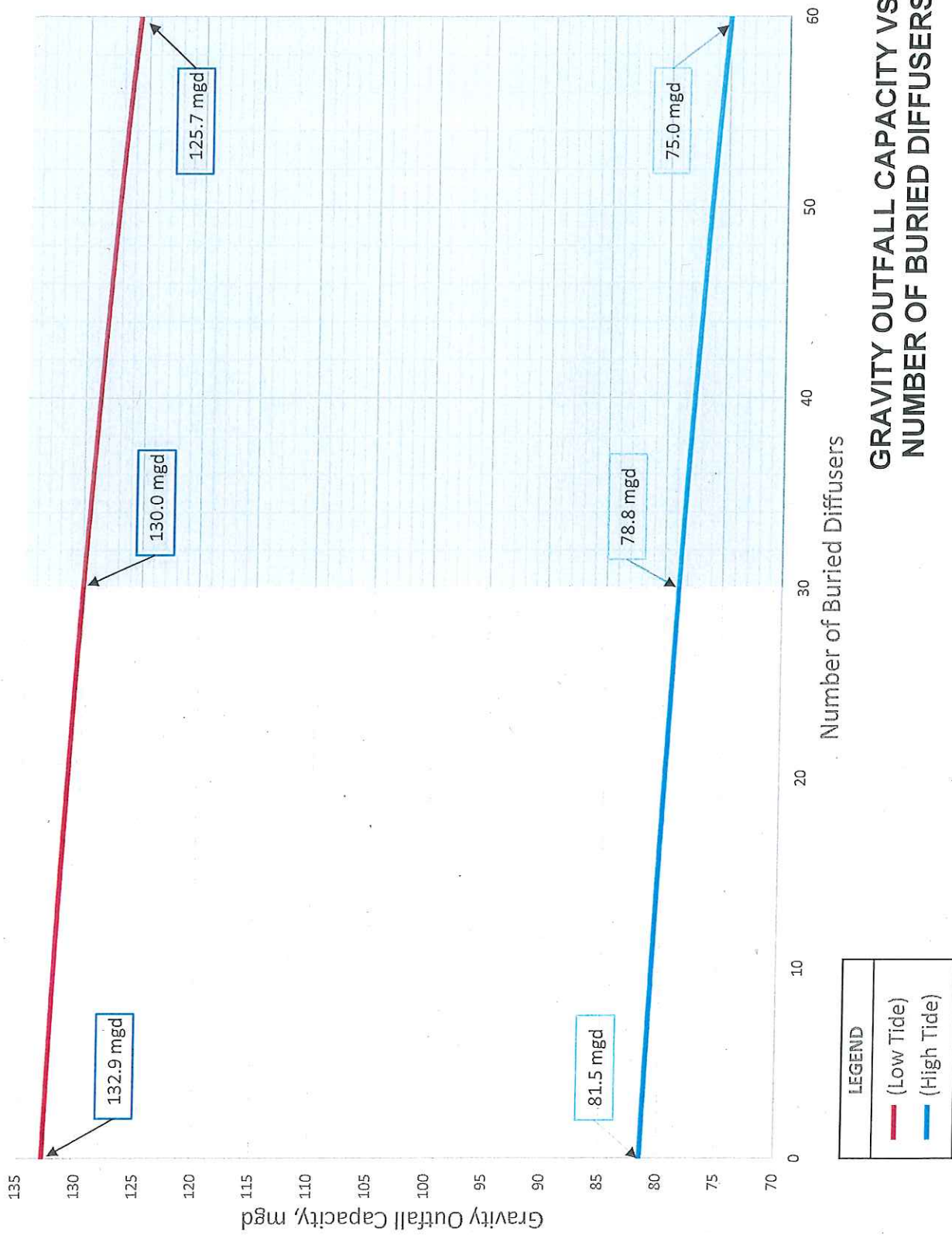


**LONG-TERM POTENTIAL FLOODING  
CONSIDERING SEA LEVEL RISE ONLY (TOP)  
AND SEA LEVEL RISE DURING A 100-YEAR  
FLOOD EVENT (BOTTOM) BY 2100**

FIGURE 10.5

CENTRAL MARIN SANITATION AGENCY  
2017 FACILITIES MASTER PLAN



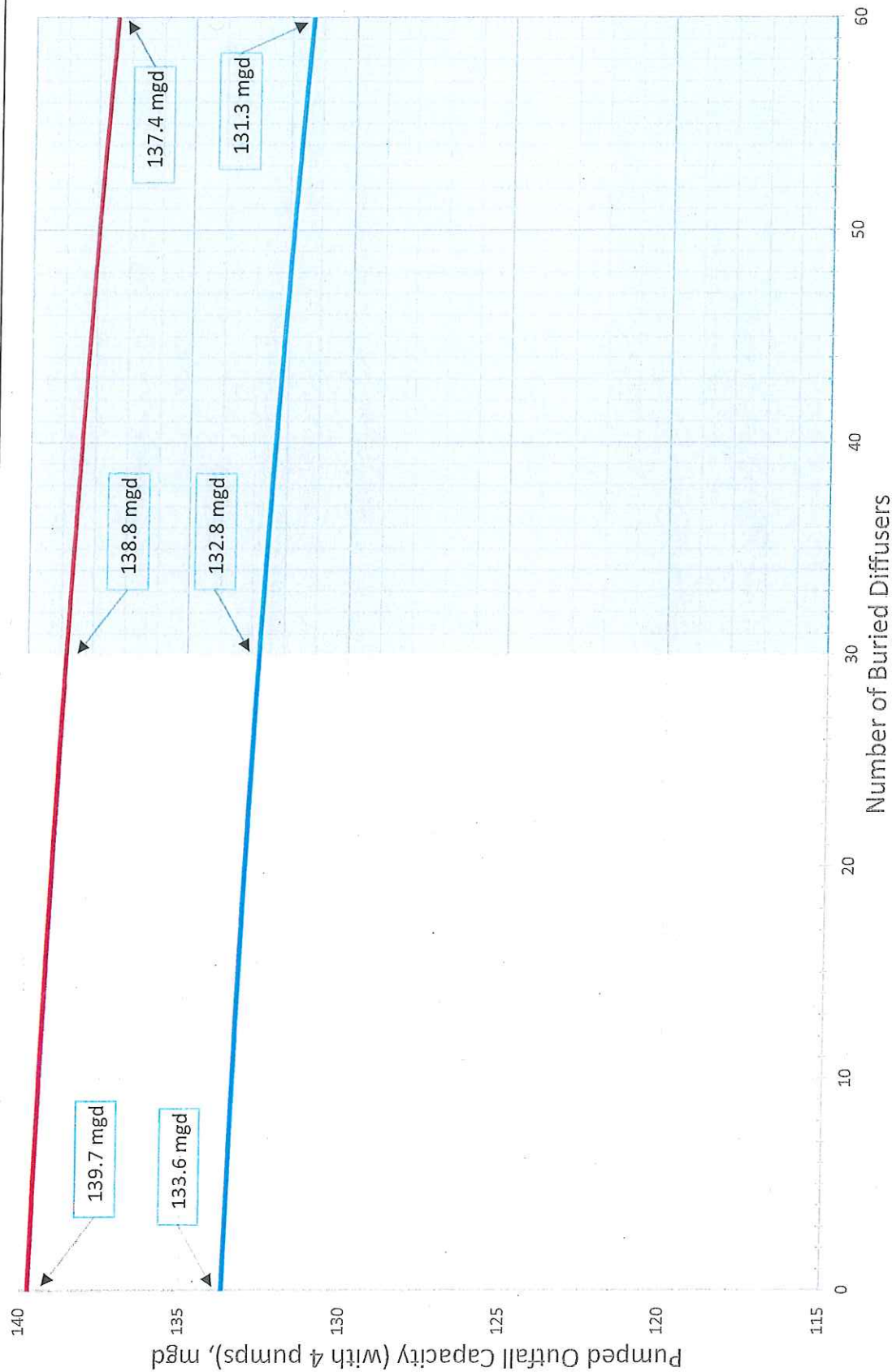


**GRAVITY OUTFALL CAPACITY VS. NUMBER OF BURIED DIFFUSERS**

FIGURE 10.6

CENTRAL MARIN SANITATION AGENCY  
2017 FACILITIES MASTER PLAN





**PUMPED OUTFALL CAPACITY VS. NUMBER OF BURIED DIFFUSERS**

LEGEND	
<span style="color: red;">—</span>	(Design High Tide)
<span style="color: blue;">—</span>	(Design High Tide + Sea Level Rise + 100-Yr Flood)

FIGURE 10.7

CENTRAL MARIN SANITATION AGENCY  
2017 FACILITIES MASTER PLAN






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**BOARD MEMORANDUM**

October 5, 2017

**To:** CMSA Commissioners and Alternates  
**From:** Brian Thomas, Technical Services Manager  
Jason Dow, General Manager   
**Subject:** Draft MCE Power Purchase Agreement

**Recommendation:** Review and provide comments on the draft Small Generator Power Purchase Agreement with Marin Clean Energy.

**Summary:** At the May 2017 meeting, the Board authorized staff to negotiate a power sale agreement with Marin Clean Energy (MCE), and directed staff to explore with MCE the possibility of a contract term of less than 20 years. Since then, staff, our energy consultant, and special legal counsel have reviewed and commented on MCE's standard power purchase agreement, and negotiated several revisions to it. The most notable revision is the Agency's ability to deliver power to MCE with the existing cogeneration system that received PG&E Self-Generation Incentive Program (SGIP) funding in 2005/6. MCE has also indicated that an agreement term of 10, 15, or 20 years is acceptable. The draft MCE agreement is attached and its accepted revisions are detailed below. Staff is seeking Board feedback on the draft agreement and selection of a preferred contract term, after which a final draft agreement will be prepared.

Also presented below is an analysis of CMSA's electricity bill from PG&E that shows a few examples of how our power purchase unit price (\$/kWh) varies depending on several factors, including power purchase quantity, the season, the time of day, and maximum energy demand. CMSA's power purchase unit price is comprised of several cost components such as MCE generation charges and PG&E transportation and delivery charges, and this past year has varied from \$0.15/kWh when the cogeneration system was off-line in January to \$0.78/kWh in August when the cogeneration system produced over 95% of the Agency's power.

Lastly, the Agency's energy consultant, MDB Consulting Engineers (MDB), provided a summary of biogas purchase prices in the PG&E service area. CMSA's reserved price of \$0.105/ kWh is higher than the other purchase prices with the exception of the purchase price through the PG&E BioMAT FIT program.



**Draft MCE Power Purchase Agreement:** Staff submitted an application for the MCE standard Feed-In Tariff (FIT) in early March 2017. MCE reviewed CMSA's application and deemed it complete on March 20, 2017, and has reserved a baseload energy price of \$0.105 per kWh. CMSA staff, CMSA's electrical consultant, MDB, and our construction/contracts attorney, Bill McInerney, have reviewed and commented on MCE's standard power purchase agreement. Staff has had multiple discussions with MCE regarding potential changes to the agreement based the Agency's review. MCE noted that they typically do not accept changes to their standard agreement; however, they are willing to consider limited revisions since their standard agreement was designed for solar power facilities. The following topics were recently discussed with MCE, and agreement sections have been revised accordingly, as shown in the attached draft agreement.

- CMSA's Energy Delivery Profile (Section 2.1.1) – MCE considers all non-solar and wind power installations as “baseload”. This distinction is important as it is used to establish the energy price.
- Sell Excess Arrangement (Section 2.3) – MDB prepared an economic model to compare the “full buy/sell” and “excess sale” alternatives. Modelling results showed the “excess sale” arrangement provides the best return for CMSA. MCE agreed to remove the “full buy/sell” description from the agreement. The agreement does not have a minimum power delivery requirement. There are no penalties if CMSA cannot provide power for any reason during the agreement term.
- Delivery Term (Section 2.4) – The standard agreement term is 20 years. MCE is willing to consider a 10, 15, or 20 year term.
- Qualified Reporting Entity (Section 2.4.1) – MCE will provide the Qualified Reporting Entity service. CMSA does not need to hire a separate entity.
- Contract Price (Section 2.5) – CMSA has a reserved baseload energy price of \$0.105/kWh which corresponds to Condition 2. MCE is currently in Condition 6 which is \$0.095/kWh. The reservation will remain effective until March 20, 2018, during which time CMSA must complete the Development Checklist items in the MCE FIT application, which are scheduled to be complete by March 1, 2018.
- Sale of Facility (Section 2.10) – This section states that upon mutual agreement between CMSA and MCE, the cogeneration facility could be sold to MCE after the seventh contract year. MCE reports that this type of arrangement is typical for solar power installations, and has stated they do not intend to pursue purchasing CMSA's cogeneration facility.
- Conveyance of Green Attributes (Section 3.1) – The agreement requires CMSA to convey all rights to Green Attributes to MCE for the electricity delivered to MCE for the term of the agreement. The value of the Green Attributes allows MCE to pay more



than the market rate for green power. Green Attributes include but are not limited to Renewable Energy Credits, avoided emissions, and reporting rights to avoided emissions. PG&E's E-BioMAT FIT and ReMAT FIT also require the electricity seller to convey all Green Attributes to PG&E for the quantity of electricity sold, which is similar to MCE's requirement. CMSA will retain the rights to all Green Attributes for electricity generated and used on-site as well as any Green Attributes from generating biogas that is used for other purposes.

- Self Generation Incentive Program (SGIP) Funding (Section 4.3.1.A) – CMSA received SGIP funding that paid for approximately 33% of the total project cost to install the existing cogeneration system in 2005/2006. MCE's standard power purchase agreement prohibits the sale of power to MCE from facilities that received SGIP funding. This is consistent with SGIP rules from the beginning of the SGIP program until 2011 when the CPUC modified the SGIP to conform with SB 412 (Kehoe, 2009). The modified SGIP rule allows projects that received SGIP funding to export power to the grid once all of the on-site demand has been met. The amount exported to the grid cannot exceed 25% of on-site consumption on an annual basis. MCE agreed that CMSA could acknowledge that we received SGIP funding, and that current SGIP rules allow CMSA to export power. CMSA's on-site demand plus 25% is roughly equivalent to the total output of the cogeneration system. Therefore, the export limitation will not significantly limit our power sale capacity.
- Scheduling (Section 11) – Scheduling with CAISO is only required for facilities with one megawatt or more of power production capability. CMSA's production capability is below this threshold. Therefore, the obligations, charges, and penalties in this section do not apply.

**CMSA Electricity Service Bill Analysis:** CMSA's electricity bill is comprised of demand charges, energy charges, and various credits and charges related to energy generation and standby reservation. Demand charges are calculated by using the 15-minute interval during each billing month when CMSA uses its maximum amount of electricity, at various demand charge periods, multiplied by the dollars per kW rate for each period. Energy charges are calculated by the amount of electricity, measured in kilowatt-hours (kWh), used per time period, multiplied by the per-kWh rate for those respective time periods. Credits and charges related to energy generation and standby reservation are harder to quantify as they vary significantly based on PG&E formulas. In general, these charges and credits will mostly offset each other.

Both demand and energy charges vary depending on the billing season and the time of day. Currently, MCE's summer energy portion of the bill is \$0.105/kWh for the On Peak period (12:00 to 6:00 Monday through Friday), \$0.065/kWh for the Part Peak period (12:00 to 6:00 Monday through Friday), and \$0.040/kWh for the Off Peak Period (all other times). The average weekly MCE energy charge respecting each period described above is \$0.057/kWh. MCE's summer On Peak demand charge is \$12.60/kW (12:00 to 6:00 Monday through Friday)

and Part Peak demand charge is \$3.10/kW (8:30 to 12:00 and 6:00 to 9:30 Monday through Friday).

CMSA's electricity bill can vary significantly from month to month depending on the operation of our cogeneration system. Whenever possible, CMSA schedules maintenance of our cogeneration system to occur during periods where the demand and energy charges are the lowest. If the cogeneration system is offline during the peak demand period, the monthly energy bill will increase significantly. For comparison, CMSA's August electrical bill including all of the charges noted above was \$17,914. In that period, CMSA purchased 22,880 kWh which equates to a total cost for power (total dollars divided by total energy) of \$0.78/kWh. Last February during the winter period, CMSA purchased 20,968 kWh for a total cost of \$12,224. February's total cost for power was \$0.58/kWh. Even though CMSA purchased 7.4% less power in February, the total cost for power was 25.6% less due to winter pricing rates. CMSA cogeneration system was offline for the entire January billing period and provide an example of the difference in pricing without the cogeneration system. For January, CMSA purchased 421,562 kWh for a total cost of \$62,164. However, the total cost of power was only \$0.15/kWh. This situation highlights how under normal cogeneration system operating conditions, demand charges have the most impact on the total cost of power. Without the cogeneration system, energy charges dominate the total cost of power.

**Renewable Power Purchase Prices:** MDB obtained the following pricing information from other entities that are selling renewable power generated from biogas within PG&E's service area.

Biogas Type	Seller	Buyer	Year	Quantity (kw)	PPA Price	Escalator
Landfill gas	Monterey Regional Waste Management District	Monterey Regional Water Pollution Control	2016	2000	\$0.0805	N/A
Digester gas	City of Tulare Water Pollution Control Facility	SCE (BioMAT FIT)	2017	2800	\$0.1273	0%
Landfill gas	Forward Landfill (Ameresco)	Palo Alto Utilities	2010	4600	\$0.0990	1.5%
Landfill gas	San Joaquin Landfill (Ameresco)	Palo Alto Utilities	2010	4300	\$0.0930	1.5%
Landfill gas	Arenal Landfill (Ameresco)	Palo Alto Utilities	2010	1400	\$0.1045	1.5%
Landfill gas	Crazy Horse Landfill (Ameresco)	Palo Alto Utilities	2010	4300	\$0.0960	1.5%

The best power purchase agreement (PPA) pricing is from the BioMAT FIT Program for which CMSA is not eligible. The next highest pricing is from projects Ameresco completed for the Palo Alto Utility. Ameresco stated that the pricing for the PPA's listed above are no longer available and that currently available power sales options for biogas power are in the 4 to 5 cents per kWh range. Their feedback was to lock in the pricing for as long as possible, as they don't see pricing moving upward for at least five years and then not enough to compensate for the lost revenues in the early years of the project. Another project listed is a bi-lateral arrangement between two Monterey Regional agencies at a lower rate than the MCE FIT.

MDB also found price growth projections from the CEC and federal Energy Information Administration (EIA) that indicate relatively low growth in electricity rates for the next 10 to 20 years. There are a few factors that may alter the projections but they are unlikely to have a dramatic impact on the prices presented. The MCE FIT is nearly fully subscribed and the future of the MCE offering is not yet known. However, given the price trends for renewable power, any future MCE FIT offering will likely be at a lower price than the present offering.

**Amended PG&E RES–BCT Tariff:** PG&E offers a program called Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT). Staff and MDB reviewed this program in early 2016 and determined CMSA did not qualify as the Agency does not have other owned properties to apply a renewable energy generation credit. Under this amended program, one or more of our JPA members could receive an electricity bill credit for the energy that CMSA exports to the electrical grid. However, RES-BCT only provides a credit for the energy generation portion of the power bill. For CMSA, that portion currently ranges from \$0.105/kwh for the summer peak period to \$0.040/kWh for the summer off-peak period. Other costs, including demand and standby reservation charges would not be realized. Therefore, the average annual value of the energy credit through RES-BCT is less than the MCE FIT rate of \$0.105/kWh.

**Alignment with Strategic Plan:** This project is a strategic action to support Goal 3 – Objective 3.1 in the Agency’s FY18 Business Plan as shown below.

*Goal Three: CMSA will further incorporate green business principles and consider renewable resource opportunities in its short- and long-term planning.*

*Objective 3.1: Implement steps to supply the Agency’s extra power.*

*Action c: Negotiate and execute a power sale agreement.*

**Attachments:**

- 1) MCE Feed In Tariff (FIT) Application, dated 3/8/17
- 2) Draft Small Renewable Generator Power Purchase Agreement between CMSA and Marin Clean Energy

MCE FIT Application rev. 6/29/2016

Date Received: 3/8/17FIT Record #: 09Assigned MCE Staff: DP

## MCE FEED IN TARIFF (FIT) APPLICATION

MCE has established a Feed-In Tariff for eligible renewable generators.

### Applicant Information

NAME Brian Thomas		TITLE Technical Service Manager	
COMPANY Central Marin Sanitation Agency			
STREET ADDRESS 1301 Andersen Drive		CITY San Rafael	STATE CA
MAILING ADDRESS (if different from above)		CITY	STATE
PHONE 415-459-1455 x122		EMAIL bthomas@cmsa.us	

### Generator Information – Generator Must Be Located within MCE's Service Territory

Location Address: 1301 Andersen Drive City: San Rafael

Parcel Number: 018-180-46

Fuel Source/Resource Type: Biogas

Generator Output Capacity (at point of delivery): 750 kW (AC, must be less than 1 MW AC per project)

Expected Annual Energy Output: 6,250,000 kWh

Proposed Commercial Operation Date: October 15, 2017

Is there MCE service at this address?  Yes  No

PG&E Account Number: 7837544967

Briefly describe any project-specific discussions with local planning authorities (identify applicable permitting requirements, related timelines, known environmental considerations/concerns, etc.; also identify pertinent points of contact, job titles and contact information):

N/A - existing generating facility that has been operational for several years.

Briefly describe your progress and timeline for completing PG&E's Generator Interconnection Process:

The project passed PG&E supplemental review on 1/11/2017. A Draft Interconnection Agreement has been provided by PG&E and is under review internally. The next step is to sign the Interconnection Agreement pending design and cost review of network upgrades. CMSA anticipates the IA will be signed on April 15, 2017 and network upgrades completed by Oct 2017.



**Financial Plan & Qualifications**

Briefly describe your intended financing plan for the referenced generator (identify prospective partners and intended share of ownership assigned to each): CMSA will utilize a Clean Water State Revolving Fund (CWSRF) Grant from the State Water Resource Control Board and budgeted monies to provide funding for this project

If applicant is a company rather than an individual, briefly describe the ownership structure of the company, including identification of all principals: CMSA is a joint powers agency (JPA) with six-member board of commissioners who are appointed by the governing bodies of each JPA member. CMSA's General Manager is the Chief Executive Officer

Briefly describe the experience and qualifications of your team in developing and operating electric generating assets, including specific experience of the principal(s) who will be leading this development effort: CMSA has operated a biogas fueled gas reciprocating engine co-generation unit on site since April 2006.

Identify the three most recent renewable generating projects that were successfully completed by your team:

1. 750 kW co-generation (biogas fueled reciprocating engine) facility at CMSA
2. \_\_\_\_\_
3. \_\_\_\_\_

**Development Checklist**

Following completion of items 1 – 7 (below), the applicant will be eligible for FIT capacity reservation subject to MCE review and verification.\* Please include expected dates of completion for items 8-15.

1.  Summary of results from the PG&E interconnection pre-planning meeting (REQUIRED)
2.  Signed Feed-In Tariff Application (this document)
3.  Evidence of site control (Lease \_\_\_\_\_, direct ownership , other \_\_\_\_\_)
4.  Financial statements for project participants (developer and financier, in particular)
5.  PG&E Generating Facility Interconnection Application and PG&E notice of complete application

**NOTE:** *In order to maintain a position in the MCE FIT queue, a project must maintain the active status of its interconnection application with PG&E. A project that withdraws its interconnection application for any reason will forfeit its MCE FIT queue position and must re-submit this Application in consideration of the prevailing FIT price (as specified in MCE's FIT) in place at the time of resubmittal.*

6.  Copy of application for RPS certification (CEC) and assigned pre-certification number, if available
7.  Evidence of environmental compliance review / notice of determination receipt

Additional Development Checklist Items	Date Expected	Date Completed
8. Evidence of Use Permit and all applicable permits		2/2/2017
9. Interconnection Agreement (executed by PG&E and developer)	4/15/2017	
10. Signed FIT PPA (by Seller)	4/30/2017	
11. Proof of WREGIS generator registration (or delegation to MCE)	9/1/2017	
12. Qualified Reporting Entity Agreement (CAISO, MCE, OTHER)	9/1/2017	
13. Proof of WREGIS account holder registration (OR, generator registration assigned to MCE)		12/20/2016
14. Execution of standby service agreement with PG&E, as necessary	N/A	
15. Project pre-parallel testing date	9/30/17	

\*Documented completion of Development Checklist items 1-7 will qualify the applicant for a FIT capacity allocation (at the currently applicable price, as determined in consideration of total installed FIT projects and other previously assigned FIT capacity allocations). The allocation will be valid for a period of twelve (12) months. For purposes of this FIT Application, the date of completion for Development Checklist items 1-7 was determined to be 3/20/17. As of this date, the currently applicable FIT price for the proposed project is \$ 105 /MWh. To remain eligible for the noted FIT price, documented completion of all remaining items on the Development Checklist (items 8-15) must be provided to and accepted by the Assigned MCE Staff member no later than 3/20/18. A project in good standing is eligible to receive a one time, twelve month extension for purposes of completing requisite development activities, provided that the pre parallel date recorded in its executed Small Generator Interconnection Agreement with PG&E is expected to occur during the 12-month period of extension. A project must complete the requisite development activities during the specified 12-month extension period in order to retain its FIT price reservation. Projects may re-submit a new Application through MCE's FIT process; project pricing will be adjusted at the time of Application re-submittal in consideration of current program conditions.

Applicants should consult the Assigned MCE Staff member for additional information regarding currently applicable FIT pricing for the proposed renewable generating project. Such pricing may change frequently. The applicant is encouraged to coordinate with assigned MCE staff regarding the completion status of any item on the Development Checklist. Please submit requisite documents to the Assigned MCE Staff member as such documents become available, referencing the applicant's assigned FIT record #. MCE will send email confirmation to the applicant following receipt of any requisite FIT materials, including items listed in the Development Checklist.

**By email:**

David Potovsky  
Power Supply Contracts Manager  
[dpotovsky@mcecleanenergy.org](mailto:dpotovsky@mcecleanenergy.org)

**By Mail:**

MCE (Attn: Feed-In Tariff)  
1125 Tamalpais Ave.  
San Rafael, CA 94901

*Upon receipt, MCE will review the application for completeness. Incomplete applications will be rejected and returned to applicant with no further processing. Applicant may resubmit application with correction of deficiencies. Information received by MCE in conjunction with this application is considered public information. MCE has the right to reject any application. For any questions regarding this application for MCE's Feed-In Tariff program, please call 1 (888) 632-3674.*

**Generator Interconnection (PG&E)**

*PG&E and MCE work in partnership to provide a broad range of services for their customers, and as the organization responsible for distribution system planning, maintenance and safety, PG&E will be your primary point of contact for all matters related to generator interconnection. FIT applicants will work directly with PG&E during the generator interconnection process. Following successful project interconnection, MCE will contract with eligible FIT generators for all electricity and environmental attributes produced by the project. For matters related to generator interconnection, all questions should be directed to [wholesalegen@pge.com](mailto:wholesalegen@pge.com). Applicants may also access the following website for additional information regarding PG&E's generator interconnection process: [www.pge.com/en/b2b/energytransmissionstorage/newgenerator/index.page](http://www.pge.com/en/b2b/energytransmissionstorage/newgenerator/index.page).*

*With regard to PG&E's wholesale generator interconnection application, this process is now administered online and can be accessed at the following link:*

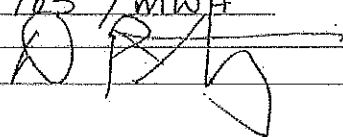
*[www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/egi/](http://www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/egi/)*

By submission of this FIT Application, I acknowledge review and acceptance of the PPA Terms and Conditions available at [www.mcecleanenergy.org/feed-in-tariff/](http://www.mcecleanenergy.org/feed-in-tariff/)

  
Applicant Signature

3/0/17  
Date

To be filled out by MCE Staff

Confirmed COD  
Assigned FIT Rate \$105 / MWH  
Signature 

Date 4/3/17

**MCE** Clean Energy  
My community. My choice.

**SMALL RENEWABLE GENERATOR  
POWER PURCHASE AGREEMENT  
BETWEEN**

AND

MARIN CLEAN ENERGY

MARIN CLEAN ENERGY, a California joint powers authority ("MCE" or "Buyer"), and \_\_\_\_\_ ("Seller" or "CMSA") hereby enter into this Small Renewable Generator Power Purchase Agreement ("Agreement"). Seller and MCE are sometimes referred to in this Agreement jointly as "Parties" or individually as "Party." In consideration of the mutual promises and obligations stated in this Agreement and its appendices, the Parties agree as follows:

**1. DOCUMENTS INCLUDED; DEFINED TERMS**

This Agreement includes the following appendices, which are specifically incorporated herein and made a part of this Agreement.

Appendix A – Definitions

Appendix B – Initial Product Delivery Date Confirmation Letter

Appendix C – Counterparty Notification Requirements for Outage and Generation Schedule Changes

Appendix D – Description and Location of Facility

Appendix E – Facility Drawings

**2. SELLER'S GENERATING FACILITY, PURCHASE PRICES AND PAYMENT**

2.1 Facility. This Agreement governs MCE's purchase of Products from the electrical generating facility as described below in this Section 2.1 (the "Facility"):

2.1.1 The Facility's Energy Delivery Profile is Baseload  
[based on the descriptions provided below in Section 2.1.1 select one of the following designations: 1) "Peak"; 2) "Baseload"; or 3) "Intermittent", as approved by MCE). Seller shall be required to deliver Products consistent with the Energy Delivery Profile of the Facility.

2.1.2 Contract Type [MCE Staff to select one]  
 Standard Feed-In-Tariff  
 Sol Shares (see additional Conditions Precedent in section 2.4.2)



Energy Delivery Profile	Delivery Characteristics	Representative Fuel Type
<b>Peak</b>	Under normal operating conditions, 90 percent or more of daily electric generating output is produced and delivered between the hours of 6:00 A.M. and 10:00 P.M. (generally described as "On-Peak Hours")	Photovoltaic Solar and Solar Thermal
<b>Baseload</b>	Under normal operating conditions, the annual capacity factor for the generator typically exceeds 75 percent, inclusive of planned outages (maintenance)	Landfill Gas, Biomass, Fuel Cell
<b>Intermittent</b>	Delivery characteristics are not consistent with either of the described Peak or Baseload Energy Delivery Profiles	Wind

2.1.3 A description of the Facility, including a summary of its significant components, is attached and incorporated herein as Appendix D. A drawing showing the general arrangements of the Facility, and a single line diagram illustrating the interconnection of the Facility and loads with PG&E's electric distribution system, are attached and incorporated herein as Appendix E.

2.1.4 The name and address PG&E and MCE use to locate the electric service account(s) and premises used to interconnect the Facility with PG&E's distribution systems is:

Central Marin Sanitation Agency

1301 Andersen Drive

San Rafael, CA 94901

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2.2 Contract Capacity. The contract capacity ("Contract Capacity") of the Facility is equal to the nameplate rating of the Facility at unity power factor at 60 degrees Fahrenheit at sea level available upon Commercial Operation of the Facility in the amount shown in Appendix D. Contract Capacity shall not exceed 1,000 kilowatts. Seller shall not modify the Facility to increase the Contract Capacity without the prior written consent of MCE. Any increase in Contract Capacity must be consistent with the interconnection requirements of Pacific Gas & Electric Company ("PG&E").

2.3 Transaction. Subject to the terms of this Agreement, during the Delivery Term of this Agreement, Seller shall sell and deliver, or cause to be delivered, and MCE shall purchase and receive, or cause to be received, the Products from the Facility at the Delivery Point, pursuant to **Seller's election of a (check one)**  full buy/sell or  excess sale arrangement as described in paragraphs 2.3.1 and 2.3.2 below. MCE shall pay Seller the Contract Price, set forth in Section 2.5, in accordance with the

terms hereof. Whenever Facility output is not enough to supply Station Use and transformation and transmission losses to the Delivery Point, Seller shall purchase energy required to serve the Facility's on-site load from MCE pursuant to MCE's applicable retail rate schedule. In no event shall Seller have the right to procure or substitute the Products from sources other than the Facility for sale or delivery to MCE under this Agreement. MCE shall have no obligation to receive or purchase Products from Seller prior to the Initial Product Delivery Date, as defined in Section 2.4, or after the end of the Delivery Term, as defined in Section 2.4.

~~2.3.1 — Full Buy/Sell. Seller agrees to sell to MCE the Facility's gross output of Products delivered to the Delivery Point into the PG&E electrical system for delivery to MCE customers. For purposes of this Section 2.3.1, the Energy conveyed to MCE shall be net of Station Use and transformation and transmission losses.~~

~~2.3.2.3.1~~ Excess Sale. Seller agrees to sell to MCE the Facility's gross output of Products delivered to the Delivery Point into the PG&E electrical system for delivery to MCE customers. For purposes of this Section 2.3.1, the Energy conveyed to MCE shall be net of Station Use and any on-site use by Seller and transformation and transmission losses.

## 2.4 Delivery Term.

2.4.1 Delivery Term – Standard Feed-In-Tariff Option 1: The Seller shall deliver the Products from the Facility to MCE for a period of twenty (20) Contract Years ("Delivery Term"), which shall commence on the first date on which Products are delivered from the Facility to MCE under this Agreement (the "Initial Product Delivery Date") and continue until the end of the last Contract Year unless terminated by the terms of this Agreement. The Initial Product Delivery Date shall occur only when all of the following conditions have been satisfied:

- A. The Commercial Operation Date has occurred, if the Facility was not in operation prior to the Execution Date of this Agreement;
- B. Seller has identified a certified Qualified Reporting Entity ("QRE"), according to criteria established by WREGIS, for the Facility and has executed the appropriate agreement(s) with such QRE to ensure that the net electric energy produced by the Facility will be timely reported to WREGIS for the purpose of creating related renewable energy certificates throughout the Delivery Term; a copy of the aforementioned QRE agreement(s) has been provided to MCE. MCE will provide QRE services for this agreement.
- C. The Facility's status as an Eligible Renewable Energy Resource is demonstrated by Seller's receipt of certification from the CEC and registration with WREGIS; and

Comment [BT1]: MCE is willing to offer a 10, 15, or 20 year period.

- D. As evidence of the Initial Product Delivery Date, the Parties shall execute and exchange the "Initial Product Delivery Date Confirmation Letter" attached hereto as Appendix B on the Initial Product Delivery Date.

2.4.2 Delivery Term – Sol Shares Option 2: The Seller shall deliver the Products from the Facility to MCE for a period of twenty (20) Contract Years ("Delivery Term"), which shall commence on the first date on which Products are delivered from the Facility to MCE under this Agreement (the "Initial Product Delivery Date") and continue until the end of the last Contract Year unless terminated by the terms of this Agreement. The Initial Product Delivery Date shall occur only when all of the following conditions have been satisfied:

- A. The project receives a final conditional use permit from the local planning authority within 45 days of the date this agreement is executed.
- B. The project receives an unconditional financing commitment within 60 days of the date this agreement is executed.
- C. The project developer demonstrates substantial construction mobilization on the project site with 90 days of the execution of this agreement.
- D. The Commercial Operation Date has occurred, if the Facility was not in operation prior to the Execution Date of this Agreement;
- E. Seller has identified a certified Qualified Reporting Entity ("QRE"), according to criteria established by WREGIS, for the Facility and has executed the appropriate agreement(s) with such QRE to ensure that the net electric energy produced by the Facility will be timely reported to WREGIS for the purpose of creating related renewable energy certificates throughout the Delivery Term; a copy of the aforementioned QRE agreement(s) has been provided to MCE
- F. The Facility's status as an Eligible Renewable Energy Resource is demonstrated by Seller's receipt of certification from the CEC and registration with WREGIS; and
- G. as evidence of the Initial Product Delivery Date, the Parties shall execute and exchange the "Initial Product Delivery Date Confirmation Letter" attached hereto as Appendix B on the Initial Product Delivery Date.

2.5 Contract Price. For the Delivery Term, the contract price for the Products (“Contract Price”) equals the amount set forth below for the applicable Energy Delivery Profile and corresponding “condition,” as described below. Amounts owed to Seller by MCE will be calculated by multiplying the Contract Amount by the applicable hourly Energy quantity delivered to MCE (as metered at the Delivery Point), net of any on-site uses or losses, as described above in Section 2.3; however, Seller shall not receive payment for any Products delivered in any hour to MCE in excess of the maximum hourly energy delivery quantity specified in Appendix D.

Prices Shall Apply Under the Following Conditions	Peak Energy Prices (20-year Term,	Baseload Energy Prices (20-year Term, \$/MWh)	Intermittent Energy Prices (20-year Term, \$/MWh)
Condition 1	\$ 137.66	\$ 116.49	\$ 100.57
Condition 2	\$ 120.00	\$ 105.00	\$ 95.00
Condition 3	\$ 115.00	\$ 100.00	\$ 90.00
Condition 4	\$ 110.00	\$ 95.00	\$ 90.00
Condition 5	\$ 105.00	\$ 95.00	\$ 90.00
Condition 6	\$ 95.00	\$ 95.00	\$ 90.00
Condition 7	\$ 90.00	\$ 90.00	\$ 90.00

Initialed (Buyer) \_\_\_\_\_ Date \_\_\_\_\_ Initialed (Seller) \_\_\_\_\_ Date \_\_\_\_\_

**Condition 1:** For any Eligible Resource such that the addition of such Eligible Resource occurs before the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources under contract with MCE) reaches 2 MW.

**Condition 2:** For any Eligible Resource such that the addition of such Eligible Resource occurs after the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources under contract with MCE) has reached 2 MW but before such combined rated generation capacity reaches 4 MW.

**Condition 3:** For any Eligible Resource such that the addition of such Eligible Resource occurs after the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources under contract with MCE) has reached 4 MW but before such combined rated generation capacity reaches 6 MW.

**Condition 4:** For any Eligible Resource such that the addition of such Eligible Resource occurs after the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources under contract with MCE) has reached 6 MW but before such combined rated generation capacity reaches 8 MW.

**Condition 5:** For any Eligible Resource such that the addition of such Eligible Resource occurs after the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources under contract with MCE) has reached 8 MW but before such combined rated generation capacity reaches 10 MW.

**Condition 6:** For any Eligible Resource such that the addition of such Eligible Resource occurs after the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources



under contract with MCE) has reached 10 MW but before such combined rated generation capacity reaches 12 MW.

**Condition 7:** For any Eligible Resource such that the addition of such Eligible Resource occurs after the combined rated generation capacity within the Eligible Territory (as measured by Eligible Resources under contract with MCE) has reached 12 MW but before such combined rated generation capacity reaches 15 MW.

- 2.6 Billing. MCE shall pay Seller by check or Automated Clearing House transfer within approximately 30 days of invoice receipt from Seller if the value of the purchased energy in a month is at least fifty dollars (\$50); if less, MCE may pay Seller quarterly. Seller shall submit invoices for Products to MCE on a monthly basis consistent with the terms of this Agreement. MCE shall have the right, but not the obligation, to read the Facility's meter on a daily basis.
- 2.7 Title and Risk of Loss. Title to and risk of loss related to the Products from the Facility shall transfer from Seller to MCE at the Delivery Point. Seller warrants that it will deliver to MCE all Products from the Facility free and clear of all liens, security interests, claims and encumbrances or any interest therein or thereto by any person arising prior to the Delivery Point.
- 2.8 No Additional Incentives. Seller agrees that during the Term of this Agreement, Seller shall not seek additional compensation or other benefits pursuant to the Self-Generation Incentive Program, as defined in CPUC Decision ("D.") 01-03-073, the California Solar Initiative, as defined in CPUC D.06-01-024, PG&E's net energy metering tariff, MCE's net energy metering tariff, or other similar California ratepayer subsidized program relating to energy production with respect to the Facility.
- 2.9 Private Energy Producer. Seller agrees to provide to Buyer copies of each of the documents identified in California Public Utilities Code Section 2821(d)(1), if applicable, as may be amended from time to time, as evidence of Seller's compliance with such California Public Utilities Code section. Such documentation shall be provided to Buyer within thirty (30) days of Seller's receipt of written request therefore.
- 2.10 Sale of Facility.
  - 2.10.1 Seller shall give MCE at least thirty (30) days' prior notice of the commencement by Seller or any of its affiliates of substantive negotiations with any unaffiliated third party with respect to the sale of any equity interests in Seller or the Facility, or any group(s) of assets or equity interests that includes the Facility, in order to provide MCE with an opportunity to discuss and negotiate with Seller the possible sale of the Facility to MCE.

2.10.2 After the seventh (7th) Contract Year, MCE shall have the right to initiate discussions with Seller regarding the potential sale of the Facility to MCE. MCE may initiate such discussions by notifying Seller in writing of this election at least three (3) months prior to the anticipated purchase date. The purchase price for the Facility shall be equal to the fair market value of the Facility at the applicable purchase date ("Purchase Price"). The Purchase Price amount shall be determined through good faith negotiations by both Parties hereto, except that if the Parties cannot agree upon the fair market value determination, the Parties shall select an independent appraiser who is familiar with appraising solar PV energy facilities to perform the required evaluation. Such appraiser shall determine, at equally shared expense of Buyer and Seller, the fair market value of the Facility as of the applicable purchase date, taking into account such items as deemed appropriate by the appraiser, which may include the resale value of the Facility, and the price of the Product. In the event Seller agrees to sell and MCE agrees to buy the Facility, (a) the Parties shall promptly execute all documents necessary to (X) cause title to the Facility to pass to MCE on the purchase date, free and clear of any liens or encumbrances, and (Y) assign all vendor warranties for the Facility to MCE, and (b) MCE shall pay the Purchase Price to Seller on the purchase date, such payment to be made in accordance with any previous written instructions delivered to MCE for payments under the Agreement. Upon execution of the documents and payment of the Purchase Price, in each case as described in the preceding sentence, this Agreement shall terminate automatically. Notwithstanding anything to the contrary, neither Party is obligated to enter into discussions or negotiations for the sale of the Facility, and neither Party will be obligated to proceed with the purchase or sale of the Facility, or the payment of the Purchase Price, except following the execution of binding, definitive documents.

### 3. GREEN ATTRIBUTES; RESOURCE ADEQUACY BENEFITS

- 3.1 Conveyance of Green Attributes. Seller provides and conveys all rights, title, and interest in all Green Attributes (whether now existing or that hereafter come into existence during the Term) from the Facility to MCE as part of the Product delivered to MCE for the duration of the Delivery Term. Seller represents and warrants that Seller holds the rights to all Green Attributes from the Facility, and Seller agrees to convey and hereby conveys all such Green Attributes to MCE to the fullest extent allowed by applicable law as included in the delivery of the Product from the Facility. Seller represents that the Products and Green Attributes from the Facility have not been, nor will be, sold or used to satisfy any California Renewables Portfolio Standard obligation other than the RPS Requirements applicable to MCE.
- 3.2 WREGIS. Prior to the Initial Product Delivery Date, Seller shall register the Facility in WREGIS and take all other actions necessary to ensure that the Products from the

Facility are tracked for purposes of satisfying the MCE RPS Requirements. Seller warrants that it shall take all necessary steps to ensure the Renewable Energy Credits transferred to Buyer under this Agreement are tracked in WREGIS and transferred in a timely manner to Buyer through WREGIS for purposes of satisfying the MCE RPS Requirements.

- 3.3 Resource Adequacy Benefits. In accordance with California Public Utilities Code Section 399.20(f), Seller conveys to MCE all Resource Adequacy Benefits attributable to the physical generating capacity of Seller's Facility to enable MCE to count such capacity towards MCE's resource adequacy requirement for purposes of California Public Utilities Code Section 380. At MCE's request, Seller shall take all reasonable actions and execute documents and instructions necessary to enable MCE to secure Resource Adequacy Benefits; Seller shall comply with all applicable reporting requirements.

#### 4. REPRESENTATION AND WARRANTIES; COVENANTS

- 4.1 Representations and Warranties. On the Execution Date, each Party represents and warrants to the other Party that:
- 4.1.1 It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;
  - 4.1.2 The execution, delivery and performance of this Agreement is within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it;
  - 4.1.3 This Agreement and each other document executed and delivered in accordance with this Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms;
  - 4.1.4 It is not bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming bankrupt;
  - 4.1.5 There is not pending or, to its knowledge, threatened against it or any of its affiliates any legal proceedings that could materially adversely affect its ability to perform its obligations under this Agreement; and
  - 4.1.6 It is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing

the merits of, and understands and accepts, the terms, conditions and risks of this Agreement.

4.2 General Covenants. Each Party covenants that throughout the Term of this Agreement:

- 4.2.1 It shall continue to be duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;
- 4.2.2 It shall maintain (or obtain from time to time as required, including through renewal, as applicable) all regulatory authorizations necessary for it to legally perform its obligations under this Agreement; and
- 4.2.3 It shall perform its obligations under this Agreement in a manner that does not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it.

4.3 Seller Representation and Warranty and Covenant.

- 4.3.1 Representation and Warranty. In addition to the representations and warranties specified in Section 4.1, Seller makes the following additional representations and warranties as of the Execution Date:
  - A. Seller has not received an incentive under the Self-Generation Incentive Program, as defined in CPUC D.01-03-073, or the California Solar Initiative, as defined in CPUC D.06-01-024. [Seller acknowledges that it has received Self-Generation Incentive Program funding in the past which paid for approximately 33% of the total project costs in 2005/2006. In accordance with current SGIP program requirements, once on-site electric load requirements of Seller have been met, excess generation of electricity attributable to SGIP funded generation improvements may be exported to the grid, provided that the amount exported from such SGIP funded generation improvements does not exceed twenty-five percent (25%) of on-site consumption on an annual basis. Nothing herein shall otherwise limit Seller's ability to export any level of excess generation of electricity not attributable to SGIP Funding and all such unrelated excess generation may be exported once internal consumption limits are met.]
  - B. Seller's execution of this Agreement will not violate California Public Utilities Code Section 2821(d)(1) if applicable.
- 4.3.2 Covenant. Seller hereby covenants that throughout the Term of the Agreement, the Facility is, or will qualify prior to the Initial Product Delivery Date, as an ERR, specifically, Seller and, if applicable, its successors, represents and warrants throughout the term of the Delivery Term of this Agreement that: (a) the Facility qualifies and is certified by the CEC as an Eligible Renewable Energy Resource; and (b) the Facility output of Products delivered to Buyer qualifies under the requirements of



the California Renewables Portfolio Standard. To the extent a change in law occurs after execution of this Agreement that causes this representation and warranty to be materially false or misleading, it shall not be an Event of Default if Seller has used commercially reasonable efforts to comply with such change in law.

## 5. GENERAL CONDITIONS

- 5.1 Facility Care, Interconnection and Transmission Service. If PG&E or MCE does not deem Seller's existing interconnection service, equipment and agreement satisfactory for the delivery of Products under this Agreement, Seller shall execute an interconnection agreement for the Facility with PG&E and pay and be responsible for designing, installing, operating, and maintaining the Facility in accordance with all applicable laws and regulations and shall comply with all applicable MCE, PG&E, CAISO, CPUC and FERC tariff provisions, including applicable interconnection and metering requirements. Seller shall also comply with any modifications, amendments or additions to the applicable tariff and protocols. Prior to and during the Delivery Term, Seller shall arrange and pay independently for any and all necessary costs under any interconnection agreement with PG&E. To make deliveries to MCE, Seller must maintain an interconnection agreement with PG&E in full force and effect.
- 5.2 Metering Requirements. Seller shall comply with all applicable rules in installing a meter appropriate for deliveries pursuant to the Full Buy/Sell or Excess Sale arrangement selected in paragraph 2.2, above, which can be electronically read daily by: (a) a telephone and modem; (b) an analog or digital phone connection; or (c) an internet portal address for PG&E's Energy Data Services ("EDS"). Seller shall be responsible for procuring and maintaining the communication link to electronically retrieve this metering data. A Seller may not install a Solar Generation Meter behind the primary service meter unless (a) the Seller is also the account holder for the primary service meter and (b) the Seller is and remains an active MCE customer throughout the Delivery Term.
- 5.3 Standard of Care. Seller shall: (a) maintain and operate the Facility and Interconnection Facilities, except facilities installed by PG&E, in conformance with all applicable laws and regulations and in accordance with Good Utility Practice; (b) obtain any governmental authorizations and permits required for the construction and operation thereof; and (c) generate, schedule and perform transmission services in compliance with all applicable operating policies, criteria, rules, guidelines and tariffs and Good Utility Practice. Seller shall reimburse MCE for any and all losses, damages, claims, penalties, or liability MCE incurs as a result of Seller's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of the Facility throughout the Term of this Agreement.
- 5.4 Access Rights. MCE, its authorized agents, employees and inspectors shall have the right to inspect the Facility on reasonable advance notice during normal business hours and for any purposes reasonably connected with this Agreement or the exercise of any and all rights secured to MCE by law, or its tariff schedules, PG&E Interconnection Handbook and rules on file with the CPUC. Seller shall keep MCE and PG&E advised of current procedures for communicating with the Facility operator's Safety and Security Departments.

- 5.5 Protection of Property. Seller shall be responsible for protecting the Facility from possible damage resulting from electrical disturbances or faults caused by the operation, faulty operation, or non-operation of the PG&E interconnection facilities.
- 5.6 MCE Performance Excuse; Seller Curtailment.
- 5.6.1 MCE Performance Excuse. MCE shall not be obligated to accept or pay for any Products provided from the Facility during a Dispatch Down Period, or an event of Force Majeure.
- 5.6.2 Seller Curtailment. MCE, PG&E or the CAISO may require Seller to interrupt or reduce deliveries of energy: (a) in the case of PG&E, when necessary to construct, install, maintain, repair, replace, remove, or investigate any of its equipment or part of PG&E's transmission system or distribution system or facilities; or (b) if MCE, PG&E or the CAISO determines that curtailment, interruption, or reduction is necessary because of a System Emergency, as defined in the CAISO Tariff, Forced Outage, Force Majeure as defined in Appendix A, or compliance with Good Utility Practice.
- 5.7 Interconnection Agreement. Seller shall comply with the terms and conditions of the Facility's interconnection agreement between Seller and PG&E.
- 5.8 Greenhouse Gas Emissions. During the Term, Seller acknowledges that a Governmental Authority may require Buyer to take certain actions with respect to greenhouse gas emissions attributable to the generation of Energy, including, but not limited to, reporting, registering, tracking, allocating for or accounting for such emissions. Promptly following Buyer's written request, Seller agrees to take all commercially reasonable actions and execute or provide any and all documents, information or instruments with respect to generation by the Facility reasonably necessary to permit Buyer to comply with such requirements, if any.

## 6. INDEMNITY

Each Party as indemnitor shall save harmless and indemnify the other Party and the directors, officers, and employees of such other Party against and from any and all loss and liability for injuries to persons including employees of either Party, and damages, including property of either Party, resulting from or arising out of: (a) the engineering, design, construction, maintenance, or operation of; or (b) the installation of replacements, additions, or betterments to the indemnitor's facilities. This indemnity and save harmless provision shall apply notwithstanding the active or passive negligence of the indemnitee. Neither Party shall be indemnified for liability or loss, resulting from its sole negligence or willful misconduct. The indemnitor shall, on the other Party's request, defend any suit asserting a claim covered by this indemnity and shall pay all costs, including reasonable attorney fees that may be incurred by the other Party in enforcing this indemnity.

## 7. LIMITATION OF DAMAGES

EXCEPT AS OTHERWISE PROVIDED IN THIS AGREEMENT THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. LIABILITY SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, SUCH DIRECT ACTUAL

DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED UNLESS EXPRESSLY HEREIN PROVIDED. NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE. UNLESS EXPRESSLY HEREIN PROVIDED, AND SUBJECT TO THE PROVISIONS OF SECTION 6 (INDEMNITY), IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE.

## 8. NOTICES

Notices shall, unless otherwise specified herein, be in writing and may be delivered by hand delivery, United States mail, overnight courier service, facsimile or electronic messaging (e-mail). Whenever this Agreement requires or permits delivery of a "notice" (or requires a Party to "notify"), the Party with such right or obligation shall provide a written communication in the manner specified below. A notice sent by facsimile transmission or email will be recognized and shall be deemed received on the Business Day on which such notice was transmitted if received before 5 p.m. Pacific prevailing time (and if received after 5 p.m., on the next Business Day) and a notice by overnight mail or courier shall be deemed to have been received two (2) Business Days after it was sent or such earlier time as is confirmed by the receiving Party unless it confirms a prior oral communication, in which case any such notice shall be deemed received on the day sent. A Party may change its addresses by providing notice of same in accordance with this provision. All written notices shall be directed as follows:

**TO MCE:** Marin Clean Energy  
Attention: Executive Officer  
1125 Tamalpais Ave.  
San Rafael, CA 94901

**TO SELLER:** Central Marin Sanitation Agency  
Attn: Jason Dow  
1301 Andersen Drive  
San Rafael, CA 94901

## 9. INSURANCE

### 9.1 General Liability Coverage.

- 9.1.1 Seller shall maintain during the performance hereof, General Liability Insurance<sup>1</sup> of not less than \$1,000,000 if the Facility's nameplate is over 100 kW, \$500,000 if the nameplate rating of the Facility is over 20 kW to 100kW or \$100,000 if the nameplate rate of the Facility is 20 kW or below of combined single limit or equivalent for bodily injury, personal injury, and property damage as the result of any one occurrence.

9.1.2 General Liability Insurance shall include coverage for Premises Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations.

9.1.3 Seller shall use reasonable efforts to provide for thirty (30) days written notice to MCE prior to cancellation, termination, alteration, or material change of such insurance.

9.2 Additional Insurance Provisions.

9.2.1 Evidence of coverage described above in Paragraph 9.1 shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance maintained by MCE.

9.2.2 MCE shall have the right to inspect or obtain a copy of the original policy(ies) of insurance.

9.2.3 Seller shall furnish the required certificates and endorsements to MCE prior to commencing operation.

10. TERM, DEFAULT, TERMINATION EVENT AND TERMINATION

10.1 Term. The term of this Agreement shall commence upon execution by the duly authorized representatives of each of MCE and Seller; and shall remain in effect until the conclusion of the Delivery Term or unless terminated sooner pursuant to Section 10.3 of this Agreement (the "Term"). All indemnity rights shall survive the termination of this Agreement for twelve (12) months.

10.2 Termination Event. Buyer shall be entitled to terminate the Agreement upon the occurrence of any of the following, each of which is a "Termination Event":

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<sup>1</sup>Governmental agencies which have an established record of self-insurance may provide the required coverage through self-insurance.



- A. The Facility has not achieved Commercial Operation within twelve (12) months of the Execution Date other than as a direct result of a Force Majeure event;
- B. Seller has not sold or delivered energy from the Facility to MCE for a period of twelve (12) consecutive months other than as a direct result of a Force Majeure event;
- C. Seller fails to deliver Energy from the Facility consistent with the selected Energy Delivery Profile as calculated over the most recent rolling twenty four (24) month period;
- D. Seller breaches its covenant to maintain its status as an ERR as set forth in Section 4.3.2 of the Agreement.

### 10.3 Termination.

10.3.1 Declaration of a Termination Event. If a Termination Event has occurred and is continuing, Buyer shall have the right to: (a) send notice, designating a day, no earlier than five days after such notice is deemed to be received (as provided in Section 8) and no later than 20 days after such notice is deemed to be received (as provided in Section 8), as an early termination date of this Agreement ("Early Termination Date") unless Seller has timely communicated with Buyer and the Parties have agreed to resolve the circumstances giving rise to the termination Event; (b) accelerate all amounts owing between the Parties; and (c) terminate this Agreement and end the Delivery Term effective as of the Early Termination Date.

10.3.2 Release of Liability for Termination Event. Upon termination of this Agreement pursuant to Section 10.3.1, neither Party shall be under any further obligation or subject to liability hereunder, except with respect to the indemnity provision in Section 6 hereof, which shall remain in effect for a period of 12 months following the Early Termination Date.

## 11. SCHEDULING

11.1 Scheduling Obligations. As necessary, MCE shall designate Seller's Scheduling Coordinator (as defined by CAISO Tariff). At MCE's direction, MCE's designated scheduling coordinator will schedule the output of the Facility using Good Utility Practices and Seller shall employ Good Utility Practices and exercise reasonable efforts to operate and maintain the Facility. All necessary generation interconnection and scheduling services shall be performed in accordance with all applicable operating policies, criteria, guidelines and tariffs of the CAISO or its successor, and any other generally accepted operational requirements. Seller, at its own expense, shall be responsible for complying with all applicable contractual, metering and interconnection requirements. Seller shall promptly notify MCE and the Scheduling

Coordinator, as applicable, of significant (i.e., greater than 100 kW) changes to its energy schedules using Scheduling Coordinator's web site (see Appendix C). Seller will exercise reasonable efforts to comply with conditions that might arise if the CAISO modifies or amends its tariffs, standards, requirements, and/or protocols in the future.

## 11.2 CAISO Charges.

11.2.1 CAISO Charge Obligations. To the extent that the Facility's electric output is scheduled with the CAISO, MCE and Seller shall cooperate to minimize CAISO delivery imbalances and any resulting fees, liabilities, assessments or similar charges assessed by the CAISO ("CAISO Charges") to the extent possible, and shall each promptly notify the other as soon as possible of any material loss of system capability, deviation or imbalance that is occurring or has occurred. In the event that the Facility's electric output is scheduled with the CAISO, Seller shall reimburse MCE for any CAISO Charges MCE incurs as a result of Seller's loss of system capability, deviation or imbalance. Any such CAISO Charges reimbursable to MCE shall be limited to the period until the commencement of the next settlement period following Seller's notification for which the delivery schedule can be adjusted. Notwithstanding anything to the contrary herein, in the event Seller makes a change to its schedule on the actual date and time of delivery for any reason (other than an adjustment imposed by CAISO) which results in differences between the Facility's actual generation and the scheduled generation (whether in part or in whole), Seller shall use reasonable efforts to notify MCE and the Scheduling Coordinator. MCE and the Scheduling Coordinator will make commercially reasonable efforts to accommodate Seller's changes and mitigate any imbalance penalties or charges levied for such changes.

11.2.2 CAISO Penalties. To the extent that the Facility's electric output is scheduled with the CAISO, Seller shall be responsible for any "non-Performance Penalties" assessed to MCE by the CAISO ("CAISO Penalties"), under the CAISO Tariff Enforcement Protocol, and not due to any fault of MCE, which shall include, without limitation, any deviation, imbalance or uninstructed energy charges or penalties payable to the CAISO that are due to the fault of Seller. To the extent that Seller materially deviates from its energy schedules (other than an adjustment imposed by the CAISO, a deviation due to any fault of MCE, or an excused Seller failure to deliver, whether for reasons of Force Majeure or otherwise), and such departure results in CAISO Penalties being assessed to MCE, such CAISO Penalties shall be passed on to Seller. Any such CAISO Penalties passed on to Seller shall be limited to the period until the commencement of the next settlement period following Seller's notification (as described above) for which the delivery schedule can be adjusted.

## 12. CONFIDENTIALITY

Seller authorizes MCE to release to the California Energy Commission ("CEC") and/or the CPUC information regarding the Facility, including the Seller's name and location, and the size, location and operational characteristics of the Facility, the Term, the ERR type, the Initial Product Delivery Date and the net power rating of the Facility, as requested from time to time pursuant to the CEC's or CPUC's rules and regulations.

The Parties hereto acknowledge that MCE is a local agency and subject to provisions of the California Public Records Act (Cal. Government Codes section 6250 and following). In the event that Seller contends that any information disclosed or required to be disclosed by Seller pursuant to this Agreement is confidential, Seller shall clearly identify such documents as such before transmitting the same to MCE. In the event that any claim or action is filed against MCE pursuant to the Public Records Act seeking the disclosure of any records or documents provided by Seller which were marked confidential hereunder, MCE shall notify Seller in writing of such fact and Seller shall thereupon defend, save harmless and indemnify MCE from all costs and expense in connection with said claim or litigation, including attorney's fees, and agrees to abide by the final decision of a court of competent jurisdiction in connection therewith.

## 13. ASSIGNMENT

Except as expressly provided in this Section, neither Party shall assign this Agreement or its rights hereunder without the prior written consent of the other Party, which consent shall not be unreasonably withheld; provided, however, either Party may, without the consent of the other Party (and without relieving itself from liability hereunder), transfer, sell, pledge, encumber or assign this Agreement or the accounts, revenues or proceeds hereof to its financing providers and the financing provider(s) shall assume the payment and performance obligations provided under this Agreement with respect to the transferring Party provided, however, that in each such case, any such assignee shall agree in writing to be bound by the terms and conditions hereof and so long as the transferring Party delivers such tax and enforceability assurance as the non-transferring Party may reasonably request. Notwithstanding anything to the contrary set forth herein, Seller may transfer or assign its interest under this Agreement without the consent of Buyer, to (a) an affiliate, subsidiary, or parent of Seller, or a corporation, partnership or other legal entity wholly owned by Seller (collectively, an "Affiliated Party"), or (b) a successor to Seller by purchase, merger, consolidation or reorganization (each such transfer a "Permitted Transfer" and any such assignee or transferee of a Permitted Transfer, a "Permitted Transferee"); provided that Seller shall give Buyer written notice at least ten (10) days prior to the effective date of the proposed Permitted Transfer and any such Permitted Transferee shall agree in writing to be bound by the terms and conditions hereof. As used herein, (1) "parent" shall mean a company which owns a majority of Seller's voting equity; (2) "subsidiary" shall mean an entity wholly owned by Seller or at least fifty-one percent (51%) of whose voting equity is owned by Seller; and (3) "affiliate" shall mean an entity controlled, controlling or under common control with Seller.

## 14. APPLICABLE LAW

THIS AGREEMENT AND THE RIGHTS AND DUTIES OF THE PARTIES HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED, ENFORCED AND PERFORMED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA, WITHOUT REGARD TO PRINCIPLES OF CONFLICTS OF LAW. TO THE EXTENT ENFORCEABLE AT SUCH TIME, EACH PARTY WAIVES ITS RESPECTIVE RIGHT TO ANY JURY TRIAL WITH RESPECT TO ANY LITIGATION ARISING UNDER OR IN CONNECTION WITH THIS AGREEMENT.

#### 15. NO RECOURSE AGAINST CONSTITUENT MEMBERS OF MCE

MCE is organized as a Joint Powers Authority in accordance with the Joint Exercise of Powers Act of the State of California (Government Code Section 6500, et seq.) pursuant to the Joint Powers Agreement and is a public entity separate from its constituent members. MCE shall solely be responsible for all debts, obligations and liabilities accruing and arising out of this Agreement. Seller shall have no rights and shall not make any claims, take any actions or assert any remedies against any of MCE's constituent members in connection with this Agreement.

#### 16. SEVERABILITY

If any provision in this Agreement is determined to be invalid, void or unenforceable by the CPUC or any court having jurisdiction, such determination shall not invalidate, void, or make unenforceable any other provision, agreement or covenant of this Agreement and the Parties shall use their best efforts to modify this Agreement to give effect to the original intention of the Parties.

#### 17. COUNTERPARTS

This Agreement may be executed in one or more counterparts each of which shall be deemed an original and all of which shall be deemed one and the same Agreement. Delivery of an executed counterpart of this Agreement by facsimile or PDF transmission will be deemed as effective as delivery of an originally executed counterpart. Each Party delivering an executed counterpart of this Agreement by facsimile or PDF transmission will also deliver an originally executed counterpart, but the failure of any Party to deliver an originally executed counterpart of this Agreement will not affect the validity or effectiveness of this Agreement.

#### 18. GENERAL

No amendment to or modification of this Agreement shall be enforceable unless reduced to writing and executed by both parties. This Agreement shall not impart any rights enforceable by any third party other than a permitted successor or assignee bound to this Agreement. Waiver by a Party of any default by the other Party shall not be construed as a waiver of any other default. The term "including" when used in this Agreement shall be by way of example only and shall not be considered in any way to be in limitation.

Absent the prior mutual written agreement of all parties to the contrary, the standard of review for any proposed changes to the rates, terms, and/or conditions of service of this Agreement,



whether proposed by a Party, a non-party or FERC acting sua sponte, shall be the “public interest” standard of review set forth in *United Gas Pipe Line Co. v. Mobile Gas Service Corp.*, 350 U.S. 332 (1956) and *Federal Power Commission v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956).

In addition, to the fullest extent permitted by applicable law, each Party, for itself and its successors and assigns, hereby expressly and irrevocably waives any rights it can or may have, now or in the future, whether under §§ 205 and/or 206 of the Federal Power Act or otherwise, to seek to obtain from FERC by any means, directly or indirectly (through complaint, investigation or otherwise), and each hereby covenants and agrees not at any time to seek to so obtain, an order from FERC changing any section of this Agreement specifying the rate, charge, classification, or other term or condition agreed to by the Parties, it being the express intent of the Parties that, to the fullest extent permitted by applicable law, neither Party shall unilaterally seek to obtain from FERC any relief changing the rate, charge, classification, or other term or condition of this Agreement, notwithstanding any subsequent changes in applicable law or market conditions that may occur. In the event it were to be determined that applicable law precludes the Parties from waiving their rights to seek changes from FERC to their market-based power sales contracts (including entering into covenants not to do so) then the foregoing shall not apply, provided that, consistent with the foregoing, neither Party shall seek any such changes except solely under the “public interest” application of the “just and reasonable” standard of review and otherwise as set forth in the foregoing.

The headings used herein are for convenience and reference purposes only.

IN WITNESS WHEREOF, each Party has caused this Agreement to be duly executed by its authorized representative as of the date of last signature provided below.

**MARIN CLEAN ENERGY**

By: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**SELLER**

By: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

## Appendix A

### DEFINITIONS

“Agreement” has the meaning set forth in the preamble.

“Business Day” means any day except a Saturday, Sunday, or a Federal Reserve Bank holiday during the hours of 8:00 a.m. and 5:00 p.m. local time for the relevant Party’s principal place of business where the relevant Party in each instance shall be the Party from whom the notice, payment or delivery is being sent.

“CAISO” means the California Independent System Operator Corporation or any successor entity performing similar functions.

“CAISO Tariff” means the CAISO FERC Electric Tariff as amended from time to time.

“California Renewables Portfolio Standard” means the renewable energy program and policies established by Senate Bill 1038 and 1078, codified in California Public Utilities Code Sections 399.11 through 399.20 and California Public Resources Code Sections 25740 through 25751, as such provisions may be amended or supplemented from time to time.

“CEC” means the California Energy Resources Conservation and Development Commission, also known as the California Energy Commission, or its successor agency.

“Commercial Operation” means the period of operation of the Facility once the Commercial Operation Date has occurred.

“Commercial Operation Date” means the date on which the Facility is operating and is in compliance with applicable interconnection and system protection requirements, and able to produce and deliver energy pursuant to the terms of this Agreement.

“Contract Capacity” has the meaning set forth in Section 2.2.

“Contract Price” has the meaning set forth in Section 2.5.

“Contract Year” means a period of twelve (12) consecutive months with the first Contract Year commencing on the first day of the month immediately following the Initial Product Delivery Date and each subsequent Contract Year commencing on the anniversary of the Initial Product Delivery Date.

“CPUC” means the California Public Utilities Commission, or successor entity.

“Delivery Point” means the point of interconnection to the PG&E distribution system.

“Delivery Term” has the meaning set forth in Section 2.4.

“Dispatch Down Period” means: (a) curtailments ordered by the CAISO or PG&E as a result of a System Emergency, as defined in the CAISO Tariff; or (b) scheduled or unscheduled maintenance on PG&E’s transmission, distribution or interconnection facilities that prevents Buyer from receiving Delivered Energy at the Delivery Point.

“Distribution Operator” means PG&E.

“Early Termination Date” has the meaning set forth in Section 10.3.1.

“Eligible Renewable Energy Resource” or “ERR” has the meaning set forth in Public Utilities Code Sections 399.12 and California Public Resources Code Section 25741, as either code provision may be amended or supplemented from time to time.

“Energy” means electrical energy delivered to the PG&E Distribution System for the benefit of MCE with the voltage and quality required by PG&E, and measured in megawatt-hours (“MWh”) or kilowatt-hours (“kWh”).

“Energy Delivery Profile” means the manner in which Energy is delivered from the Facility in consideration of the delivery characteristics described in 2.1.1.

“Expected Annual Output” means the Energy that the Facility can be expected to produce during a typical year of operation, factoring in typical weather patterns, expected fuel availability, etc. The Expected Annual Output is shown in Appendix D.

“ERR Credits” means any and all credits associated with electricity procured from Eligible Renewable Energy Resources, pursuant to the California Renewables Portfolio Standard, that are directly attributable to electric production from the Facility.

“Execution Date” means the latest signature date found at the end of the Agreement.

“Facility” has the meaning set forth in Section 2.1.

“FERC” means the Federal Energy Regulatory Commission or any successor government agency.

“Forced Outage” means any unplanned reduction or suspension of the electrical output from the Facility resulting in the unavailability of the Facility, in whole or in part, in response to a mechanical, electrical, or hydraulic control system trip or operator-initiated trip in response to an alarm or equipment malfunction and any other unavailability of the Facility for operation, in



whole or in part, for maintenance or repair that is not a scheduled maintenance outage and not the result of Force Majeure.

“Force Majeure” means any event or circumstance which wholly or partly prevents or delays the performance of any material obligation arising under this Agreement, but only if and to the extent (i) such event is not within the reasonable control, directly or indirectly, of the Party seeking to have its performance obligation(s) excused thereby, (ii) the Party seeking to have its performance obligation(s) excused thereby has taken all reasonable precautions and measures to prevent or avoid such event or mitigate the effect of such event on such Party’s ability to perform its obligations under this Agreement and which by the exercise of due diligence such Party could not reasonably have been expected to avoid and which by the exercise of due diligence it has been unable to overcome, and (iii) such event is not the direct or indirect result of the negligence or the failure of, or caused by, the Party seeking to have its performance obligations excused thereby. Force Majeure shall not be based on: (i) MCE’s inability economically to use or resell the energy or capacity purchased hereunder; (ii) Seller’s ability to sell the energy, capacity or other benefits produced by or associated with the Facility at a price greater than the price set forth in this Agreement, (iii) Seller’s inability to obtain approvals of any type for the construction, operation, or maintenance of the Facility; (iv) Seller’s inability to obtain sufficient fuel to operate the Facility, except if Seller’s inability to obtain sufficient fuel is caused by an event of Force Majeure of the specific type described in any of subsections (i) through (iv) of this definition of Force Majeure; (v) a Forced Outage except where such Forced Outage is caused by an event of Force Majeure of the specific type described in any of subsections (i) through (iv) of this definition of Force Majeure; (vi) a strike or labor dispute limited only to Seller, Seller’s affiliates, the Engineering, Procurement, and Construction Contractor or subcontractors thereof; or (vii) any equipment failure not caused by an event of Force Majeure of the specific type described in any of subsections (i) through (iv) of this definition of Force Majeure.

“Good Utility Practice” means any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4). Seller acknowledges that the use of Good Utility Practice by Seller does not exempt Seller from any obligations set forth in this Agreement. Good Utility Practice includes, at a minimum, those professionally responsible practices, methods and acts that comply with manufacturers’ warranties, restrictions in this Agreement, the interconnection requirements of PG&E, the requirements of Governmental Authorities, and WECC and NERC standards.

Good Utility Practice also includes taking reasonable steps to ensure that:

a) Equipment, materials, resources, and supplies, including spare parts inventories, are available to meet the Facility's needs;

b) Sufficient operating personnel are available at all times and are adequately experienced and trained and licensed as necessary to operate the Facility properly and efficiently, and are capable of responding to reasonably foreseeable emergency conditions at the Facility and emergencies whether caused by events on or off the Facility site;

c) Preventive, routine, and non-routine maintenance and repairs are performed on a basis that ensures reliable, long-term and safe operation of the Facility, and are performed by knowledgeable, trained, and experienced personnel utilizing proper equipment and tools;

d) Appropriate monitoring and testing are performed to ensure equipment is functioning as designed;

e) Equipment is not operated in a reckless manner, in violation of manufacturer's guidelines or in a manner unsafe to workers, the general public, or the connecting utility's electric system or contrary to environmental laws, permits or regulations or without regard to defined limitations such as, flood conditions, safety inspection requirements, operating voltage, current, volt ampere reactive (VAR) loading, frequency, rotational speed, polarity, synchronization, and control system limits; and equipment and components are designed and manufactured to meet or exceed the standard of durability that is generally used for electric energy generating facilities operating in the Western United States and will function properly over the full range of ambient temperature and weather conditions reasonably expected to occur at the Facility site and under both normal and emergency conditions.

"Green Attributes" means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Facility, and its displacement of conventional energy generation. Green Attributes include but are not limited to ERR Credits and Renewable Energy Credits, as well as: (1) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and other pollutants; (2) any avoided emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) nitrous oxide, hydrofluoro carbons, perfluoro carbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere; (3) the reporting rights to these avoided emissions such as Green Tag Reporting Rights. Green Tag Reporting Rights are the right of a Green Tag Purchaser to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party at the Green Tag Purchaser's discretion, and include without limitation those Green Tag Reporting Rights accruing under Section 1605(b) of The Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Green Tags are accumulated on MWh basis and one Green Tag represents the Green Attributes associated with one (1) MWh of energy. Green Attributes do not include: (i) any energy, capacity, reliability or other power attributes from the Facility; (ii) production tax credits associated with the construction or operation of the Facility and other financial incentives in the form of credits, reductions, or allowances associated with the Facility that are applicable to a state or federal income taxation obligation; (iii) fuel-related subsidies or "tipping fees" that may

be paid to Seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular preexisting pollutants or the promotion of local environmental benefits; or (iv) emission reduction credits encumbered or used by the Facility for compliance with local, state, or federal operating and/or air quality permits. If Seller's Facility is a biomass or landfill gas facility and Seller receives any tradable Green Attributes based on the greenhouse gas reduction benefits or other emission offsets attributed to its fuel usage, it shall provide Buyer with sufficient Green Attributes to ensure that there are zero net emissions associated with the production of electricity from such facility.

"Initial Delivery Period" shall mean the calendar year in which the Initial Product Delivery Date occurs.

"Initial Product Delivery Date" has the meaning set forth in Section 2.4.

"Law" means any statute, law, treaty, rule, regulation, ordinance, code, permit, enactment, injunction, order, writ, decision, authorization, judgment, decree or other legal or regulatory determination or restriction by a court or Governmental Authority of competent jurisdiction, including any of the foregoing that are enacted, amended, or issued after the Execution Date, and which becomes effective during the Delivery Term; or any binding interpretation of the foregoing.

"MCE RPS Requirements" means (i) the California Renewables Portfolio Standard-compliant energy MCE is required to procure pursuant to the California Renewables Portfolio Standard, and (ii) any additional California Renewables Portfolio Standard-compliant energy procured by MCE in excess of the mandatory California Renewables Portfolio Standard requirements.

"NERC" means the North American Electric Reliability Corporation, or any successor organization.

"Party" or "Parties" has the meaning set forth in the preamble.

"PG&E" means Pacific Gas & Electric Company, or any successor entity.

"Products" means Energy, Contract Capacity and Green Attributes.

"Renewable Energy Credit" has the meaning set forth in California Public Utilities Code Section 399.12(g), as may be amended from time to time or as further defined or supplemented by Law.

"Resource Adequacy" means a requirement by a governmental authority or in accordance with its FERC-approved tariff, or a policy approved by a local regulatory authority, that is binding upon either Party and that requires such Party procure a certain amount of electric generating capacity.

"Resource Adequacy Benefits" means the rights and privileges attached to the Facility that satisfy any entity's resource adequacy obligations, as those obligations are set forth in any Resource Adequacy Rulings and shall include any local, zonal or otherwise locational attributes associated with the Facility.

“Resource Adequacy Rulings” means CPUC Decisions 04-01-050, 04-10-035, 05-10-042, 06-06-064, 06-07-031 and any subsequent CPUC ruling or decision, or any other resource adequacy laws, rules or regulations enacted, adopted or promulgated by any applicable governmental authority, as such decisions, rulings, laws, rules or regulations may be amended or modified from time-to-time during the Delivery Term.

“Seller” has the meaning set forth in the preamble.

“Station Use” means energy consumed within the Facility’s electric energy distribution system as losses, as well as energy used to operate the Facility’s auxiliary equipment. The auxiliary equipment may include, but is not limited to, forced and induced draft fans, cooling towers, boiler feeds pumps, lubricating oil systems, plant lighting, fuel handling systems, control systems, and sump pumps.

“Term” has the meaning set forth in Section 10.1.

“WREGIS” means the Western Renewable Energy Generating Information System or any successor renewable energy tracking program.



**Appendix B**

**INITIAL PRODUCT DELIVERY DATE CONFIRMATION LETTER**

In accordance with the terms of that certain Small Renewable Generator Power Purchase Agreement dated \_\_\_\_\_ (“Agreement”) by and between the Marin Clean Energy (“MCE”) and \_\_\_\_\_ (“Seller”), this letter serves to document the parties further agreement that MCE will begin receiving the Products, as specified in the Agreement, as of this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ (the “Initial Product Delivery Date”). This letter confirms the Initial Product Delivery Date, as defined in the Agreement, as the date referenced in the preceding sentence.

Pursuant to the Agreement, Seller hereby represents and warrants that as of the date hereof that:

- A. The Commercial Operation Date has occurred, if the Facility was not in operation prior to the Execution Date of this Agreement;
- B. Seller has identified a certified QRE, according to criteria established by WREGIS, for the Facility and has executed the appropriate agreement(s) with such QRE to ensure that the net electric energy produced by the Facility will be timely reported to WREGIS for the purpose of creating related renewable energy certificates throughout the Delivery Term; a copy of the aforementioned QRE agreement(s) has been provided to MCE.
- C. The Facility’s status as an Eligible Renewable Energy Resource, is demonstrated by Seller’s receipt of certification from the CEC and evidence of Seller’s registration with WREGIS has been satisfied.

IN WITNESS WHEREOF, each Party has caused this Agreement to be duly executed by its authorized representative as of the date of last signature provided below:

By Seller  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: Marin Clean Energy  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

## Appendix C

### COUNTERPARTY NOTIFICATION AND FORECASTING REQUIREMENTS

#### A. NOTIFICATION REQUIREMENTS FOR START-UP AND SHUTDOWN

Prior to paralleling to or after disconnecting from the electric system, ALWAYS notify your designated Distribution Operator as follows:

1. Call your Distribution Operator for permission to parallel before any start-up.
2. Call your Distribution Operator again after start-up with parallel time.
3. Call your Distribution Operator after any separation and report separation time as well as date and time estimate for return to service.

#### B. FORECASTING REQUIREMENTS

Seller shall abide with all established requirements and procedures described below:

1. Generating Facilities of 1000 kW must comply with the CAISO Tariff and Protocols while generating facilities under 1000 kW must comply with all applicable interconnection, communication and metering rules; and
2. Annual Energy Forecast: No later than January 1<sup>st</sup> of each year during the Delivery Term, Generating Facilities 100 kW and greater will electronically provide MCE and the Scheduling Coordinator, if applicable, with an Energy Forecast for the next calendar year.

The Annual Energy Forecast submitted to MCE and the Scheduling Coordinator, if applicable, shall:

1. Not include any anticipated or expected electric energy losses;
2. Be provided as instructed by MCE;
3. Include Seller's contact information and an indication of the Generating Facilities for which the forecast is being provided;
4. Identify the expected dates and times of any planned outages associated with the Generating Facilities.

**Appendix D**

**DESCRIPTION AND LOCATION OF FACILITY**

1. Seller's Feed-In Tariff Record Number as assigned by MCE: \_\_\_\_\_
2. The Facility is described as \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. The Facility is located at the following address \_\_\_\_\_.
4. The Facility's primary fuel is \_\_\_\_\_
5. The Facility has a Contract Capacity of \_\_\_\_\_ kilowatts ("kW").
6. The maximum hourly energy delivery quantity is \_\_\_\_\_ kWh (Contract Capacity x 1 hour).
7. The Expected Annual Energy Output of the Facility is \_\_\_\_\_ kWh.
8. The scheduled Commercial Operation Date of the Facility is \_\_\_\_\_.
9. The Facility has a primary voltage level of \_\_\_\_\_ kilovolts ("kV")
10. The Facility is connected to PG&E's electric system at \_\_\_\_\_ kV.
11. MCE shall revise this Appendix D as appropriate, give written notice to Seller regarding the revision, and issue a new Appendix D which shall then become part of the Agreement, in the event of changes to the information contained within Appendix D.

## **Appendix E**

### **FACILITY DRAWINGS**

[Seller to include: (i) a drawing showing the general arrangements of the Facility, and (ii) a single line diagram illustrating the interconnection of the Facility and loads with PG&E's electric distribution system]