



The Mission of the Las Gallinas Valley Sanitary District is to protect public health and the environment by providing effective wastewater collection, treatment, and recycling services.

DISTRICT BOARD
Megan Clark
Rabi Elias
Craig K. Murray
Judy Schriebman
Crystal J. Yezman

DISTRICT ADMINISTRATION
Mike Prinz,
General Manager
Michael Cortez,
District Engineer
Mel Liebmann,
Plant Manager
Greg Pease,
Collection System/Safety Manager
Robert, Ruiz,
Administrative Services Manager

BOARD MEETING AGENDA

February 6, 2020

MATERIALS RELATED TO ITEMS ON THIS AGENDA ARE AVAILABLE FOR PUBLIC INSPECTION DURING NORMAL BUSINESS HOURS AT THE DISTRICT OFFICE, 101 LUCAS VALLEY ROAD, SUITE 300, SAN RAFAEL, OR ON THE DISTRICT WEBSITE WWW.LGVSD.ORG

Estimated
Time

NOTE: Final board action may be taken on any matter appearing on agenda.

4:30 PM

1. PUBLIC COMMENT

This portion of the meeting is reserved for persons desiring to address the Board on matters not on the agenda and within the jurisdiction of the Las Gallinas Valley Sanitary District. Presentations are generally limited to three minutes. All matters requiring a response will be referred to staff for reply in writing and/or placed on a future meeting agenda. Please contact the General Manager before the meeting.

4:35 PM

2. CONSENT CALENDAR:

These items are considered routine and will be enacted, approved or adopted by one motion unless a request for removal for discussion or explanation is received from the staff or the Board.

- A. Approve the Board Minutes for January 9th and January 16, 2020
- B. Approve the Warrant List for February 6, 2020
- C. Approve conference request for Clark and Elias to attend the WateReuse Conference March 15-17 in San Francisco
- D. Approve conference request for Elias to attend the CWEA Annual Conference in Denver, Colorado March 31 – April 3, 2020
- E. Approve training for Murray to take Principles of Real Estate Negotiation from IRWA Jan 30 – Jan 31, 2020 in Pismo Beach, CA.
- F. Approve Application of Allocation of Capacity for APN 175-322-02 Chevron Gas Station
- G. Approve Application of Allocation of Capacity for APN 179-270-12 San Rafael Fire Station
- H. Approve Order Regarding Publication Ordinance 181

Possible expenditure of funds: Yes, Items B through E.

Staff recommendation: Adopt Consent Calendar – Items A through H.

- 4:45 PM** **3. 101 LUCAS VALLEY ROAD, SUITE 300 LEASE AMENDMENT**
Board to review and approve 101 Lucas Valley Road, Suite 300 Lease Amendment.

- 5:15 PM** **4. INFORMATION ITEMS:**
A. STAFF/CONSULTANT REPORTS:
 - 1. General Manager Report – Verbal
 - 2. Retention of HDR, Inc. for Class B Land Application Evaluation Services– Written

- 5:40 PM** **5. BOARD MEMBER REPORTS:**
 - 1. CLARK
 - a. NBWA Board Committee, NBWA Conference Committee, Ad Hoc HR Committee re: 2019 GM Evaluation, Ad Hoc HR Committee re: 2019 Employee Climate Survey, Other Reports
 - 2. ELIAS
 - a. NBWRA, Ad Hoc Engineering Committee re: STPURWE, Other Reports
 - 3. MURRAY
 - a. Marin LAFCO, CASA Energy Committee, Ad Hoc HR Committee re: 2019 GM Evaluation Other Reports - CASA Energy Workgroup Meeting
 - 4. SCHRIEBMAN
 - a. Gallinas Watershed Council/Miller Creek Watershed Council, JPA Local Task Force NBWA Tech Advisory Committee, Ad Hoc HR Committee re: 2019 Employee Climate Survey, Other Reports- CASA Winter Conference
 - 5. YEZMAN
 - a. Flood Zone 7,CSRMA, Ad Hoc Engineering Committee re: STPURWE, Other Reports

- 6:00 PM** **6. BOARD REQUESTS:**
 - A. Board Meeting Attendance Requests – Verbal
 - B. Board Agenda Item Requests – Verbal

- 6:05 PM** **7. VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE**

- 6:10 PM** **8. ADJOURNMENT**

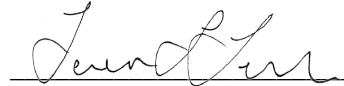
FUTURE BOARD MEETING DATES: FEBRUARY 20, MARCH 5, MARCH19, 2020

AGENDA APPROVED:

Rabi Elias Board President

Patrick Richardson, Legal Counsel

CERTIFICATION: I, Teresa Lerch, District Secretary of the Las Gallinas Valley Sanitary District, hereby declare under penalty of perjury that on or before February 3, 2020 at 4:30 p.m., I posted the Agenda for the Board Meeting of said Board to be held February 6, 2020 at the District Office, located at 101 Lucas Valley Road, Suite 300, San Rafael, CA.



Teresa L. Lerch
District Secretary

The Board of the Las Gallinas Valley Sanitary District meets regularly on the second and fourth Thursday of each month. The District may also schedule additional special meetings for the purpose of completing unfinished business and/or study session. Regular meetings are held at the District Office, 101 Lucas Valley Road, Suite 300, San Rafael, CA.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the District at (415) 472-1734 at least 24 hours prior to the meeting. Notification prior to the meeting will enable the District to make reasonable accommodation to help ensure accessibility to this meeting.

SPECIAL MEETING MINUTES OF JANUARY 9, 2020

THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT MET IN OPEN SESSION ON JANUARY 9, 2019 AT 4:19 PM, AT THE DISTRICT OFFICE, 101 LUCAS VALLEY ROAD, SUITE 300, SAN RAFAEL, CALIFORNIA.

BOARD MEMBERS PRESENT: M. Clark, R. Elias, C. Murray and J. Schriebman

BOARD MEMBERS ABSENT: None.

STAFF PRESENT: Mike Prinz, General Manager; Teresa Lerch, District Secretary; Robert Ruiz, Administrative Services Manager

OTHERS PRESENT: Dave Byers, District Counsel.

ANNOUNCEMENT: President Murray announced that the agenda had been posted as evidenced by the certification on file in accordance with the law

PUBLIC COMMENT: John Peairs spoke to the Board.

Pursuant to Government Code section 54954.2(b)(2), Prinz requested that the following 2 items be added to the Closed Session – 1) Conference with Real Property Negotiators pursuant to Government Code Section 54956.8; Property : 101 Lucas Valley Road, Suite 300, San Rafael, CA. Agency Negotiator: Mike Prinz, General Manager; Under Negotiation: Terms; and 2) Conference with Legal Counsel – Anticipated Litigation, Significant Exposure to litigation pursuant to paragraph (2) of subdivision (d) of Government Code Section 54956.9; one potential case.

ACTION:

Board approved (M/S Schriebman/Murray 5-0-0-0) Conference with Real Property Negotiators pursuant to Government Code Section 54956.8; Property : 101 Lucas Valley Road, Suite 300, San Rafael, CA. Agency Negotiator: Mike Prinz, General Manager; Under Negotiation: Terms.

- AYES: Clark, Elias, Murray, Schriebman and Yezman
- NOES: None.
- ABSENT: None.
- ABSTAIN: None.

ACTION:

Board approved (M/S Schriebman/Elias5-0-0-0) Conference with Legal Counsel – Anticipated Litigation, Significant Exposure to litigation pursuant to paragraph (2) of subdivision (d) of Government Code Section 54956.9; one potential case.

- AYES: Clark, Elias, Murray Schriebman and Yezman.
- NOES: None.
- ABSENT: None.
- ABSTAIN: None.

ADJOURNMENT:

ACTION:

THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT ADJOURNED TO CLOSED SESSION ON JANUARY 9, 2020 AT 4:25 PM, AT THE DISTRICT OFFICE, 101 LUCAS VALLEY ROAD, SUITE 300, SAN RAFAEL, CA. 94903

Lerch left at 4:25 pm.

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CLOSED SESSION:

CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code § 54956.5; Regarding real property located at 405 Vendola Drive, San Rafael. Real Property Negotiator Is Mike Prinz, General Manager. Seeking instruction/authority concerning price and/or terms of payment.

CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code Section 54956.8; Property : 101 Lucas Valley Road, Suite 300, San Rafael, CA. Agency Negotiator: Mike Prinz, General Manager; Under Negotiation: Terms

CONFERENCE WITH LEGAL COUNSEL – Anticipated Litigation, Significant Exposure to litigation pursuant to paragraph (2) of subdivision (d) of Government Code Section 54956.9; one potential case.

ADJOURNMENT:

ACTION:
The Board of Directors of the Las Gallinas Valley Sanitary District reconvened the Regular Session on January 9, 2020 at 5:11 pm.

STAFF PRESENT: Mike Prinz , General Manager; Teresa Lerch, District Secretary; Mel Liebmann, Plant Manager, Robert Ruiz, District Treasurer

OTHERS PRESENT: Jim Finklestein, FutureSense, Stephanie Nelson FutureSense (by telephone),

PUBLIC COMMENT: None.

BOARD ELECTIONS – PRESIDENT, VICE PRESIDENT, TREASURER , DISTRICT ENGINEER AND SECRETARY

Board elected a President, Vice President, Treasurer, District Engineer and Secretary.

ACTION:
Board nominated and approved (M/S Clark/Yezman 5-0-0-0) Rabi Elias to serve as President for 2020, Judy Schriebman to serve as Vice-President, Robert Ruiz to serve at District Treasurer, Mike Cortez to serve as District Engineer and Teri Lerch to serve as District Secretary.

- AYES: Clark, Elias, Murray, Schriebman and Yezman.
- NOES: None.
- ABSENT: None.
- ABSTAIN: None.

Murray turned the meeting over to President Elias.

FUTURESENSE LLC EMPLOYEE CLIMATE REPORT

Jim Finkelstein and Stephanie Nelson (by telephone) from FutureSense presented an Employee Climate Report to the Board. Discussion ensued.

Byers left at 6:20 pm.

Finkelstein left at 6:27 pm

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113 **CONSENT CALENDAR:**
114 These items are considered routine and will be enacted, approved or adopted by one motion unless a request for
115 removal for discussion or explanation is received from the staff or the Board.
116 A. Approve the Warrant List for January 9, 2019
117 B. Approve Conference attendance requests for Yezman to attend the WEF/AWWA Utility
118 Management Conference Feb 25-28 in Anaheim, the WateReuse Conference March 15-17
119 in San Francisco, the Annual WateReuse Conference Sept 13-16 in Denver, Colorado and
120 the WEFTEC conference October 2-6 in New Orleans, Louisiana

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122 Yezman pulled the March 15-17 WateReuse Conference and the Sept 16-17 WateReuse Conference.
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- 124 **ACTION:**
125 Board approved (M/S Schriebman/Murray 5-0-0-0) the Consent Calendar items A and B – the WEF/AWWA
126 Utility Conference and the WEFTEC conference.
127 AYES: Clark, Elias, Murray and Schriebman and Yezman
128 NOES: None.
129 ABSENT: None.
130 ABSTAIN: None
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- 133 **REVISION TO BOARD POLICY B -20**
134 Board and staff discussed creation of Board Policy B-20-50 and Resolution 2020-2181. Board decided to
135 bring this policy back with other policy revisions at a future meeting.
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- 137 **HUMAN RESOURCES SUBCOMMITTEE**
138 Board and staff discussed creation of a Ad Hoc Human Resources Subcommittee focusing on the 2019
139 Employee Climate Survey.
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- 141 **ACTION:**
142 Board approved (M/S Yezman/Murray 5-0-0-0) creation of a Human Resources Ad Hoc Subcommittee
143 consisting of Clark and Schriebman regarding the 2019 Employee Climate Survey.
144 AYES: Clark, Elias, Murray, Schriebman and Yezman.
145 NOES: None.
146 ABSENT: None.
147 ABSTAIN: None.
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- 149 **BOARD PRESIDENT APPOINTMENTS**
150 Discussion ensued.
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ACTION:

Board approved (M/S Yezman/Murray 5-0-0-0) the committee assignments updated below:

AYES: Clark, Elias, Murray, Schriebman and Yezman.

NOES: None.

ABSENT: None.

ABSTAIN: None.

Committee	Regular Member	Alternate Member
NBWA Board Committee	Clark	Schriebman
NBWA Tech Advisory Committee	Schreibman	Clark
NBWA Conference Committee	Clark	None
NBWRA	Elias	None
JPA Local Task Force**	Schriebman	None
Gallinas Watershed Council	Yezman	Schriebman
Marin LAFCO**	Murray	None
CASA Energy Committee	Murray	None
CSRMA	Yezman	None
Flood Zone 7	Yezman	None
Engineering Ad Hoc Subcommittee regarding the Secondary Treatment Plant Upgrade	Elias/Yezman	None
Human Resources Ad Hoc Subcommittee regarding 2019 GM Evaluation	Clark/Murray	None

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**Appointments made by JPA Local Task Force and Marin LAFCO not LGVSD.

INFORMATION ITEMS:

STAFF / CONSULTANT REPORTS:

1. General Manager Report – Verbal – Prinz reported.
2. California Regional Water Quality Control Board, San Francisco Bay Region Conditional Offer for Settlement of Alleged Violations- Written – Liebmann and Prinz reported.
3. Monthly Report as of November 30, 2019 – Written – Ruiz reported.
4. Treasury Report as of November 30, 2019 – Written – Ruiz reported.

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Liebmann left at 7:48 pm.

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BOARD MEMBER REPORTS:

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1. Clark – reported on NBWA
2. Elias – no report
3. Murray – reported on Marin LAFCO
4. Schriebman – reported on NBWA
5. Yezman – no report

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BOARD REQUESTS:

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- A. Board Meeting Attendance Requests – None.
- B. Board Agenda Item Requests- Murray requested a summary of District Awards. Yezman requested more information regarding ADU ordinance changes. Collective input on Board policies from the Board will be on a future agenda.

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VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE:

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Discussion ensued.

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ADJOURNMENT:

ACTION:

Board approved (M/S Murray Schriebman 5-0-0-0) the adjournment of the meeting at 7:58 p.m.

- AYES: Clark, Elias, Murray, Schriebman and Yezman.
- NOES: None.
- ABSENT: None.
- ABSTAIN: None.

The next Board Meeting is scheduled for January 16, 2020 at the District Office.

ATTEST:

Teresa Lerch, District Secretary

APPROVED:

Rabi Elias, Board President

SEAL

1 **MINUTES OF JANUARY 16, 2020**

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3 THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT MET IN OPEN
4 SESSION ON JANUARY 16, 2020 AT 4:30 PM AT THE DISTRICT OFFICE, 101 LUCAS VALLEY ROAD,
5 SUITE 300 SAN RAFAEL, CA. 94903
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7 **BOARD MEMBERS PRESENT:** M. Clark, R. Elias, C. Murray, J. Schriebman and
8 C. Yezman
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10 **BOARD MEMBERS ABSENT:** None.

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12 **STAFF PRESENT:** Mike Prinz , General Manager; Robert Ruiz, District
13 Treasurer.
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15 **OTHERS PRESENT:** Pat Richardson, District Counsel; Emily Ginsburg from
16 R3 Consulting Group, Inc; Joe Garbarino, Patty
17 Garbarino, Casey Fritz, Ray Holmes and Kim Scheibly
18 from Marin Sanitary Service; John Cropper, Cropper
19 Accountancy Corporation.
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21 **ANNOUNCEMENT:** President Elias announced that the agenda had been
22 posted as evidenced by the certification on file in
23 accordance with the law.
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25 **PUBLIC COMMENT:** None.
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27 **ACTION:**
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29 THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT ADJOURNED TO
30 CLOSED SESSION ON JANUARY 16, 2020 , AT 4:32 PM, AT THE DISTRICT OFFICE, 101 LUCAS VALLEY
31 ROAD, SUITE 300, SAN RAFAEL, CALIFORNIA.
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33 **CLOSED SESSION:**
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35 **CONFERENCE WITH REAL PROPERTY NEGOTIATORS** – Pursuant to Government Code
36 § 54956.5; Regarding real property located at 101 Lucas Valley Road, Suite 300 San Rafael. Real Property
37 Negotiator Is Mike Prinz, General Manager. Seeking instruction/authority concerning price and/or terms of
38 payment.
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40 **ADJOURNMENT:**
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43 **ACTION:**

44 The Board of Directors of the Las Gallinas Valley Sanitary District reconvened the Regular Session on
45 January 16, 2020 at 4:45 pm.
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47 **STAFF PRESENT:** Mike Prinz , General Manager; Robert Ruiz, Administrative
48 Services Manager
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50 **OTHERS PRESENT:** None.
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52 **PUBLIC COMMENT:** None.
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56 **PUBLIC HEARING FOR ORDINANCE NO. 181 AMENDING TITLE 4, CHAPTER 1 – REGULATING**
57 **SOLID WASTE, RECYCLABLE AND ORGANIC MATERIALS, AND THE COLLECTION, REMOVAL**
58 **AND DISPOSAL THEREOF INCLUDING THE GARBAGE AND REFUSE RATE AND ADJUSTMENT**
59 **FOR 2020 AND GARBAGE FRANCHISE FEE**

60 Emily Ginsburg from R3 Consulting and Patty Garbarino and Roger Williams from Marin Sanitary Service
61 addressed the Board. Discussion ensued. All comments were from R3 Consulting and Marin Sanitary
62 Service. No members of the Public attended.

63 **OPEN PUBLIC HEARING** – President Elias opened the public hearing at 5:30 p.m.

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65 **CLOSE PUBLIC HEARING** – President Elias closed the public hearing at 5:31 p.m.
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68 **ACTION:**

69 Board approved (M/S Murray/Schriebman 5-0-0-0) the adoption of Ordinance No 175, An Ordinance
70 Amending Title 4, Chapter 1 of the District Ordinance Code and adjusting the garbage and refuse rate by
71 4.38% and directing its publication.

72 AYES: Clark, Elias, Murray, Schriebman and Yezman.

73 NOES: None.

74 ABSENT: None.

75 ABSTAIN: None.
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78 **CONSENT CALENDAR:**

79 These items are considered routine and will be enacted, approved or adopted by one motion unless a request for
80 removal for discussion or explanation is received from the staff or the Board.
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82 A. Approve the Board Minutes for December 5, December 13th and December 19, 2019

83 B. Approve the Warrant List for January 16, 2020

84 C. Approve Board Compensation for December 2019
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86 Item C was discussed.
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88 **ACTION:**

89 Board approved (M/S Murray/Schriebman 5-0-0-0) the Consent Calendar items A through C amending
90 Clark December Compensation.

91 AYES: Clark, Elias, Murray, Schriebman and Yezman.

92 NOES: None.

93 ABSENT: None.

94 ABSTAIN: None.
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96 **PRESENTATION OF THE FINANCIAL STATEMENTS WITH AUDITOR'S REPORT FOR THE YEAR**
97 **ENDED JUNE 30, 2019**

98 John Cropper from Cropper Accountancy Corporation presented the Financial Statements and Auditor's
99 Report for the Year ended June 30, 2019. Discussion ensued.

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101 **ACTION:**

102 Board approved (M/S Schriebman/Yezman 5-0-0-0) the Financial Statements with Auditor's Report for the
103 Year Ended June 30, 2019.

104 AYES: Clark, Elias, Murray, Schriebman and Yezman.

105 NOES: None.

106 ABSENT: None.

107 ABSTAIN: None.
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INFORMATION ITEMS:

STAFF / CONSULTANT REPORTS:

- 1. General Manager’s Report – Verbal – Prinz reported.

BOARD MEMBER REPORTS:

- 1. CLARK
 - a. NBWA Board Committee – no report
 - b. NBWA Conference Committee– verbal report
 - c. Other Reports– no report
- 2. ELIAS
 - a. NBWRA– no report
 - b. Ad Hoc Engineering Committee— no report
 - c. Other Reports– no report
- 3. MURRAY
 - a. Marin LAFCO– no report
 - b. CASA Energy Committee– verbal report
 - c. Other Reports– no report
- 4. SCHRIEBMAN
 - a. Gallinas Watershed Council/Miller Creek Watershed Council– no report
 - b. JPA Local Task Force– verbal report
 - c. NBWA Tech Advisory Committee– no report
 - d. Other Reports– San Rafael DPW – Merrydale parking/civic center lagoon
- 5. YEZMAN
 - a. Flood Zone 7– no report
 - b. CSRMA– no report
 - c. Other Reports– no report

BOARD REQUESTS:

- A. Board Meeting Attendance Requests – Clark and Elias requested to attend March 15-17 WateReuse conferece. Elias requested to attend CWEA Annual Conference March 31- April 3 in Denver, Colorado. Murray requested IRWA training regarding Principles of Real Estate Negotiation on January 30-31.
- B. Board Agenda Item Requests – Schriebman requested Reclamation area Cattails and Murray requested Awards of Excellence be on a future agenda.

VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE:

Discussion ensued.
Richardson left at 7:23 p.m.

ADJOURNMENT:

ACTION:

Board approved (M/S Murray/Schriebman 5-0-0-0) the adjournment of the meeting at 7:38 pm.
AYES: Clark, Elias, Murray, Schriebman and Yezman.
NOES: None.
ABSENT: None.
ABSTAIN: None.

The next Board Meeting is scheduled for February 6, 2020 at the District Office.

166 ATTEST:
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170 Robert Ruiz, District Treasurer

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172 APPROVED:
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176 Rabi Elias, Board President

Las Gallinas Valley Sanitation District Warrant List 2/06/2020 Draft							
	Date	Num	Vendor	Original Amount	Addition and Adjustment	Total Amount	Description for items
1	2/6/2020	N/A	Able Tire & Brake	655.24		655.24	Tacoma Tire Repair
2	2/6/2020	EFT1	ADP Payroll	104,300.43		104,300.43	1/31/20 Paydate
3	2/6/2020	EFT	ADP	1,802.50		1,802.50	Payroll Processing Charges
4	2/6/2020	N/A	ArcSine Engineering	107,523.44		107,523.44	Programming Services for STPRWE
5	2/6/2020	N/A	AT&T	3,336.40		3,336.40	Electricity Billing
6	2/6/2020	EFT2	Bank of Marin	47,335.64		47,335.64	February Loan Payment - Recycled Water Loan
7	2/6/2020	ACH	Brown & Caldwell	4,058.05		4,058.05	Secondary TP Upgrade Engineering Services
8	2/6/2020	ACH	Cal-Steam	64.73		64.73	Operating Supplies
9	2/6/2020	EFT	CalPERS - 457 Plan	8,679.72		8,679.72	457 Deferred Comp Plan for 1/3 & 1/17 Paydates
10	2/6/2020	ACH	CalPERS - CERBT- OPEB	11,630.00		11,630.00	Pre-fund GASB payment
11	2/6/2020	EFT	CalPERS - Health	30,499.54		30,499.54	CalPERS Health- Active & Employer Retiree share
12	2/6/2020	EFT	CalPERS - Retirement	34,097.53		34,097.53	Retirement for 1/3 & 1/17 Paydates
13	2/6/2020	ACH	Caltest	3,662.75		3,662.75	Lab Testing
14	2/6/2020	N/A	CD & Power	6,883.06		6,883.06	Generator Rental, Parts/Labor for Potential PSPS
15	2/6/2020	ACH	Central Marin Sanitation Agency	317.00		317.00	FOG Program - 250 Gallons of SBS
16	2/6/2020	N/A	Cintas Corporation	125.06		125.06	Safewasher Service & Filter Change
17	2/6/2020	N/A	Contractor Compliance & Monitoring Inc.	3,088.23		3,088.23	Labor Compliance Services on various Construction Projects
18	2/6/2020	N/A	Cropper Accountancy Corporation	2,000.00		2,000.00	Auditing Services for Fiscal Year Ending 2019
19	2/6/2020	N/A	CWEA	385.00		385.00	C. Gill - Collection System Maintenance Grade 3 cert. B. Exberger - Electrical/Instrumentation Grade 2
20	2/6/2020	N/A	Dave Lehman Trucking	1,665.00		1,665.00	Asphalt for Storage Bin
21	2/6/2020	EFT	Direct Dental	296.96		296.96	Employee Dental Services
22	2/6/2020	ACH	Downing Heating & Air Conditioning	1,548.55		1,548.55	Work on HVAC
23	2/6/2020	ACH	Du-All Safety	2,408.00		2,408.00	LGVSD Safety Compliance
24	2/6/2020	N/A	Durkin	358.05		358.05	Sign Fabrication
25	2/6/2020	ACH	Fontana, Lauren	170.00		170.00	CWEA Test - Lab Analyst Grade 1
26	2/6/2020	ACH	Hanford ARC	13,000.00		13,000.00	Weed Management & Irrigation Maintenance
27	2/6/2020	N/A	IDEA Inc.	7,392.00		7,392.00	Labor Relations Consulting
28	2/6/2020	N/A	JDB Systems	3,336.05		3,336.05	Electrical & Instrumentation Troubleshooting- FFR Pump #2 VFD Fault
29	2/6/2020	N/A	Liebert Cassidy Whitmore	114.00		114.00	Professional Legal Services

Las Gallinas Valley Sanitation District Warrant List 2/06/2020 Draft							
	Date	Num	Vendor	Original Amount	Addition and Adjustment	Total Amount	Description for items
30	2/6/2020	N/A	Marin Ace	10.88		10.88	Rubber Ground Plug
31	2/6/2020	N/A	McPhail Fuel	1,783.90		1,783.90	Propane Purchase
32	2/6/2020	N/A	Miksis Services Inc.	215,354.55		215,354.55	Marinwood Trunk Sewer Repair
33	2/6/2020	ACH	Nute Engineering	408.75		408.75	Plant Improvements - O&M & Inspection Services
34	2/6/2020	N/A	Pacific EcoRisk	4,070.00		4,070.00	NPDES Toxicity Testing
35	2/6/2020	N/A	PG&E	10,206.59		10,206.59	Pump Stations
36	2/6/2020	N/A	PG&E	922.92		922.92	Line Extension Deficiency - Gas
37	2/6/2020	N/A	RGS	6,452.10		6,452.10	Team Building Retreat, Organizational Analysis & GM Perf Eval
38	2/6/2020	N/A	SMART	4,019.44		4,019.44	License Fee from 1/1/2020 - 12/31/2020 - Property located near Milepost 20.79 for 20" Longitudinal Sewer Main.
39	2/6/2020	ACH	State Water Resources Control Board	1,638.00		1,638.00	Annual Permit Fee
40	2/6/2020	EFT	Sunlife Financial	2,093.91		2,093.91	Life Insurance, Addl Life and ADD
41	2/6/2020	N/A	Thomas & Associates	13,266.83		13,266.83	Replace Failed FFR Pump #3
42	2/6/2020	N/A	United Site Services	451.64		451.64	Porta Potty for Water Shut-Offs/ Construction Workers
43	2/6/2020	N/A	USA BlueBook	50.21		50.21	Comfort Brite Bib Overalls Class E
44	2/6/2020	EFT	VSP	375.30		375.30	Vision Plan for Employees
45	2/6/2020	N/A	Water Components & Building Supply Inc.	507.32		507.32	Screen, Tape Coat, Valve Brass Gate
46	2/6/2020	ACH	WECO Industries	597.83		597.83	Safety Road Signs
47	2/6/2020	N/A	Woodland Center Auto Supply	776.92		776.92	Misc. Supplies
48	2/6/2020	N/A	WRA Inc.	227.00		227.00	STPURWE - Compliance Services

Do not change any formulas below this line.

TOTAL	\$	663,947.02	\$	-	\$	663,947.02
-------	----	------------	----	---	----	------------

EFT1	EFT1 = Payroll (Amount Required)	104,300.43	104,300.43	Approval: Finance GM Board
EFT2	EFT2 = Bank of Marin loan payments	47,335.64	47,335.64	
PC	Petty Cash Checking	0.00	0.00	
>1	Checks (Operating Account)	0.00	0.00	
N/A	Checks - Not issued	394,961.83	394,961.83	
EFT	EFT = Vendor initiated "pulls" from LGVSD	77,845.46	77,845.46	
ACH	ACH = LGVSD initiated "push" to Vendor	39,503.66	39,503.66	
Total		\$ 663,947.02	\$ 663,947.02	

Difference:

\$ -

Agenda Item 2C
Date February 6, 2020



BOARD MEMBER
MEETING ATTENDANCE REQUEST

1-16-2020
Date: ~~1-16-20~~ Name: MEGAN CLARK

I would like to attend the _____ Meeting
of _____

To be held on the 15th day of MARCH from 8:00 (a.m.) p.m. and
returning on 17th day of MARCH from 8:00 (a.m.) p.m.

Actual meeting date(s): MARCH 15, 16, 17 2020

Purpose of Meeting: Education + networking
WATER USE

Frequency of Meeting: ONCE

Estimated Costs of Travel (if applicable): \$ 0 -

Please submit to the District Administrative Assistant, no later than 2:00 p.m. on the Friday prior to the Board Meeting.

For Office Use Only

Request was Approved Not Approved at the Board Meeting held on _____.



BOARD MEMBER MEETING ATTENDANCE REQUEST

Date: 1/13/20 Name: Rabi Elias

I would like to attend the Water Reuse CA Annual Conf. Meeting of in San Francisco

To be held on the 15 day of March from a.m. / p.m. and returning on 17 day of March from a.m. / p.m.

Actual meeting date(s): 15, 16, 17 of March

Purpose of Meeting: Water Reuse Add TOUR

Frequency of Meeting: -

Estimated Costs of Travel (if applicable): travel to San Francisco and Back daily.

Please submit to the District Administrative Assistant, no later than 2:00 p.m. on the Friday prior to the Board Meeting.

For Office Use Only

Request was [] Approved [] Not Approved at the Board Meeting held on .



BOARD MEMBER
MEETING ATTENDANCE REQUEST

Date: 1/13/20 Name: Rabi Elias

I would like to attend the CWEA Annual conference Meeting
of DENVER in Boulder, Colorado

To be held on the 31 day of March from _____ a.m. / p.m. and
returning on 3 day of April from _____ a.m. / p.m.

Actual meeting date(s): April 1, 2, 3

Purpose of Meeting: ~~FOUR~~

Frequency of Meeting: _____

Estimated Costs of Travel (if applicable): _____

air fair and Conf. cost and lodging

Please submit to the District Administrative Assistant, no later than 2:00 p.m. on the Friday prior to the Board Meeting.

For Office Use Only

Request was Approved Not Approved at the Board Meeting held on _____.

Agenda Item 2E
Date February 6, 2020



BOARD MEMBER MEETING ATTENDANCE REQUEST

Date: 1/16/20 Name: CRAIG K. MURRAY, SR./WR

I would like to attend the PRINCIPLES OF REAL ESTATE NEGOTIATION Meeting
of THE INTERNATIONAL RIGHT OF WAY ASSOCIATION (IRWA)

To be held on the 30TH day of JAN 2020 from 8⁰⁰ a.m. / p.m. and
returning on 31ST day of JAN. 2020 from 5⁰⁰ a.m. / p.m.

Actual meeting date(s): JAN. 30, 31, 2022

Purpose of Meeting: R/W NEGOTIATION PROCESS, NECESSARY
SKILLS. COMMON ISSUES, TACTICS + PITFALLS IN NEGOTIATIONS
PREPARING FOR ADMINISTRATIVE SETTLEMENT, LEGAL SETTLEMENTS
+ CONDEMNATION.

Frequency of Meeting: IX

Estimated Costs of Travel (if applicable): ~ \$600.

Please submit to the District Administrative Assistant, no later than 2:00 p.m. on the Friday prior to the Board Meeting.

For Office Use Only

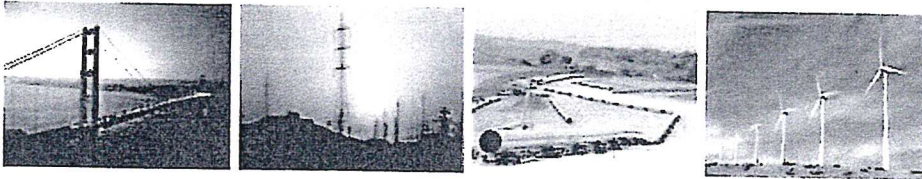
Request was Approved Not Approved at the Board Meeting held on _____

2E.1



19210 S. Vermont Avenue, Building A, Suite 100
Gardena, CA 90248
Phone: (310) 538-0233
www.irwaonline.org

Course 200: Principles of Real Estate Negotiation January 30-31, 2020 Shell Beach, CA



Course 200: Principles of Real Estate Negotiation

Course Description:

This two-day course focuses on a unique blend of the communication skills associated with successful, real-world right of way negotiations. With an emphasis on the practical as opposed to the theoretical, participants will explore their own negotiation skills, habits and styles with the goal of improving settlement rates of right of way acquisitions.

Topics

- Overview of types of negotiations
- Pre-negotiation "must do's"
- Creating your own individual negotiation style
- Three types of negotiations
- Communicating effectively throughout the negotiation process
- Negotiating with attorneys and other "powerful" owners
- Common issues, tactics, and pitfalls in negotiations
- Preparing for administrative settlements, legal settlements and condemnation

Course Level:

Core

Course Tuition Includes:

Participant Manual

Recommended Materials:

Successful Communication and Negotiation (Textbook)
Available for purchase from IRWA.

Who should take this course:

This course is designed for all right of way practitioners and negotiators who would like to explore their negotiation skills, habits and styles to improve settlement rates of right of way acquisition.

200 Principles of Real Estate Negotiation January 30-31, 2020 Shell Beach, CA
 Register online at www.irwaonline.org / Fax this entire page to IRWA HQ: (310) 538-1471

MURRAY _____ CRAIG _____
 Last Name First Name

DIRECTOR _____
 Title

LUCAS GALLINAS VALLEY SANITARY DISTRICT
 Company Name

101 LUCAS VALLEY ROAD SUITE 300
 Address

STAN ISRAFAEL CA 94903
 City, State, Zip/Postal Code

(415) 472-1734 _____ Yes No
 Phone Member Member ID Number

CRAIG.MURRAY@CI.RICHMOND.CA.US
 Email Address

If payment includes the fees for registrants other than yourself, check here:
 (Please submit names of other registrants on a separate paper along with this form)
 Will you also be attending? Yes No

UNDESCORE LINE

	Registration Deadlines	Member Tuition	Non-Member Tuition	Total Tuition Amount
On and Before:	Jan. 21, 2020	\$475.00	\$580.00	_____
On and After:	Jan. 22, 2020	\$500.00	\$605.00	_____

Total Member Registrants: _____
 Total Non-Member Registrants: _____

PRINT NAME AS IT APPEARS ON CARD: _____ 3-DIGIT CVV: _____

AMEX MC VISA Card #: _____ EXP: _____

SIGNATURE: _____ Date: _____ Amount to be Charged: _____

Course 200: Principles of Real Estate Negotiation January 30-31, 2020 Shell Beach, CA

Sponsor: IRWA Chapter 47
 Date: January 30-31, 2020
 Time: 2 days – 8 AM to 5 PM Daily
 City: Shell Beach, CA

Class Location:
 Spyglass Restaurant
 2703 Spyglass Dr.
 Shell Beach, CA 93449
 Phone: (805) 773-1222
 Participant Capacity: 60

Four Ways to Register:
 Online: www.irwaonline.org
 Fax: (310) 538-1471
 Phone: (310) 538-0233, x138
 Contact Course Coordinator

Accommodations:
 Cottage Inn by the Sea
 2351 Price Street
 Pismo Beach, CA 93449
 Phone: (805) 773-4617
 Rate: Single - \$127.50 per night (rate only good until 12/29/19)
 Please contact the hotel directly and ask for the IRWA room block rate.
 Limited rooms available.

Course Coordinators:
 Jennifer Mizrahi
 530 Paulding Circle, Suite A
 Arroyo Grande, CA 93444
 Phone: (805) 773-1459
 Fax: (805) 773-2418
 Email: escrow.coordinator@hamner-jewell.com

Course Instructor:

Georgia S. Snodgrass, SRWA, R/W-NAC, R/W-AMC, Georgia S. Snodgrass, SRWA, R/W-NAC, R/W-AMC, is a popular Instructor for the CLS-Professional Development Institute (Contract Land Staff) as well as for the IRWA. She obtained her Bachelor of Science Degree in Business Education from Eastern Kentucky University, Richmond, Kentucky and obtained her Master of Science Degree in School Business Administration from Pepperdine University, Malibu, CA. Prior to joining Contract Land Staff, she was a Real Estate Representative III for the San Antonio River Authority with responsibility for acquisition and project management oversight on behalf of the River Authority, plus additional oversight responsibilities for the asset management program. Prior to the River Authority, Ms. Snodgrass was the chief negotiator for the San Diego Unified School District and was responsible for their asset management program for 32 years. She is past Chair of both Regions 1 and 2 and Past Chair of the International Membership Committee. She has been approved since 2007 to teach the 700 Series of IRWA Asset Management Courses as well as IRWA Communications Courses 205 and 213. In addition, she is a Certified Course Coordinator for her chapter.

Cancellation Policy: All classes scheduled by IRWA are subject to cancellation. All class registrants must contact the Course Coordinator prior to making travel arrangements, keeping in mind that the class may be cancelled at any time (for reasons including, but not limited to, insufficient registration, Instructor emergencies or other issues beyond the control of the chapter and/or IRWA). Fully liquidated damages for any losses incurred by a class registrant are limited solely to a refund of the registrant's prepaid class tuition.

Tuition Refund Policy: Written notification of intent to cancel registration must be received via email by both the Course Coordinator and IRWA Headquarters Education Staff (education@irwaonline.org) prior to the class start date in order to be eligible for a tuition refund. A full tuition refund will be issued if notice is received 15 days or more prior to the class start date; a 75% refund will be issued if notice is received less than 15 days prior to the class start date.



Item Number 2F

Agenda Summary Report

To: Mike Prinz, General Manager *MP*
From: Michael P. Cortez, PE, District Engineer
Mtg. Date: February 6, 2020
Re: Application of Allocation of Capacity for APN 175-322-02
 Chevron Gas Station
Item Type: Consent Discussion _____ Information _____ Other _____
Standard Contract: Yes _____ No _____ (See attached) Not Applicable

BACKGROUND:

The owner of Chevron Gas Station on 949 Del Presidio Blvd has proposed to replace an existing gas station at the same location. The new station will include a 2,964-square foot convenience store. Based on design drawings and information submitted, a Will Serve Letter has been drafted and a connection fee of \$5,287 has been assessed for the addition of 7 plumbing fixture units.

STAFF RECOMMENDATION:

Board approve the issuance of a Will Serve Letter to Chevron Gas Station.

FISCAL IMPACT:

Connection fee revenue of \$5,287.



DISTRICT BOARD
 Megan Clark
 Rabi Elias
 Craig K. Murray
 Judy Schriebman
 Crystal Yezman

DISTRICT ADMINISTRATION
 Mike Prinz,
 General Manager
 Michael Cortez,
 District Engineer
 Mel Liebmann,
 Plant Manager
 Robert Ruiz,
 Administrative Services Manager
 Greg Pease,
 Collection System/Safety Manager

Date: February 6, 2020

Property Owner: Chevron U.S.A. Inc. c/o Darin O'Kelley

Property Owner Address: 6001 Bollinger Canyon Rd. Bldg. L, Room 1168
 San Ramon, CA 94583

Applicant: Gary M. Semling, Architect with Stantec Architecture Inc.

Project Name: Chevron Gas Station

Project Address: 949 Del Presidio Blvd
 San Rafael, CA 94903

Project APN: APN 175-322-02

Re: Will-Serve Letter

You have requested a **Will-Serve Letter** from the Las Gallinas Valley Sanitary District (“LGVSD”) at the February 6, 2020 Board Meeting.

Subject to the terms and conditions in this letter, LGVSD will serve the project with additional seven (7) Plumbing Fixture Units (PFU). This letter may be used to submit to another local agency to satisfy a condition for either tentative subdivision map approval or any other permit approval.

The standard terms and conditions of approval are as follows:

Initial	Item	Condition of Approval
	1	You pay for the facility capacity fee (new connection fee) in accordance with LGVSD ordinances and policies. Please note payment date obligation and amount obligation.
	2	You agree to abide by all conditions of approval of the Board of Directors.
	3	This Will Serve approval terminates three (3) years from the Board meeting date unless all building permits have been issued for the project.
	4	After the lateral inspection is completed and the connection verified, the property will be added to the sewer user charge and will receive a charge for this service, if applicable.

The remodeled building has 26 PFUs per information submitted. Applicant will receive a credit of 19 PFUs for the existing plumbing fixtures. At \$311 per Plumbing Fixture Unit according to current District Ordinance, the connection fee for 7 additional PFU is \$5,287.

The Connection Fee approved by the Board is as follows:

Connection Fee for 7 PFU at \$311/PFU:	\$ 5,287
Application Fee:	\$ 250 (Paid)
Engineering Review and Inspection Fees:	\$ 0
Total Fee:	\$ 5,287
Outstanding Balance:	\$ 5,287

The District ordinance provides for payment of the Connection Fee over a two-year period according to the following:

1. 10% of the Connection Fee is due within thirty days of Board approval of final plans and specifications;
2. 40% of the Connection Fee is due within one year, February 6, 2021; or upon the date of building permit issuance, whichever occurs first;
3. 50% of the Connection Fee is due within two years, February 6, 2022; or upon the date of building permit issuance, whichever occurs first;

Please remit **\$5,287**. Make the check payable to Las Gallinas Valley Sanitary District. Please note if payment schedule as above is not followed, you risk losing your allocation.

By issuing this **Will-Serve Letter**, LGVSD is not incurring any liability of any nature, including but not limited to mandate, damages or injunctive relief. LGVSD is making no representation to the applicant nor waiving any rights it has under any applicable State or Federal law. In the event there is any court imposed moratorium on LGVSD, a connection to the District system may not occur. In the event any government agency imposes a moratorium on LGVSD, a connection to the District system may not occur. In the event there is not sufficient capacity, a connection to the District system may not occur.

If connection has not been made within three years, the allocation will be terminated without prejudice. Upon request, you will receive a refund of 90% of the above fees and you will be able to re-apply for an allocation at the fee rate then prevailing. Please sign and date the original of this letter and return it to the District office within 10 days. The copy is for your records.

Sincerely,

Mike Prinz, General Manager

AGREED:

Date: _____

Project Applicant

Cc: Michael P. Cortez, District Engineer
Robert Ruiz, Administrative Services Manager



Agenda Summary Report

To: Mike Prinz, General Manager *MP*
From: Michael P. Cortez, PE, District Engineer
Mtg. Date: February 6, 2020
Re: Application of Allocation of Capacity for APN 179-270-12
 San Rafael Fire Station 57
Item Type: Consent X Discussion _____ Information _____ Other _____
Standard Contract: Yes _____ No _____ (See attached) Not Applicable X

BACKGROUND:

City of San Rafael has completed the construction of a new 9,855 square-foot two-story building at 3530 Civic Center Dr designated as Fire Station 57 as replacement of the old station located at the same site. On November 21, 2019, District Staff completed the final inspection of sanitary sewer facilities and found all improvements consistent with the original plans approved by the District. As a condition of project approval, Staff requested written permission from the City in providing access for sewer facilities maintenance and emergency repair to the District, which was received on January 10, 2020.

Based on the final inspection, as-built drawings submitted, and Plumbing Fixture Unit count of the original building, a Will Serve Letter has been drafted and a connection fee of \$17,105 has been assessed for the addition of 55 plumbing fixture units.

STAFF RECOMMENDATION:

Board approve the issuance of a Will Serve Letter to San Rafael Fire Station 57.

FISCAL IMPACT:

Connection fee revenue of \$17,105.



DISTRICT BOARD
 Megan Clark
 Rabi Elias
 Craig K. Murray
 Judy Schriebman
 Crystal Yezman

DISTRICT ADMINISTRATION
 Mike Prinz,
 General Manager
 Michael Cortez,
 District Engineer
 Mel Liebmann,
 Plant Manager
 Robert Ruiz,
 Administrative Services Manager
 Greg Pease,
 Collection System/Safety Manager

Date: February 6, 2020
 Property Owner: Marin County
 Property Owner Address: 3501 Civic Center Dr, Suite 325
 San Rafael, CA 94903
 Applicant: City of San Rafael
 Project Name: San Rafael Fire Station 57
 Project Address: 3530 Civic Center Dr
 San Rafael, CA 94903
 Project APN: APN 179-270-12

Re: Will-Serve Letter

You have requested a **Will-Serve Letter** from the Las Gallinas Valley Sanitary District (“LGVSD”) at the February 6, 2020 Board Meeting.

Subject to the terms and conditions in this letter, LGVSD will serve the project with additional 55 Plumbing Fixture Units (PFU). This letter may be used to submit to another local agency to satisfy a condition for either tentative subdivision map approval or any other permit approval.

The standard terms and conditions of approval are as follows:

Initial	Item	Condition of Approval
	1	You pay for the facility capacity fee (new connection fee) in accordance with LGVSD ordinances and policies. Please note payment date obligation and amount obligation.
	2	You agree to abide by all conditions of approval of the Board of Directors.
	3	This Will Serve approval terminates three (3) years from the Board meeting date unless all building permits have been issued for the project.
	4	After the lateral inspection is completed and the connection verified, the property will be added to the sewer user charge and will receive a charge for this service, if applicable.

City of San Rafael has agreed to provide a 24-hr access to District Staff for maintenance and emergency repair of the sanitary sewer facilities.

The remodeled building has 97.5 PFU per information submitted. Applicant will receive a credit of 42.5 PFU for the existing plumbing fixtures. At \$311 per Plumbing Fixture Unit according to current District Ordinance, the connection fee for 55 additional PFU is \$17,105.

The Connection Fee approved by the Board is as follows:

<u>Remodeled Building</u>	
Connection Fee for 55 PFU at \$311/PFU:	\$ 17,105
Application Fee:	\$ 250
Engineering Review and Inspection Fees:	\$ 0
Total Fee:	\$ 17,355
Outstanding Balance:	\$ 17,355

The District ordinance provides for payment of the Connection Fee over a two-year period according to the following:

1. 10% of the Connection Fee is due within thirty days of Board approval of final plans and specifications;
2. 40% of the Connection Fee is due within one year, February 6, 2021; or upon the date of building permit issuance, whichever occurs first;
3. 50% of the Connection Fee is due within two years, February 6, 2022; or upon the date of building permit issuance, whichever occurs first;

Please remit **\$17,355**. Make the check payable to Las Gallinas Valley Sanitary District. Please note if payment schedule as above is not followed, you risk losing your allocation.

By issuing this **Will-Serve Letter**, LGVSD is not incurring any liability of any nature, including but not limited to mandate, damages or injunctive relief. LGVSD is making no representation to the applicant nor waiving any rights it has under any applicable State or Federal law. In the event there is any court imposed moratorium on LGVSD, a connection to the District system may not occur. In the event any government agency imposes a moratorium on LGVSD, a connection to the District system may not occur. In the event there is not sufficient capacity, a connection to the District system may not occur.

If connection has not been made within three years, the allocation will be terminated without prejudice. Upon request, you will receive a refund of 90% of the above fees and you will be able to re-apply for an allocation at the fee rate then prevailing. Please sign and date the original of this letter and return it to the District office within 10 days. The copy is for your records.

Sincerely,

Mike Prinz, General Manager

AGREED:

_____ Date: _____
Project Applicant

Cc: Michael P. Cortez, District Engineer
Robert Ruiz, Administrative Services Manager

Agenda Item 2H
Date February 6, 2020



ORDER REGARDING PUBLICATION

The Board of Directors finds that Ordinance 181 was published in the Marin Independent Journal on January 27, 2020 as required by the California Health and Safety Code and have been available for inspection at the District's offices and on its website. This Order constitutes conclusive evidence of compliance with requirements for publication and posting of this ordinance. This Order shall be posted at the following locations and are available for inspection at the District's offices

The Order shall be posted in the following locations in the District, as follows:

1. Las Gallinas Valley Sanitary District
101 Lucas Valley Road, Suite 300
San Rafael, California 94903
2. Las Gallinas Valley Sanitary District Web Site
www.lgvsd.org

Executed on this 6th Day of February, 2020 at San Rafael, Marin County, California.

Rabi Elias
Board President



Agenda Summary Report

To: LGVSD Board of Directors
From: Mike Prinz, General Manager *MSP*
Date: February 6, 2020
Re: Approval of Lease Addendum B
Item Type: Consent _____ Discussion X Information _____ Other _____
Standard Contract: Yes _____ No X (See attached) Not Applicable _____

BACKGROUND

The District entered into a 5 year lease for 101 Lucas Valley Road, Suite 300, effective October 18, 2019. Since that time, the District has determined that it needs dedicated availability of the adjacent conference room 301, which had been designated for general tenant uses. The Owner of the building has determined that due to vacancy rates in the building, the room needed to be rented. In order to preserve the room's availability for District purposes, the Board authorized the General Manager to negotiate terms of an addendum to the Lease for Suite 300 in order to formally include room 301 in the Lease.

Specific terms of the proposed Lease Addendum B are:

Term	1 year with up to four 1 year renewals
Rate	\$800/month, with a 3% annual increase
Square footage	Approximately 450
Lease commencement	February 1, 2020
Furnishings	Conference table, 11 chairs, and large format monitor (existing)

PREVIOUS BOARD ACTION

The Board held a closed session on January 16, 2020 to discuss conference room needs, negotiating parameters, and authorize the General Manager to negotiate terms for Lease Addendum B.

ENVIRONMENTAL REVIEW

N/A

FISCAL IMPACT AND SOURCE OF FUNDS

The cost of the lease of the conference room for the balance of the current fiscal year is \$4,000, funds for which are available in undesignated reserves. Approximate costs to lease the room for the balance of the 5 year term for Suite 300 beyond the end of the current fiscal year are \$40,000.

STAFF RECOMMENDATION

Staff recommends that the Board authorize the General Manager to execute the Lease Addendum B for 101 Lucas Valley Road, conference room 301.

ADDENDUM NO. _____ B _____

To Agreement dated 10/18/2019, between RATHLIN PROPERTIES LLC, as LESSOR, and LAS GALLINAS VALLEY SANITARY DISTRICT, as LESSEE, concerning property located at 101 LUCAS VALLEY RD., #300 SAN RAFAEL, CA 94903

The parties agree as follows:

LESSOR AGREES TO RENT TO LESSEE ADDITIONAL SPACE COMMONLY KNOWN AS SUITE 301 FOR A CONFERENCE ROOM. LESSOR SHALL PROVIDE A CONFERENCE TABLE, 11 CHAIRS, LARGE SCREEN MONITOR SET. IF LESSEE DESIRES TO SET UP FOR VIDEO CONFERNING THEY MAY DO SO. LESSEE SHALL BE RESPONSIBLE FOR INTERNNET, TELEPHONE SERVICE TO THE SUITE AND MAINTENANCE / REPAIR OF ANY VIDEO EQUIPMENT PROVIDED BY LESSOR.

STARTING RENT SHALL BE \$800 PER MONTH AND IS DUE ON THE FIRST OF EVERY MONTH STARTING WITH THE FIRST DAY OF FEBRUARY 2020.

RENT PAYMENTS ARE DUE ON THE 1ST OF EACH MONTH AND SHALL BECOME LATE UPON THE 5TH DAY OF EACH MONTH AT WHICH TIME A LATE CHARGE OF \$40 SHALL BE INCURRED.

LEASE FOR SUITE 301 SHALL BE FOR ONE PERIODS THE FIRST PERIOD ENDING ON THE LAST DAY OF NOVEMBER 2020.

LEASE MAY BE EXTENDED INCREMENTS OF 1 YEAR PERIODS STARTING DECEMBER 1, 2020 RUNNING CONCURRENTLY WITH THE LEASE FOR SUITE 300. EXTENSIONS SHALL BE EXERCISED BY GIVING LESSOR 30 DAYS NOTICE OF INTENT TO EXTEND THE LEASE.

RENT FOR EACH EXTENSION PERIOD SHALL BE INCREASED BY 3% OVER THE PREVIOUS EXTENDED PERIOD I

This Addendum, upon its execution by both parties, is made a part of the above Agreement.

If checked this Addendum is of no force or effect unless executed by all parties and delivered prior to (date) _____ (time) _____ a.m. p.m., to _____ (Name of Party)

Seller/Lessor _____ Date _____
Ciaran Scally, Rathlin Properties LLC

Seller/Lessor _____ Date _____
Louise Martinm, Rathlin Properties LLC

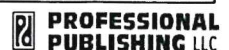
Buyer/Lessee _____ Date _____
Mike Prinz, PE General manager

Buyer/Lessee _____ Date _____

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Rev. by _____
Date _____



2/6/2020

General Manager Report

- Separate Item to be distributed at Board Meeting
- Separate Item to be distributed prior to Board Meeting
- Verbal Report – Topics include:
 - Rafael Meadows Pump Station Security
 - CalPERS Uniform Settlement
 - FutureSense Report Correction
- Presentation



Item Number 4A2

Agenda Summary Report

To: LGVSD Board of Directors
From: Mike Prinz, General Manager
Date: February 6, 2020
Re: Retention of HDR Inc. for Class B Land Application Evaluation Services
Item Type: Consent _____ Discussion _____ Information X Other _____
Standard Contract: Yes X No _____ (See attached) Not Applicable _____

BACKGROUND

Currently, the District's second highest strategic initiative is to establish beneficial use of Biosolids. In order to do that, a quantitative analysis of land application disposal capacity within the reclamation area must be performed. This work exceeds in house technical capacity.

Staff has retained HDR Engineering, Inc. in order to perform the analysis. HDR was retained under the General Manager's signature authority. HDR recently conducted extensive work for Sanitary District 5 (Belvedere-Tiburon), which referenced the District's reclamation area as a potential regional disposal site alternative. Mary Martis, HDR's project manager, has extensive experience in this arena and will be a capable manager of this effort.

PREVIOUS BOARD ACTION

Not applicable

ENVIRONMENTAL REVIEW

None. If the conceptual approach to beneficial use of biosolids is deemed feasible from a capacity standpoint, environmental review will be required in order to advance efforts beyond a capacity analysis.

FISCAL IMPACT AND SOURCE OF FUNDS

The cost for HDR's scope is not to exceed \$45,000 on a time and expense basis

STAFF RECOMMENDATION

None. Informational only.

2/6/2020 BOARD MEMBER REPORTS

1. BOARD MEMBER REPORTS:

1. CLARK

- a. NBWA Board Committee, NBWA Conference Committee, Ad Hoc HR Committee re: 2019 GM Evaluation, Ad Hoc HR Committee re: 2019 Employee Climate Survey, Other Reports

2. ELIAS

- a. NBWRA, Ad Hoc Engineering Committee re: STPURWE, Other Reports

3. MURRAY

- a. Marin LAFCO, CASA Energy Committee, Ad Hoc HR Committee re: 2019 GM Evaluation, Other Reports – CASA Energy Workgroup Meeting Webinar

4. SCHRIEBMAN

- a. Gallinas Watershed Council/Miller Creek Watershed Council, JPA Local Task Force
NBWA Tech Advisory Committee, Ad Hoc HR Committee re: 2019 Employee Climate Survey, Other Reports – CASA Winter Conference

5. YEZMAN

- a. Flood Zone 7, CSRMA, Ad Hoc Engineering Committee re: STPURWE, Other Reports



AGENDA

Agenda Item 5.3
Date February 6, 2020

Air Quality, Climate Change, and Energy Workgroup Meeting

Meeting Date/Time: January 17, 2020 / 8:30 – 10:30 am
Meeting Location: GoToWebinar Meeting (Link delivered via e-mail)
Dial-in: 605-472-5814 and Passcode 840 541 702#

COMMENCEMENT

ITEM	LEAD
Welcome/Roll Call	Jackie Zipkin (Chair), Greg Kester and Sarah Deslauriers (CASA)
Review/Approval of Agenda	All

LEGISLATIVE UPDATE

	ITEM	LEAD	STATUS
1.	2020 Bill Cycle	Jessica/Jared	2020 schedule, preview of bills already introduced

PRIORITY ISSUES/ACTION ITEMS

	ITEM	LEAD	NOTES
1.	Public Safety Power Shutoffs	David/Jackie	Air District/CAPCOA feedback, BAYCAN efforts
2.	Water Resiliency Portfolio	Sarah/Jessica	Summary of <u>final draft</u> released last week!
3.	SB 1383: Organic Waste Reduction Regs	Greg	<u>SB 1383</u> , adoption to take place in Jan 2020
4.	Regional Hot Topic: BAAQMD Climate Pollutants	Sarah	<u>Regulation 13 development</u> , 13-1 tabled, waiting for revised draft 13-2, 13-4 needs author, modified schedule
5.	Methane Hotspots Survey & Source Finder	Sarah/David	NASA JPL fly-overs and reporting
6.	PFAS (PFOA and PFOS)	Greg	<u>SWRCB PFAS, CASA and National Coalition fact sheets</u>
7.	<u>AB 617: Community Air Protection Program</u> & AB 2588 Toxics Program	Sarah/David	Tracking local air district and CAPCOA activities, drafting statewide approach for CASA member consideration

DISCUSSION/INFORMATIONAL ITEMS

	ITEM	LEAD	NOTES
1.	CA Adaptation efforts: • SWRCB • California Coastal Commission	Sarah	SWRCB Vulnerability Census; CCC Critical Infrastructure Guidance doc being drafted and negotiating 'managed retreat' of coastal WWTPs
2.	SWRCB Co-digestion Capacity Analysis	Sarah	SWRCB's internal review complete, publish by March 2020
3.	SB 100 <u>Joint Agency Report</u> & Scoping Workshops	Sarah	Renewable energy/zero-carbon resources to supply 100% of electric retail sales by 2045, next meeting(s) TBD
4.	Biogas/Biomethane Management: • EPA <u>Renewable Fuel Standard</u> RINs • CPUC Pipeline Biomethane • Biogas Accidental Release Prevention & Risk Management impacts • <u>LCFS</u>	Greg/Sarah	Next steps Renewable Gas Interconnection tariff <u>CalARP Risk Management Plan</u> & OSHA <u>Process Safety Management</u> Standards, OSHA contact established CARB working on realistic CI for co-digestion projects
5.	Non-refinery flares: SCAQMD Rule 1118.1 & SJVAPCD Rule 4311 Updates	David/Ray	SCAQMD: Meetings, status of mandated research SJVAPCD: Resuming rule-making (no update)
6.	TCR: <u>Water-Energy GHG (WEG) Guidance Initiative</u> & <u>Water-Energy Nexus Registry</u>	Sarah/Greg	<u>2019 IPCC Guideline Refinements</u>
7.	Offset Protocol Development – CA/U.S.	Sarah/Greg	<u>CARB Task Force</u> ; American Carbon Registry efforts, WEF – Climate Finance Task Force, Climate Action Reserve efforts
8.	CARB <u>Natural & Working Lands Climate Change Implementation Plan</u>	Sarah	Linkages to <u>Healthy Soils Initiative</u> & <u>Forest Carbon Plan</u> , importance of land management in meeting 2050 target
9.	Biosolids and Fire Reclamation Efforts	Greg	Project at Las Virgenes/Calabasas, Phase 1
10.	US Forest Services Wood Innovation Grant	Greg	Two-year project focused on tree mortality for biochar, use of biochar at WWTPs for odor control

UPCOMING CONFERENCES/EVENTS

NAME	DATE/LOCATION
<u>CASA Winter Conference</u>	January 21 – 23, Indian Wells
<u>2020 D.C. Policy Forum</u>	February 24 – 26, Washington, D.C.
<u>Biocycle Connect West 2020</u>	March 30 – April 1, Sacramento
<u>CWEA Annual Conference</u>	March 31 – April 3, Reno
<u>WEF Residuals & Biosolids Conference</u>	March 31 – April 3, Minneapolis

NEXT MEETING: February 27th, 8:30 to 10:30 (Conference Call/Webinar)



AGENDA

Air Quality, Climate Change, and Energy Workgroup Meeting

Additional topics we review periodically for progress or changes:

State

- CARB Natural & Working Lands
- CARB Mandatory GHG Reporting Regulation
- CARB 2030 Target Scoping Plan
- CEQA Guidance on GHG Emissions
- CNRA Climate Change Assessment
- CNRA Online CA Sea Level Rise Database
- CNRA Safeguarding CA: Implementation Action Plans
- CEC Climate Change Research Plan
- OEHHA Cal EnvironScreen Tool
- California's Climate Future report (by Governor Brown)
- Funding opportunities

National

- NEPA Guidance on GHG Emissions
- EPA EJScreen Tool
- WERF Phase II Project (lab scale based model) - N₂O Emissions from Wastewater Treatment Processes
- WERF High Quality Biosolids from Wastewater Project
- EPA Mandatory GHG Reporting Regulation Updates
- EPA Clean Power Plan (on stay)
- EPA Existing Source Performance Standards
- EPA Biogenic Emissions Accounting Framework
- White House Budget for DOE Energy Efficiency and Renewable Energy Programs
- NACWA Energy Workgroup
- NACWA Climate & Resilience Workgroup
- Funding opportunities

International

- Global GAP (Good Agricultural Practices) & Biosolids
- IWA Nitrous Oxide Modeling

Air Quality, Climate Change, & Energy (ACE) Workgroup Meeting

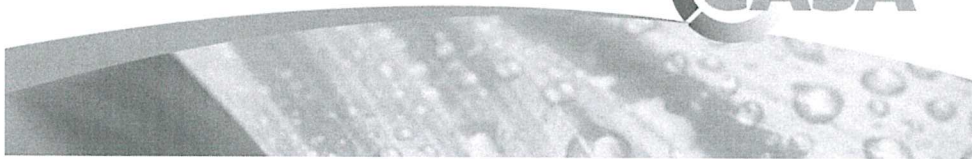
January 17, 2020 (8:30 to 10:30 am)

Conference Call

Dial-In: 605-472-5814

Passcode: 840 541 702 #

Please avoid using "HOLD" – Thank You! 😊



Legislative Update



Priority Issues/ Action Items



1. Public Safety Power Shutoffs (PSPS)

- For **public safety**, it may be necessary to turn off electricity when gusty winds and dry conditions, combined with heightened fire risk, are forecasted

- Air Districts concerned about increased diesel emissions from older stationary generators – may require older diesel engines be replaced with Tier 4 diesel engines
- Legislation seeking relief for essential public services could trigger response from CARB/air districts

- ACE Workgroup Subcommittee to coordinate tracking efforts



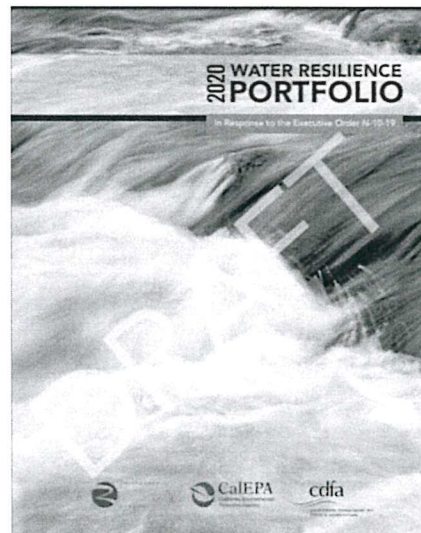
2. Water Resilience Portfolio released!

- Seven principles on which the portfolio was built:
 - Prioritize multi-benefit approaches that meet several needs at once
 - Utilize natural infrastructure such as forests and floodplains
 - Embrace innovation and new technologies
 - Encourage regional approaches among water users sharing watersheds
 - Incorporate successful approaches from other parts of the world
 - Integrate investments, policies, and programs across state government
 - Strengthen partnerships with local, federal and tribal governments, water agencies and irrigation districts, and other stakeholders.



2. Water Resilience Portfolio released!

- “...to improve California’s capacity to prepare for disruptions, withstand and recover from climate-related shocks, and adapt into the future.”
 - Maintain and diversify water supplies
 - Protect and enhance natural ecosystems
 - Build connections – share water more flexibly
 - Be prepared – for changing conditions



Region by region basis



3. SB 1383 (SLCP Reduction Implementation): Organic Waste Reduction Regulations

- 40% methane reduction by 2030 (relative to 2013 levels)
- Organic waste diversion from landfills (includes biosolids, digestate, and sludges)
 - 50% by 2020 (relative to 2014 levels)
 - 75% by 2025 (relative to 2014 levels)
- CEC/CPUC to incentivize biogas production/use
- Adoption by January 18, 2020 – final regulation to roll out
- State to start enforcement on Jurisdictions January 1, 2022
- Jurisdictions to start enforcement January 1, 2024



4. Regional Hot Topic: BAAQMD Climate Pollutants

Rules and Regulations

	GHGs	Odors	VOCs	Toxics
Regulation 13: Climate Pollutants				
Rule 13-1: Significant Methane Releases	CH ₄	Yes	Yes	Yes
Rule 13-2: Organic Material Handling	CH ₄	Yes	Yes	Yes
Rule 13-3: Composting Operations	CH ₄	Yes	Yes	Yes
Rule 13-4: Wastewater Operations*	CH ₄ , N ₂ O	Yes	Yes	Yes
Rule 13-5: Hydrogen Plants	CH ₄	Yes	Yes	Yes
Rule 8-34: Solids Waste Disposal Sites*				

* Future rule development efforts.



4. Regional Hot Topic: BAAQMD Climate Pollutants

Rule	Next Workshop	Board Presentation	Notes
13-1: Significant Methane Releases	TBD	TBD	Tabled indefinitely, focus on source-specific rules first
13-2: Organic Waste Handling	None	Q2 2020	Focus on organic material handling: Material Recovery Facilities, Transfer Facilities, Chip & Grind Facilities.
13-3: Composting Operations	Q2 2020	Q4 2020	Draft language in development.
13-4: Sewage Treatment & Anaerobic Digestion	Q2 2020	Q4 2020 (likely 2021)	BACWA requested involvement to provide input on draft language and workshop report. Draft rule to consider biogas produced/collected, minimizing other pollutants, flare requirements, record keeping, reporting requirements, etc.
13-5: Hydrogen Plants	Q1 2019	Q3 2020	Focus on hydrogen production at petroleum refineries.
8-34: Solid Waste Disposal (Landfills)	Q2 2020	Q4 2020	Focus on methane from landfills – BAAQMD to align with state and federal requirements.

5. Methane Hotspots Research & Source Finder



- AB 1496 (2015) – methane hot spots legislation to identify, measure and monitor areas of high methane concentrations
- Tiered observation system was used to perform measurements: satellite- and aircraft-based remote sensing, ground verification, and regional inventories
- Super-emitters = small fraction (<10%) of sources in a category responsible for majority (>50%) of emissions (landfills, refineries)
- CARB/CEC teamed with NASA/JPL to perform aerial methane survey to identify “super-emitters” (wastewater ~2%, flare and digester leakage – **encourage preventive maintenance**)
- NASA results to be presented at SWANA conference, Frank Caponi to summarize



6. Per and Polyfluoroalkyl Substances (PFAS)

- Quick facts:
 - Sources: cookware, carpets, fire retardant foam, microwavable popcorn bags, etc.
 - Background levels are in the ppb range, notification triggers are set to ppt
 - No federally approved method for analyzing biosolids, wastewater
 - Ban on land application of biosolids in Maine
- SWRCB investigation of PFAS (Summit Dec 4th and 5th)
 - Phase 1 – Landfills/airports, drinking water wells (notified via letter)
 - Phase 2 – summer or fall start date
 - Phase 3 – will include WWTPs (notified via letter) & land application sites
 - Notification levels for PFOA/PFOS lowered to 6.5/5.1 ppt, respectively
- National Coalition (met November 19th)
- State Coalition



7. AB 617 (Proposed CAP & TAC Reporting Regulation) and AB 2588 (Toxics Program)

- CARB to harmonize community air monitoring, reporting, & local emissions reduction programs for CAPs and TACs (and GHGs).
 - Assess community exposure
 - Establish criteria for air monitoring
 - Identify source contributions and strategies for emissions reduction
- October 2019
 - Establish emission reduction targets, schedule, & enforcement programs
 - Air Districts to submit annual progress reports to CARB in 2019 for 2018
- Some local air districts moving fast!



7. AB 617 CTR (Proposed CAP & TAC Reporting Regulation) and AB 2588 Updates (Toxics Program)

- AB 617 (Lead: Dave Edwards), AB 2588 Updates (Lead: Gabe Ruiz)
- CTR Regulation to go to board end of 2020
- AB 2588 Updates schedule extended through 2020, weigh in on:
 - Compound list expansion and testing/modeling methods
 - Developing/adopting a short list of toxics compounds for WW sector
- Scientific Review Panel to issue interim findings to CARB on the expanded list of 2588 compounds in Feb 2020, encouraged:
 - Wastewater sector to participate in review
 - Wastewater sector to perform an updated pooled emissions estimating effort to update outdated emission factors



7. AB 617 CTR (Proposed CAP & TAC Reporting Regulation) and AB 2588 Updates (Toxics Program)

- **Next Steps:**
 - CASA staff to review draft approach (for a pooled emissions study to update default emission factors)
 - David Rothbart (LACSD) will host a roundtable at the CASA Winter Conference to help gain feedback on and support for a wastewater pooled emissions study

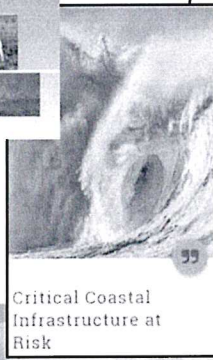
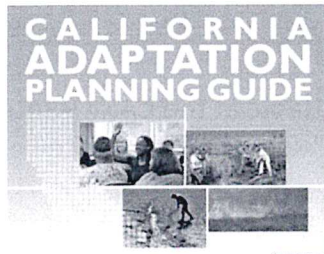


Discussion/ Informational Items



1. State actions to adapt California's water to impacts of climate change...

- State Water Board
- California Coastal Commission



STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2017-0012
COMPREHENSIVE RESPONSE TO CLIMATE CHANGE

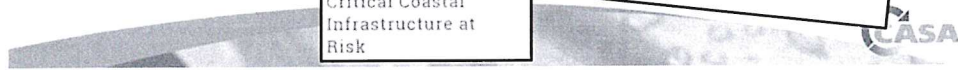
WHEREAS:

1. Sharp rises in the atmospheric concentration of greenhouse gases over the last century, and a half, due to human activity, have led to an increase in global average temperature, and associated climate change.
2. Climate change is affecting and will affect different regions in different ways. Current and future impacts include increasing frequency of extreme weather events, prolonged sea-level rise and storm surges, increased fire mortality, drought, more frequent and longer droughts, more frequent and more severe flooding, changes in the timing and volume of peak runoff, more frequent and more severe flooding, changes in water quality, vulnerability of water resources to increased impacts on water quality and flooding, and related risks to water and wastewater infrastructure and operations, degradation of estuaries, alteration of aquatic ecosystems and sea level rise, erosion, impacts on coastal areas, and ocean acidification.

Examples of water quality impacts include, but are not limited to, dry periods and droughts lowering stream flow and reducing dilution of pollutants, harmful algal blooms due to a combination of warm waters, reduced ability of warm water to hold dissolved oxygen, and nutrient pollution, more erosion and sedimentation caused by intense rainfall events, especially following wildfires, and increased volumes of stream flow, potential sewer overflows due to more intense precipitation and increased stream flows, and increasing areas subject to saltwater intrusion into groundwater and water pollution and increased absorption of carbon dioxide creating coastal zone "acidosis" or hypoxia.

The risk of acute or irreversible changes increase as the magnitude of the warming increases. The Intergovernmental Panel on Climate Change, in its latest assessment, states that limiting global average temperature increase to below 2 degrees Celsius is necessary in order to minimize the most catastrophic climate disruptions. The California Climate Change Assessments have provided a strong foundation of research concerning the impacts of climate change on the state, as well as potential response strategies.

Mitigation, in the context of climate change, refers to actions taken to reduce the concentration of greenhouse gases in the atmosphere. The most effective way to reduce greenhouse gas concentrations in the atmosphere is to reduce emissions.



1. SWRCB Climate Change Resolution

- State Water Board seeks feedback on:
 - Permit modifications and other regulatory requirements to reduce vulnerability to flooding, storm surge, and sea level rise.
 - Use of U.S. EPA's Climate Resilience Evaluation and Awareness Tool (CREAT) or a comparable approach to identify vulnerabilities to climate change impacts at water and wastewater utilities.
- State Water Board to distribute revised survey, timeline?
- RWQCBs going forward – Example: Simi Valley WDR Tentative Order

REVIEW DRAFT

Question for Stakeholders Collection, Commission on the State Water Board
CLIMATE CHANGE IMPACTS

Address: _____
 Check to include this agency or organization for: Collection Interagency Treatment Disposal
 Agency/organization/individual name: _____
 Contact: _____ Title: _____
 Phone: _____ Email: _____

PLEASE NOTE THIS SURVEY DOES NOT ASSESS REGULATORY REQUIREMENTS. IT DOES NOT ASSESS THE LEVEL OF VULNERABILITY, UNLESS IN THE CASE OF FLOODING.

1. Has your agency conducted a flood or infrastructure vulnerability assessment that includes coastal flood-related impacts in those extreme weather events (e.g. sea level rise, storm surge, multiple high concurrent precipitation, flooding, or extreme heat)? Yes (SWRCB 10/13/19) No

2. If yes, is it a required assessment or a voluntary Climate Action Plan or Resilience Report? (Check all that apply)
 Collection system Treatment plant Other (specify): _____
 Sanitary and storm sewage and use water facilities Other (specify): _____
 Distribution Other (specify): _____
 Other (specify): _____

3. Are results of the assessment available to the public? Yes No

If Yes, please provide the website address: _____

4. Detail areas of attention to address resilience of your facility to climate change impacts. The scenarios shown to place indicate the use of completion, in progress, and planned actions, within the expected time of completion.

Issues	Status of response				Completion Time
	In Plan	In Progress	Planned	Not Planned	
Dependence on water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dependency on infrastructure or infrastructure components	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dependency on water quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dependency on water quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dependency on water temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dependency on water quality or quantity, including in emergency scenarios, facilities or services that are critical to the operation of the facility, or services that are critical to the community, when located or provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



October 2019, Simi Valley Tentative Order:

- Special Studies, Technical Reports, and Additional Monitoring Requirements
 - Climate Change Vulnerability Assessment & Mitigation Plan:
 - Considering flooding, wildfire, sea level rise, or other climate-related changes
 - Assess/manage threats that may impact a wastewater treatment facility's...operation, influent quality, its collection system, and water quality, including changes to influent water temperature and pollutant concentrations, and beneficial uses.
 - The Climate Change Plan is due 12 months after adoption of the Order.



1. Coastal Commission: Critical Coastal Infrastructure & Climate Change

- Critical Infrastructure Guidance document no longer announced on website – following up with staff
- Various smaller coastal WWTPs in discussions regarding “managed retreat” and permit negotiations
 - Morro Bay and four others (CCC to confirm details)
 - Based on sea level rise projections (10 feet by 2100) – “details for determining setback distances and trigger conditions will need customization to local conditions”

- Next steps:
Meet with CCC to discuss which WWTPs they will target next



2. SWRCB Co-Digestion Capacity Analysis

- **Submitted final chapters per task July 31**
 1. Estimate organics generation in 2025 and 2030
 2. Assess existing capacity (without rehab/modifications)
 3. Assess future capacity in 2025 and 2030 (without & with rehab/ modifications)
 4. Assess methane emissions
 5. Additional Topics:
 - Investigate opportunities and barriers at small- to medium-sized facilities
 - Examine pilot/demonstration facilities that have already operated

- **Release of report to public expected March 2020**



3. SB 100 Joint Agency Report and Scoping Workshops

- SB 100: Requires renewable energy and zero-carbon resources supply 100% of electric retail sales to end-use customers by 2045
- Requires CEC, CPUC, and CARB to complete joint agency report to Legislature by January 1, 2021 (every 4 years thereafter):
 - Review 100% zero-carbon policy.
 - Evaluate potential benefits and impacts on system and local reliability associated with achieving the policy.
 - Evaluate the nature of any anticipated financial costs and benefits to electric, gas, and water utilities, including customer rate impacts and benefits.
 - Identify barriers to, and benefits of, achieving the policy.
 - Alternative scenarios in which the policy can be achieved and estimated costs and benefits of each scenario.



4. Biogas/Biomethane Management

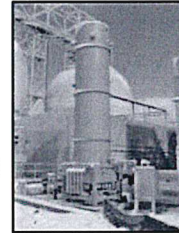
- EPA Renewable Fuel Standard RINs – follow up letter to be drafted
- CPUC Pipeline Biomethane
- Accidental Release Prevention & Process Safety Management Standards – OSHA Contact
- LCFS – Co-Digestion pathway development



5. Non-Refinery Flares: SCAQMD Rule 1118.1 & SJVAPCD Rule 4311

■ SCAQMD

- Examining impacts of SB 1383
 - Food Waste Diversion
 - Beneficial Use Technology Assessment – considering more funds for meaningful study



■ SJVAPCD – Rule 4311 (no update)

- Resuming amendments to limit use and proposing a lower NOx limit (0.018 lbs/MMBtu)



6. TCR Water-Energy GHG Guidance 2.0 & Voluntary Water-Energy Nexus (WEN) Registry

- Goal: Develop methodology and protocols to quantify, compare, report, track, and analyze GHG emissions embedded in delivered water and treated wastewater and recycle water
- Incorporate process related emissions based on 2019 IPCC Guidance Refinements
 - Improvement of N2O emission factors from WWTPs



7. Offset Protocol Development – ARB mandated efforts under AB 398

- Compliance Offsets Protocol Task Force – establish new protocols for use in post-2020 Cap-and-Trade Program
- Goal: Develop report (draft by July 2020) providing guidance to CARB in establishing new offset protocols for post-2020 Cap-and-Trade
- Program with direct environmental benefits in the state while prioritizing disadvantaged communities, Native American or tribal lands, and rural and agricultural regions

- **Next Public Meeting:**
January TBD



7. Offset Protocol Development – ACR and CAR are resources to ARB

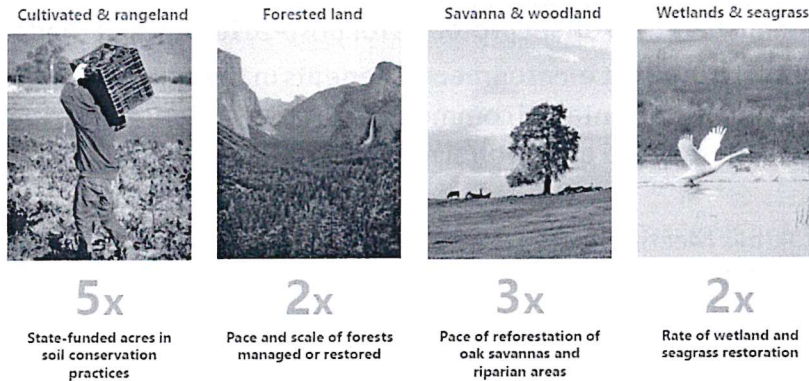
- American Carbon Registry (ACR)
 - ACR building excel-based tool to estimate emissions of municipal wastewater
- Climate Action Reserve (CAR)
 - CAR launching development of the Soil Enrichment Project Protocol
 - Provide guidance on how to quantify, monitor, report, and verify agricultural practices that enhance carbon storage in soils
 - [Soil Organic Carbon Potential Paper](#)
 - Draft protocol to be released in April
 - Public Comment period April – May
 - Protocol to Board

- **Next Steps:**
 - Reach out to CAR to provide input on the Soil Enrichment Project Protocol
 - WEF Residuals & Biosolids GHG Subcommittee Climate Finance Task Force



8. California 2030 Natural & Working Lands Climate Change Implementation Plan

California strives to double the pace and scale of land restoration activities by 2030 and beyond.

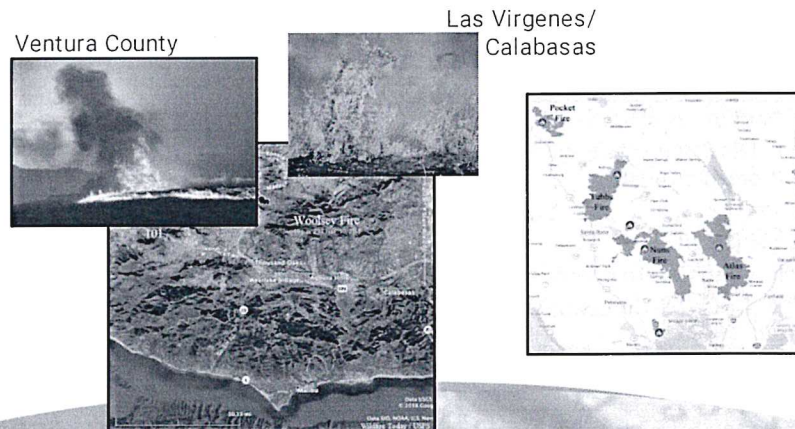


Comparing program to Healthy Soils Initiative & Forest Carbon Plan!



9. Biosolids and Fire Reclamation Efforts

- Received \$82,500 from agency contributions
- Working to get funding from legislature - \$200k
- Sites secured in Las Virgenes/Calabasas (Phase 1) for Class B, Class A compost, & Class A dried pellets for land application
- Looking for a site in Bay Area (Phase 2) and back to Colorado (Phase 3)



10. U.S. Forest Services Wood Innovation Grant



- CASA applied for grant at request of Sierra-NV Conservancy & Governor's Office of Planning & Research
- Two-year grant with U-CO and UC-Merced/Phoenix Energy
- Investigate viability of replacing GAC with biochar (from gasification of dead trees) for pre- and post-treatment odor control
 - Year 1: Perfect activation of biochar (bench to full scale)
 - Year 2: Five agencies to test (SOCWA, VVWRA, Delta Diablo, LACSD, & South Tahoe)

Early results:

- Biochar too moist
- H₂S, Siloxanes not removed well



Upcoming Conferences/Events

- **CASA Winter Conference**
January 21 - 23, Indian Wells
- **2020 D.C. Policy Forum**
February 24-26, Washington, D.C.
- **Biocycle Connect West 2020**
March 30 – April 1, Sacramento
- **CWEA Annual Conference**
March 31 – April 3, Reno
- **WEF Residuals & Biosolids Conference**
March 31 – April 3, Minneapolis



Upcoming Meetings

- February 27th
- March 26th
- April 23rd (In-Person)
- May 28th
- June 25th
- July 23rd (In-Person)
- August 27th
- September 24th
- October 22nd
- November 12th (In-Person)
- December 17th

Thanks for Joining!



Agenda Item 5.4
Date February 6, 2020

CASA Winter Conference
Jan. 21, 22, 23 2020
Judy Schriebman

CSRMA:

1. Aging workforce; job demands are staying the same; so increased risk of injury. Most accidents from lifting heavy. **Occumetric and Physical Demand Assessment Software** tool now available to CSRMA members free; tailored and designed based on our industry and jobs. Breaking jobs into tasks; rating tasks by difficulty so that injured returning workers can do some things but not others. Working w/the doctor. Info/picture sheets on what the work entails per job for dr. assessment. Sheets available to CSRMA members. Free webinar Feb. 13 for all members on how to use this tool.
2. **Wellness programs.** Going beyond safety training to keep staff healthy. This is something for the board to discuss. → Board newsletter could ask staff what they like to see in wellness program. Give options. Nutrition/gym membership/PT, etc. Companies found that free additions of Omega-3 supplements to all staff as helping soft tissue (damaged by lifting/strain etc) heal and repair; saved costs/worker injury.
3. Legal ramifications of Oroville decision re: SSOs and damage to property. Looking at ordinance language from agencies. Inverse condemnation additional protection.
4. San Diego Gas and Electric; pro-active approach to risk management of fire. Working out of "just a utility" box; hardening vulnerable infrastructure like poles; placing cameras for early fire detection; jobbing out risky work to companies skilled at doing it (helicopters); not taking it on themselves. Microgrids. Weather monitoring stations to get onsite accurate wind/temp data. Asked when they were taking over PG&E; they're not. ☹

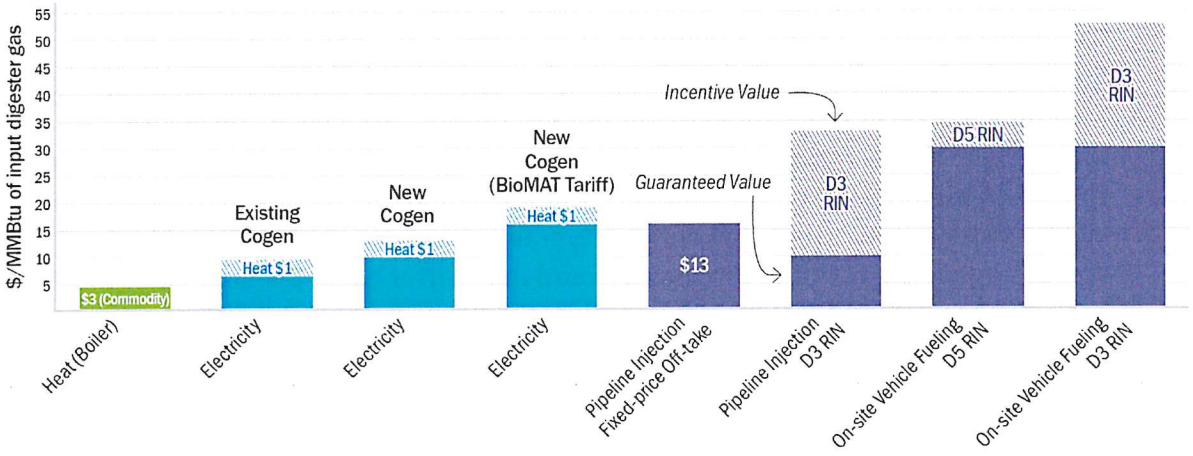
RoundTables:

PFOA/PFAS: More PFAS in house dust than in current water supply. A political issue where can measure but not treat w/o great expense (RO/carbon filtration). Argument being made on WWTP not being the environmental source/generator of the PFOAs. AQWA workgroup submitted letter. Levels in human bodies going down due to banning of the chems in 2000. Military bases the worst. Fire suppression materials. Need to stop it at the source; where it's manufactured. For Craig going to Washington: A few bills that highlighted sanitation NOT being real source: HR 525 passed out of the House. Water Resources Development act process that gets passed every two years now including PFOs.

Biosolids: SB 1383. Jan. 2022 for enactment; 2025 in full. Requires WWTP to 40% reduction in Methane from 2013 levels by 2030. Requirement to divert (2014 numbers) 25% from landfill. Help state by composting greenwaste and biodigesting food waste. Language now disallows local ordinances that restrict land applications of biosolids. Complicated; eg bio gas gets credit but ONLY from food waste. Can only count reduction of landfill disposal if you are ultimately doing land application with the compost/biosolids. Surface disposal sites; will be considered as landfill disposal. Land disposal means for ag; growing and harvesting a crop. Incineration also not counted as diversion. State will be looking at franchise agreement with haulers to make sure organics are separated properly and if not, will begin enforcement. Biosolids have to be composted. Have to be co-digesting and can't be landfilling more than 25%

of your biosolids. If you co-digest and use that for onsite power and heat and fuel, it counts. I asked for a graphic for all this to determine best value/best practices; Mike Harrison of Brown and Caldwell was able to supply:

Relative value of energy (adjusted for conversion efficiency)



Brown and Caldwell

Also discussed non-Lithium battery storage—looking for pilot project. **Flowcell batteries**. No flammability; on par with lithium ion batteries with longer lifespan. Can finance these b/c of longer lifespan; 10-20 years. Few moving parts.

Emerging Leaders Program (Keynote): Mentoring programs needed. Role of mentor: Build skills through coaching by asking **open ended questions**; help w/self-discovery/self-awareness. Top 5 mentoring myths handout and worksheet. Establish judgement-free zone; work to develop trust; willingness to be vulnerable/imperfect; young leaders want that time with senior leaders. Include mentorships with list of benefits offered. Re: operations; *really think about who you are putting into the line crew leadership*. Offer external list of mentors. Could be retired employees; consulting firms; other regional utilities, etc.

Cutting Edge Tech and Research Partnerships Panel: The BEST panel:

Sebastien Tilmans, Stanford Codiga Resource Recovery Center, Anaerobic Secondary Treatment and Bioplastics: Goal of accelerating **resource recovery** at WWTP; taking cues from mining/petroleum industry at WWTP; products are water, energy, bioproducts. Methane is major food source for methanotrophs. Microbial mats harvest the methane; food for higher forms of life. 10 acre tx plant could produce the same amount of protein as 1000 acres of forest. Two companies selling animal feed from methanotrophs w/EU approval (but from NG not RNG; that's coming). They also create a bioplastic that is 100% biodegradable/reusable—breaks down into more methane for feed. Nature's Plastic; PHB-Poly-hydroxybutyrate (a bacterial "fat") made before oxygen was on the planet. Readily biodegradable. Made by methane eating bacteria. Harvest the plastic from them. PHB is also a probiotic in animal feed.

<http://mangomaterials.com/technology/> *Is energy the highest and best use of the methane resource you are producing? Should we be making animal feed/fish farm on LGVSD land? How do we design our plant/master plans to create diverse portfolio for methane use?*

Vijay Srivatsan, Fuel Cell Tech with Bloom Energy of San Jose: Combustion-free waste to energy: anaerobic biogas to energy. Clean, reliable, onsite; tech came out of NASA fuel cell project for drinkable water, air for long term space missions. Installed sites have survived fire, typhoons, hurricanes, earthquakes and still produced power. Highly reliable. Modular. Each box at 50Kw generating capacity; about size of refrigerator. 2 other boxes to remove sulphur and siloxanes (all else can pass through); power. Solid ceramic piece; can use biogas or natural gas or hydrogen as fuel. Fed ambient air. Needs methane rich gas. Ammonia and ag manures are perfect feedstocks. Siloxane removal is the main problem from WWTPs.

Ian Pepper, U of AZ, Director Water/Tech Center; biosolids report: Land application biosolids researcher. With Greg Kester, co-author of A Collaborative Rebuttal to the OIG (Office of the Inspector General) Biosolids Report Nov. 2018. Misleading info in report. 61 ID'd as hazardous. ID's the concentrations in biosolids; cf to residential soil; eval half-life and mobility through soil. Removed low concentrations, non-toxic, biodegradable and got down to short list of chemicals that need investigation. Most of the 61 chemicals have already been assessed this way by EPA. The other 300 chemicals are non-toxic or low concentration. ARB (AntiBiotic resistant Bacteria) are present in soils everywhere, for past 3Billion years. Calculate the naturally occurring ARBs in acre of soil; % increase in land application is 0.1%. Introduced bacteria are less than those naturally occurring and usually die off quickly or lose the ABR gene as not needed. Pathogens in biosolids: Class A has non-detect; Class B has detectable. Protocols known for safe use.

Jim Herberg, Orange County: Climate Resiliency: ID'd climate variables and future projections; prepared risk maps; ID'd individual facilities; site-specific risk assessment. "CREATE" tool for small agencies. Climate forces: SLR, Tsunami, Wildfires, Extreme heat, Need to reduce of CO2, PSPS. King Tides; EL Nino also a threat. Peak high Inflows a huge factor over base flows due to more intense storms. Pump stations (underground) to be built w/higher control areas; fixes will be done whenever retrofits are done.

Silver Tsunami: Three CASA Programs to train Next Gen Workforce

Michele Roman, Mayor of Kingsburg (Fresno), Sanitation District Board: Started Valley Regional Occupational Program bringing kids into clean water agencies. Reached out to schools to see how to fill the need; reach them younger than college. High School w/paid internship (\$12/hr) June/July/Aug; job shadow all positions: Admin, operations, collections, HR, IT, Lab, Engineering. Interns have to do a full presentation to the board at end on what they learned. They do know NOT to flush wipes or grease and they are teaching it to their parents and school board.

Dave Hicks, SLO, Deputy Director WW, Interested People Training Program. Did *unpaid* internship program, starting in the lab. There was interest in learning something new or a trade. Found interns via tours, websites (did videos), word of mouth via CalPoly teachers. Needed to explain the field to everyone—talk about the value of water, environmental protection, *transportable* career, job security, good pay. Work was geared towards certification. Developed a training manual. Given a uniform; job shadowing as part of staff. Waiting list.

Randy Lee, Inland Empire Utilities, Environmental Engineer, Grade 5 Operator: Intern and Volunteer Trades Program. Had 50% turnover in operations staff in last 3 years due to retirement. Hurdle to get into the industry; can get T2 certification from school but the other piece requires certification which requires work experience. Catch-22. Program addresses this. Video on program. Certification focused. Paid and unpaid positions. Hiring process the same. Interview; etc; drug testing, start date. Expect them to study for certification exam. Interns are paid (\$12-\$17/hour, M-TH) with limit on hours. Volunteers can work as long as they want, to get certified quicker. Supervised. Need to keep a daily log. Tested and written evaluation. Working on manual revision for 2020. Start small to build on success; review program and revise as needed.

ROP in every county; a state program. Have legal and tech etc academies. Engage unions early; to get their support, to not see interns as competition. College credit for unpaid work.

Solutions for Medium to Small Agencies (100 miles or less of lines)

Financing: Greg Schwatz, Piper Sandler firm; Tailor Funding Sources to your Project. 5 Key Factors that guide you to appropriate funding sources. 1. Reason for project, 2. Timing/Need for Cash, 3. Primary Inputs, 4. Schedule, 5. Repayment. Interest rates do not define the costs. The 5 factors do. [See slides] SRF is starting to do refunds better (you get placement to get going; repaid by SRF).

Nutrient removal: Bob Holt, Suez, Minimally Invasive Nutrient Removal. Inserting hollow fiber membranes. **ZeeLung**. MABR cassettes installed in the CAS bioreactor tanks. Supplying air to the process. Not a filter or fine bubble diffuser. ZeeLung biofilm favors the growth of nitrifying bacteria. Transfer O₂ w/o bubbles; 4x lower energy than bubble diffusers. Can install in existing tanks. Can expand modularly.

Alex Quinn, triple bottom line analysis for SFPUC capital planning: Grey and Green Tech evaluated; what are the best solutions for SF? Traditional: Engineering performance and what's the cost? Vs Environmental benefit, noise, community air quality, social benefit. "Cannibals with Forks" book for a whole systems approach. Used tripart pie chart. Expressed it in color to limit false precision in the data. Didn't want analytics to trump the politics. Criteria described for each analytic.

Legislative update:

Washington: Pelosi to unveil infrastructure bill; some for water, most for transportation
NPDES Permit Terms: State can issue 10 year permits but imposed conditions are tricky—proposing that state loses its ability to ministerially extend permit term. May end up in WRDA bill. WRDA may become the bill that pulls a lot of infrastructure through. WOTUS final rule; will be litigated as final rule. Water Recycling Action Plan—no money in it, but put all the agencies together to promote WR better. PFAS Action Plan—regulation in drinking water. NEPA Rewrite—Admin wants to rollback regs on big infrastructure projects; will be litigated; but how do we deal with outdated rules? Wipes issue: introducing plastics legislation w/section on wipes designated as flushable or not flushable.

Sacto: Feb 21 is when all bills must be introduced. Wipes bill will be passed to Assembly by next week. Working w/industry to find common ground to address improper disposal of wipes.

“Flushable” wipes dispersal report will be coming out. CoastKeepers Alliance and Sen Hertzberg invited CASA to seek voluntary projects to keep stormwater out of oceans. Microplastics/microfibers. \$1B set aside for water projects; recycled water a major focus in bill. June deadline!

Adam Krantz of NACWA; Nationwide perspective on Water; CA is largest state member: National Environmental Achievement Award to Bobbi Larsen next week as she is retiring. NACWA 50th anniversary year. 2 more years till anniversary of CWA. SRF, WIFFIA funding goes up regardless—water nonpartisan issue. Protection of tax free bond funding. Regulatory reform—watershed approach. Amended CWA to include integrated planning; including the regulated with the regulators (Grace Napolitano). PFOS: no scientific methodology to address reality for any CECs, if testing can even be done; what are the risks, the hot spots, etc. Need a new model under CWA. Independent body to make conclusions. Utility of the Future: energy and plastics to cull from waste stream presentation. **Have to move to net environmental benefit model.** Workforce issue; needs fed support to create new workers in water. **Concerned about privatization of public sector.** Taking over small utilities for private benefit. Moving Water as top National Priority in DC. Better coordination. All water groups in big conference in GA, Feb. 2020. <https://www.nacwa.org/conferences-events> 2020 Utility Leadership Conference and NACWA 50th anniversary July 2020 Seattle.

Michael Thompson, Sonoma Water: “Fires, Favours and Wolves: Sonoma’s Recent Disaster Experience”. Largest energy user north of SF; all renewable. Supply water to Sonoma/Marin. Many generators and fuel needed. Had to evacuate (Santa Rosa fires). Worked 6 pm to midnight to remove all file servers; computers; historical docs. Had 12 vans and SUVs to transport to Rohnert Park, which had power and internet at city council. Full SCADA system transferred to closet in Sonoma Valley CSD. Deep Survival—who makes it through? Jump and run don’t do so well; sit quietly, don’t do well; so control the panic but *act*. Standardized Emergency Management system—teaches the mindset that is needed for smart action, not panic action. Stop and breathe. Train and practice your plans. Not enough to know it. Set up daycare for staff onsite at education facility. Restaurants and schools were closed; food was donated to kids.



BOARD MEMBER MEETING ATTENDANCE REQUEST

Date: _____ Name: _____

I would like to attend the _____ Meeting
of _____

To be held on the _____ day of _____ from _____ a.m. / p.m. to
_____ day of _____ from _____ a.m. / p.m.

Location of meeting: _____

Actual meeting date(s): _____

Meeting Type: (In person/Webinar/Conference) _____

Purpose of Meeting: _____

Other meeting attendees: _____

Meeting relevance to District: _____

Frequency of Meeting: _____

Estimated Costs of Travel (if applicable): _____

Date submitted to Board Secretary: _____

Board approval obtained on Date: _____

Please submit to the District Administrative Assistant, no later than 2:00 p.m. on the
Friday prior to the Board Meeting.

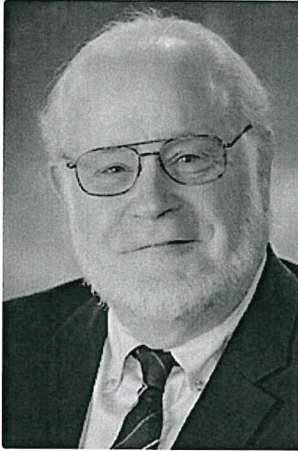
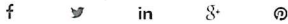
2/6/2020

BOARD AGENDA ITEM REQUESTS

Agenda Item 6B

- Separate Item to be distributed at Board Meeting
- Separate Item to be distributed prior to Board Meeting
- Verbal Report
- Presentation

Managing PFAS Chemicals In Composting And Anaerobic Digestion



New series explores ramifications of PFAS in recycled organics and process storm water — and technology options to treat the contamination. Part I

Craig Coker

A lot of media attention is currently given to the issue of per- and polyfluoroalkyl substances (PFAS). The issues for composting and anaerobic digestion facilities are the presence of PFAS in finished compost or digestate products (Beecher and Brown, 2018, Parts I and II), and the presence of PFAS in facility storm water runoff. Composting or digestion facilities that take in biosolids, industrial residuals, and food scraps containing grease-resistant food packaging are receptors of PFAS chemicals.

What Are PFAS?

PFAS are a large group of compounds used in nonstick coatings, textiles, paper products, some firefighting foams, and many other products. These compounds have many manufacturing and product applications because they repel oil and water, resist temperature extremes, and reduce friction. PFAS include compounds that vary in molecular weight and can have multiple structures and functional groups. Over the years, manufacturing and use of these compounds has resulted in their presence in the environment. The scientific community is rapidly recognizing the environmental and health effects of PFAS.

Some of the perfluoroalkyl acids, such as perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), are mobile, persistent, and bioaccumulative. Researchers are learning more about potential degradation of these compounds by bacteria in the environment, and findings need to be corroborated. In May 2016, EPA established drinking water health advisories (HAs) of 70 parts per trillion (ppt) (0.07 micrograms per liter) for the combined concentrations of PFOS and PFOA (EPA, 2017). PFOA ($C_8HF_{15}O_2$) is highly water-soluble (9,500 mg/L at 25°C.) whereas PFOS ($C_8HF_{17}O_3S$) is much less water-soluble (680 mg/L at 25°C.).

Aqueous film-forming foams (AFFFs) are commercial surfactant solutions used for several decades by the U.S. military, civilian airports, and other facilities to extinguish hydrocarbon fires. Manufacturing facilities that may be sources of PFAS releases to the environment include textile and leather processors, paper mills, metal finishers,

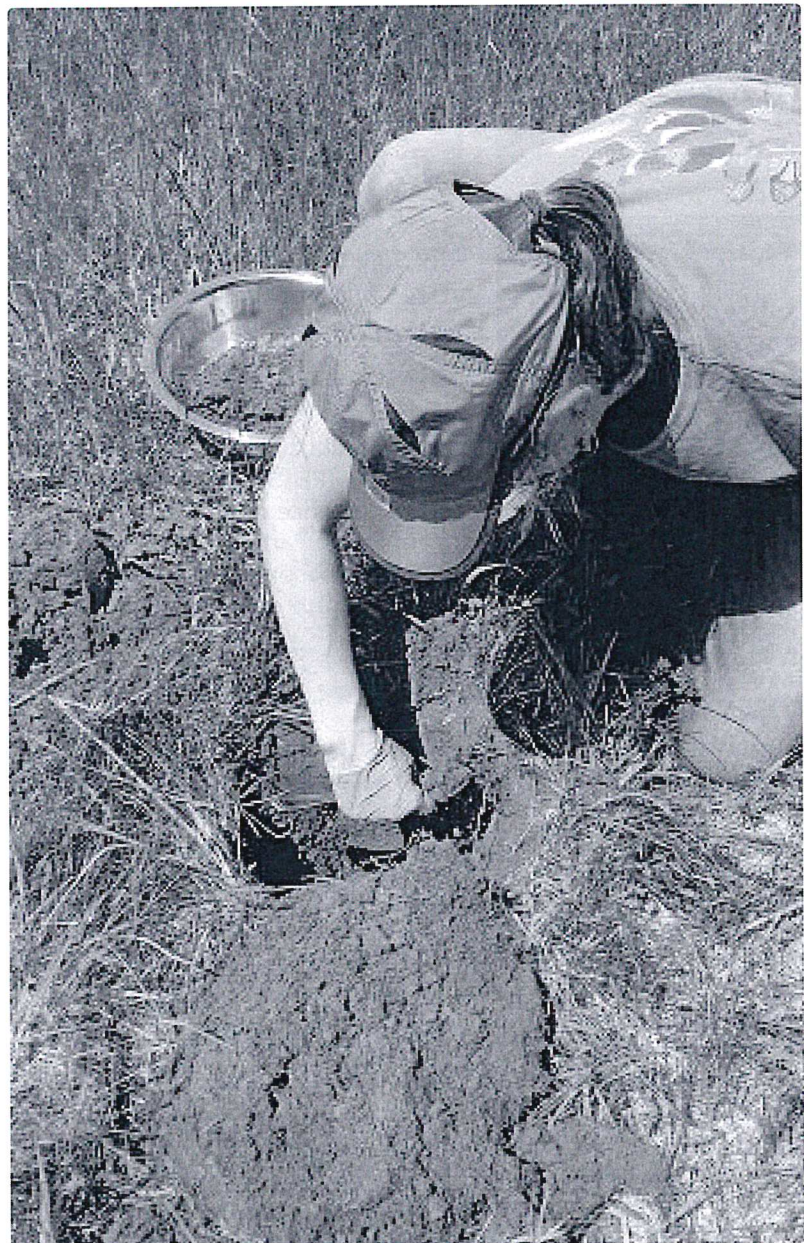
wire manufacturers, and plating facilities, as well as facilities using surfactants, resins, molds, plastics, photolithography, and semiconductors. The vast majority of significant PFAS contamination sites around the world are associated with fire-fighting activities and industrial facilities and discharges. At such sites, levels of PFAS in soils are near 1,000 ppb or more and groundwater PFAS levels are in the 1,000s to 100,000s of ppt.

Landfills are recipients of PFAS because they are the ultimate repositories not only for PFAS-contaminated industrial waste, sewage sludge, and waste from site mitigation, but also for PFAS-bearing consumer goods treated with hydrophobic, stain-resistant coatings. PFAS may also be introduced to the environment through wastewater effluent, septic systems, and via the land application of biosolids as a beneficial soil amendment, potentially allowing PFAS to enter surface water through runoff or infiltrate to groundwater. State and research data indicate that the large majority of wastewater and biosolids management, where there has been no direct, large industrial discharge, results in PFAS levels in soils in the 10s to low 100s of parts per billion (ppb) and 10s of ppt in groundwater (NEBRA, 2019).

PFAS In Composts

Research at Purdue University detected all 17 of the PFAS chemicals for which they analyzed, including PFOA and PFOS, in 18 commercially available fertilizers (of which 11 were biosolids-based and 5 were composted biosolids) and 10 solid waste-derived composts (Lee, 2019). Composted biosolids had concentrations of PFAS ranging from 20 to 85 micrograms per kilogram ($\mu\text{g}/\text{kg}$, ppb) while composts made from various combinations of food scraps, compostable servingware and yard trimmings had PFAS concentrations between 22 and 52 $\mu\text{g}/\text{kg}$. Pure yard trimmings compost registered concentrations of 2 to 5 $\mu\text{g}/\text{kg}$.

In March 2019, the Maine Department of Environmental Protection (DEP) imposed a moratorium on biosolids distribution and use, pending testing of all biosolids for PFAS. Maine DEP is applying very low soil screening levels (2.5 $\mu\text{g}/\text{kg}$ for PFOA and 5.2 $\mu\text{g}/\text{kg}$ for PFOS), and all but one Maine biosolids product exceeds the screening levels. Exceeding the screening values does not preclude possible use of the biosolids. Maine DEP regulations allow “proof” using loading rate calculations that biosolids applied to soil for several decades will not raise soil levels above the screening values. Those calculations have now been applied to several Class A products, such as compost from the Casella Organics’ Hawk Ridge Compost Facility in Unity, New England’s largest compost facility. Maine DEP has determined that that compost is safe for use, and permitted resumed sales and distribution in mid-April 2019 until June of 2020 (NEBRA, 2019).



Field sampling for PFAS in soil
Photo by Lauren Souther

In June 2019, Golden Heart Utilities (GHU) in Fairbanks, Alaska voluntarily suspended sales of its biosolids compost after detecting PFAS. The Utility said in a statement, "Analytical tests have indicated the presence of PFAS in last season's compost stock. GHU has been proactive in screening and testing the compost for PFAS materials. Based on information available to us at this time, it is our understanding that the risk of PFAS in biosolids (compost) has not been determined and more studies need to be conducted to properly determine the risk. Given the uncertainty and general concerns regarding PFAS, GHU is erring on the side of caution and decided to cease the distribution of compost. Alaska Department Environmental Conservation (ADEC) agreed with the decision." It should be noted that the exhaustive risk assessment conducted prior to promulgation of U.S. EPA's Part 503 biosolids regulations has not yet been conducted for PFAS.

If you make compost from biosolids and/or from food scraps, it is likely your compost does contain PFAS chemicals. Unfortunately, it is very difficult to test for PFAS in composts as the EPA-approved laboratory procedures in use are those for drinking water. The American Society for Testing and Materials (ASTM) does have a standard (D7968-17a) for "Determination of Polyfluorinated Compounds in Soil by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)". However, most commercial labs are using their own "modified Method 537", which involves isotope dilution that achieves lower detection levels. Each lab has developed its own modified method, meaning results from one lab versus another may not be comparable. Recent quotes for compost testing have been in the \$250 to \$500/sample range.

There are no known methods for removing PFAS chemicals from composts other than to stop accepting feedstocks that contain PFAS. Given the long residence times in some composting facilities, it would take many months, if not longer, for compost qualities to improve to the point where no PFAS were found. Also, the very small concentrations being measured offer significant potential for cross-contamination with loader buckets, temperature probes and sampling tools.

While regulatory moratoria on compost sales may be unlikely, knowledgeable consumers may ask questions about compost PFAS content, which may cause issues with product sales.

Craig Coker is a Senior Editor at BioCycle and CEO of Coker Composting & Consulting near Roanoke, VA. He can be reached at ccoker@jgpress.com.

References

Agency for Toxic Substances and Disease Registry, "Toxicological Profile for Perfluoroalkyls, Draft for Public Comment," June 2018.

Lee, L., "PFAS -More Than You Ever Wanted to Know and Then Some", Michigan Water Environment Association 2019 Biosolids Conference, March 2019.

North East Biosolids and Residuals Association, "Biosolids & Septage Management Affected by Strict PFAS Limits in New England", May 9, 2019.



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Comments are closed.

Biogas Tax Credits Resurrected

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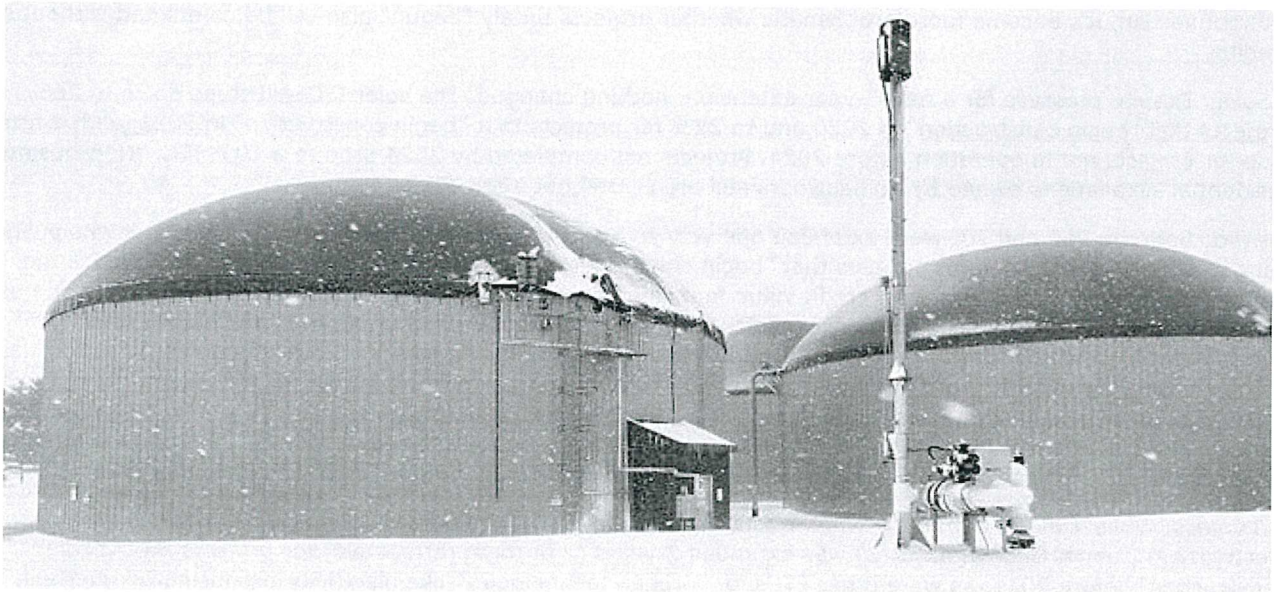


Under new law tax credits come to life again, for some anaerobic digesters.

Michael H. Levin

On December 20, as part of the "Further Consolidated Appropriations Act of 2020," Congress passed and the President signed the "Taxpayer Certainty and Disaster Tax Relief Act of 2019." That concluded the most suspenseful struggle in recent memory to extend federal tax credits for anaerobic digestion (AD) and other renewable energy facilities (see "2018 Bipartisan Budget Act Extends Tax Credits").

For nearly a year, participants and observers were whipsawed by shifts over whether or how expired and expiring renewables credits might be extended. Arrayed on one side were (e.g.) conservative budget hawks and Administration-allied fossil fuel supporters who saw their "best shot to terminate these temporary tax credits," many of which had expired for an unprecedented two years. On the other side were solar, wind and biomass sectors plus Paris Climate Accord advocates, asserting that without extenders huge numbers of "good jobs" and greenhouse gas reductions would be foregone. It seemed anyone's guess what tax credit provisions might squeak through impeachment proceedings, the U.S.-Mexico-Canada Trade Agreement debate, a possible government shutdown, and an oncoming Presidential election.



Anaerobic digesters producing electricity qualify for PTC and ITC tax extender credits. Photo by Doug Pinkerton

In the end no one's dreams survived. Against stiff odds, tax benefits for biomass-to-electricity facilities generally were extended for three years (two of them retroactive) from 2018 through 2020, bolstered by GOP fears of continued farm-state anger at the Administration's avalanche of Renewable Fuel Standard (RFS) refinery waivers (see "State of Play in Renewable Fuels Markets"). But all parties came away privately disappointed.

Proposals Not Making The Cut

Ambitious AD-related proposals that fell by the wayside included:

- HR 4186, the "Renewable Electricity Tax Equalization Act," which would have extended the PTC "begin construction" eligibility window through 2024 and nearly doubled the Code Section 45 production tax credit (PTC)

for biomass, landfill gas and several other renewable electricity technologies from 1.3¢/kWh to 2.4¢/kWh, equal to the historically higher PTC for wind.

- HR 3744, the "Agriculture Environmental Stewardship Act," which would have created new broad stand-alone 30% Investment Tax Credits (ITCs) through 2021 for both facilities like AD that produce "green gas" (renewable natural gas or RNG), and facilities that recover nutrients from digestate or livestock manure. These provisions were "broad" because they would have applied retroactively, whenever such facilities began operating. They also would expressly have covered ancillary equipment like gas conditioners as well as thermal driers or "any other property used to recover nutrients." HR 3744 was the latest failed "green gas" bill in a line dating back a decade.
- The "Growing Renewable Energy and Efficiency Now" (GREEN) Act, a discussion draft released November 19 by the House Ways and Means Committee. Among many other things, the GREEN Act generally would have extended most PTCs and parallel ITCs through 2024, pushing back existing phase downs. It also would have provided new 30% ITCs for stand-alone energy storage, waste heat recovery, and "biogas property [that] converts biomass into a gas (which is at least 52% methane) for [any] productive use." Perhaps most striking, it would have allowed renewable energy developers immediately to claim 85% of the applicable ITC as payment against tax and collect those payments as tax refunds. Thus developers would have been able to monetize tax credits without the costs or access barriers of tax equity transactions controlled by a few dozen institutional investors reviewing hundreds of projects to cherry-pick.

Takeaways For AD And Other Developers

- *General:* One argument for the 2017 Tax Cuts Act's permanent corporate tax reductions from 35% to 21% was that tax credits would become much less central with federal rates lowered 40%. That now seems smoke and mirrors given recent tax credit battles. On the other hand, one argument against retroactive tax credits — that they're "windfalls" which can't affect past behavior — also seems undercut. The change early last decade from "placed in service" to "begin construction" as the eligibility trigger for wind, solar and several other types of renewable energy facilities shifted this calculus. With longer timelines for development and grid or pipeline interconnection, it's become more problematic whether projects timely "begun" also will be completed without such credits.
- *Solar:* Despite pressure for a new 5-year extension, nothing changed. The solar ITC still steps down to 26% for projects that "begin construction" in 2020 and to 22% for projects that "begin construction" in 2021, with a firm stop for projects not in operation before 2024. Projects not completed by 2024 drop to a 10% ITC. "Non-business" residential installations owned by homeowners still are zeroed out after 2023.
- *Wind:* Both the PTC and ITC were extended one year to avoid expiration in 2020, with PTC phase downs pushed back to 60% of credit value for projects that "begin construction" in 2020. However, Congress left in place the previous PTC phase down to 40% of credit value for projects that "began construction" in 2019. This flips the usual scenario where developers seek to "begin construction" as early as possible to optimize tax benefits (see "Investment Tax Credits for AD Projects"). It appears to mean that wind projects which "began construction" last year only can claim an ITC worth 12% (40% X 30%) of eligible basis, creating incentives for these developers to attempt to show they "began construction" in 2020. Combined with other apparent missteps — notably, failure to fix the Tax Cuts Act's "retail glitch" inadvertently requiring retail, restaurant and other physical improvements to be amortized over 39 years rather than the intended year — it virtually guarantees more tax benefit wars.
- *Biomass:* While it didn't get nearly what it sought, this sector was the biggest winner. The open-loop biomass-to-electricity PTC under Section 45(d)(3) was extended 3 years (2 of them retroactive) for projects that "begin construction" before 2021, as were other PTCs for "orphan technologies" like electricity-producing geothermal, landfill gas, municipal-waste-to-energy, qualified hydropower, and marine/hydrokinetic facilities whose "begin construction" eligibility window had expired at the end of 2017. These facilities' ability to "jump" from the 10-year PTC to the more predictable lump sum ITC was similarly extended. A raft of related provisions — including \$1/gal biodiesel/renewable diesel credits, 10¢/gal small agri-biodiesel credits, \$1.01/gal second generation biofuel producer credits, alternative fuel vehicle refueling equipment credits, and alternative fuel excise tax credits — also were extended, generally through 2020 for production or equipment placed in service after 2017. (No "begin construction" flexibility applies to these categories — equipment must operate or production occur in pertinent years for credits to be claimed.)

Owners of open-loop biomass-to-electricity facilities (AD installations using biomass-derived biogas to generate electricity or in certain cases sell it for power generation) retain a unique ability to designate lessees or operators as credit recipients. In addition, both a special 50% "bonus" depreciation deduction for second generation biofuel facilities, and the Tax Cuts Act's 100% "bonus" depreciation deduction, generally remain available to AD developers

for facilities placed in service before 2021 and 2024 respectively. The 100% provision applies to purchased facilities, not just originally constructed ones.

This is not the end of the tax credit story. On December 20 the American Biogas Council optimistically noted that "passage of this bill [indicates] Congress' readiness to address remaining disparities in the tax code . . . and [is] a first step to more comprehensive renewable energy tax policy . . . in 2020." While the Council implied more extenders this spring, that step may not come until or after a lame-duck session following the November elections.

Mike Levin, a BioCycle Contributing Editor, is managing member of the virtual law firm Michael H. Levin Law Group, PLLC (Washington DC) and a principal in NLGC, LLC, Carbon Finance Strategies LLC, and Solar Shield LLC, which respectively focus on capital formation for renewable energy projects and the optimization/development of ground-mounted solar PV facilities in MA and roof-top PV systems in the District of Columbia. From 1979-1988 he was national Regulatory Reform Director at the U.S. EPA.



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Comments are closed.

Editorial

Fines levied against three Marin County sewage treatment plants are signs that they are having trouble living up to their environmental responsibilities; keeping sewage out of San Francisco Bay.

The Sewerage Agency of Southern Marin is being slapped with the largest fine, \$24,000. Two other districts, the Las Gallinas Valley Sanitary District in North San Rafael and the Sausalito-Marín City Sanitary District are being fined, \$9,000 and \$6,000, respectively.

Paying sums is not as important as remedying failures in their treatment system, which has a primary and important purpose of living up to “clean water” standards aimed at enhancing rather than damaging the bay’s environment.

In fact, the sums are the result of agreements between the districts and the oversight agency, the state Regional Water Quality Control Board.

They also pale in comparison to the \$1.5 million the Ross Valley Sanitary District paid in 2012 for sewer overflows.

The regional agency said that some of the failures occurred as a result of work being done to increase and improve the plants, work aimed at keeping the facilities up to capacity demands and keeping treatment up to “clean water” requirements.

For instance, SASM is in the midst of a \$20 million upgrade of its Mill Valley plant, which serves the greater Mill Valley area and the Tiburon Peninsula.

The SASM plant was fined for discharging more ammonia than its permit allows, despite precautions — hiring a special consultant and spending hundreds of thousands of dollars on temporary equipment — that had been taken to prevent such an occurrence.

The fines and the state’s oversight are evidence that our work is not done in the important goal of protecting the bay and its ecology from pollution.

Being fined for slips occurring during the installation of overall improvements is, of course, a frustration for local sewerage agencies. Those improvements, however, don’t excuse them from meeting “clean water” requirements.

As one local sewer official said, “No good deed goes unpunished.”

At the same time, it is important to note

that most of the county’s sewerage agencies were not fined. And when the state board finds violations and the basis for fines, there needs to be a way for the public, which is paying for these agencies to meet the anti-pollution requirements, to know about problems, whether they are large or small, or and ongoing or a rarity. The public also deserves to know what measures are being taken to prevent such problems from recurring.

Our sewer-treatment systems should be failsafe in terms of making progress toward that goal. The state board’s work should serve as a routine report card on how we are doing.

Teresa Lerch

From: Mark Millan <millan@datainstincts.com>
Sent: Tuesday, January 14, 2020 8:03 AM
To: Undisclosed Recipients
Subject: Fecal Bacteria In California's Waterways Increases With Homeless Crisis - California Healthline 1/6/20

Fecal Bacteria In California's Waterways Increases With Homeless Crisis

Anna Almendrala, California Healthline 1/6/20

President Donald Trump, a self-described germophobe, has made no secret of his disgust with California's growing homeless problem, which he has called a "disgrace" and "inappropriate" and equated to "living in hell."

"We should all work together to clean up these hazardous waste and homeless sites before the whole city rots away," Trump tweeted about San Francisco on Oct. 26. "Very bad and dangerous conditions, also severely impacting the Pacific Ocean and water supply."

San Francisco officials were quick to dispute Trump's claims. But some of California's most prized rivers, beaches and streams are indeed contaminated with levels of fecal bacteria that exceed state limits, threatening kayakers, swimmers — and the state's reputation as a bastion of environmental protection.

The presence of fecal bacteria in water is usually the result of problems with sewer systems and septic tanks. But water quality officials agree that the source of at least some of the fecal bacteria is California's growing homeless population, most of whom don't have reliable access to toilets.

"I've carried 5-gallon buckets that were unambiguously being used as toilets," said David Gibson, executive officer of the San Diego Regional Water Quality Control Board, describing his experience cleaning up homeless encampments. "They were taking it to the San Diego River, dumping it there, and rinsing it out there."

Fecal contamination of waterways is a widespread problem and becoming more urgent in states with large homeless populations. In Seattle, homeless people living in RVs are accused of dumping raw sewage straight into storm drains, which flows directly to local waterways. In Oregon, workers cleaning up homeless camps along the Willamette River in Eugene routinely find feces and needles.

California has the largest homeless population in the nation, estimated at more than 151,000 people in 2019, according to the U.S. Department of Housing and Urban Development. About 72% of the state's homeless slept outside or in cars rather than in shelters or temporary housing.

The Trump administration has fixated on California's homeless population in particular as a potent source of pollution.

In addition to Trump's tweets, the U.S. Environmental Protection Agency sent a letter to California Gov. Gavin Newsom on Sept. 26 alleging that the state's lack of urgency on homelessness threatens public health by polluting nearby water with untreated human waste. It then issued a notice to San Francisco accusing it of violating the federal Clean Water Act.

Jared Blumenfeld, secretary of the California Environmental Protection Agency, responded by accusing the federal EPA of retreating on clean water protection, and called the administration's focus on the environmental impact of homelessness "sensationalized" and "misguided."

But concerns extend beyond the Trump administration. A record number of Californians — about 1 in 4 — believe homelessness and housing is the top issue facing the state today, up from 1% in 1999, according to the Public Policy Institute of California.

When it comes to water, scientists look for E. coli and other bacteria to determine levels of fecal contamination. While E. coli is present in both human and animal feces, human fecal contamination is particularly dangerous because it can transmit diseases that affect people, including hepatitis A and cholera.

Most people are not at risk of getting sick unless they drink the water, or if pathogens enter open cuts or sores, said Richard Ambrose, a professor in the department of environmental health sciences at UCLA. Homeless people face the highest risk because they are more likely to wash or wade in the water and have less access to toilets and showers, he said.

In the city of San Francisco, Trump's favorite punching bag on the issue, fecal pollution on the streets gets swept into the storm drains after it rains and is routed to the same treatment plants as toilet water, which means Trump's claims about the city's water were inaccurate, officials say.

But that isn't the case for most of the state's cities and sewage systems. In San Diego, the state's second-most populous county, dozens of homeless encampments line the 52-mile-long San Diego River, which flows into the Pacific Ocean. Officials have for decades recorded high levels of fecal bacteria in the river that exceed state standards, Gibson said.

Last year, the regional water board ordered San Diego County, several cities and municipal agencies to determine the source of the contamination. In addition to investigating the condition of leaky sewage infrastructure, which fails when it rains, the order requires municipalities to evaluate how homeless people living on riverbanks, in parking lots, trailers and RVs may be contributing to the problem, Gibson said.

Farther north, in Sacramento, regulators have been measuring elevated fecal bacteria levels in the lower American River for more than three years. Located near downtown Sacramento, it is a popular destination for water sports, even as hundreds of homeless people camp nearby.

Some recreational areas, including Tiscornia Beach, where families picnic, BBQ and wade in the river, had E. coli levels so high in the past year that they hit the upper limits of what the water board's laboratories could measure — more than seven times higher than the state standard, said Adam Laputz, assistant executive officer of the Central Valley Regional Water Quality Control Board.

The board is conducting a three-year DNA analysis to determine whether the bacteria comes from people, birds or dogs, he said. "That source could be from a sewage collection that's leaky, or it could be from leaky septic systems," in addition to homeless encampments, he said.

If the source is human, the water board will embark on a new study to determine whether the source is an infrastructure failure or individuals.

In the San Francisco Bay Area and Southern California, which have the largest homeless populations in the state, some cities conduct routine water monitoring. But the regional water boards, which make key water quality decisions for their regions and take enforcement actions when necessary, aren't testing to determine if and how homeless encampments affect water quality.

Contamination from homeless camps is so easy to observe — and smell — that there is no "need to monitor to know there's a problem," said Thomas Mumley, executive officer of the San Francisco Bay Regional Water Quality Control Board, which stretches from Napa County to Santa Clara County.

If there are no bathrooms in or near a homeless encampment, “we can assume there’s a discharge of waste” where there shouldn’t be, he said.

Bay Area regulators are working with some cities that are conducting pilot projects, such as offering free RV dump stations and providing sanitation services for encampments.

The board could one day require municipalities to adopt such projects or face fines, Mumley said.

“We’re cautious about using that authority,” he said. “We want public dollars going toward solutions, not just paying penalties.”

The Central Coast Water Board has already issued an order to the city of Salinas to map homeless encampments and focus more resources on their sanitation needs.

In Los Angeles, hundreds of homeless people camp within the Los Angeles River channel itself and thousands live nearby.

Along a stretch of the river that runs through Atwater Village north of downtown, one man, who called himself P. Dogg and said he had been homeless for three years, said that he bathes in the river when the water is “clear, not murky.”

Asked if he’s ever gotten sick from bathing in the river, he answered proudly: “Never once.”

While local testing of the Los Angeles River, San Gabriel River and the Ventura River Estuary wasn’t designed to measure the effects of homelessness, results suggest there have been significant impacts in some areas due to homeless encampments, said Renee Purdy, executive officer of the Los Angeles Regional Water Quality Control Board.

Purdy is working with area communities that have installed portable toilets and organized trash cleanups with money initially budgeted for water infrastructure maintenance.

“The long-term solution is really to address the societal issue of homelessness,” she said.

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LEGAL NOTICE - ORDINANCE NO. 181

AN ORDINANCE AMENDING CHAPTER 1, AN ORDINANCE REGULATING SOLID WASTE, RECYCLABLE AND ORGANIC MATERIALS, AND THE COLLECTION, REMOVAL AND DISPOSAL THEREOF, TITLE 4 - GARBAGE SERVICE, AS AMENDED, OF THE ORDINANCE CODE OF THE LAS GALLINAS VALLEY SANITARY DISTRICT

Pursuant to Health & Safety Code § 6490 and 6491.3, the Board of Directors of the Las Gallinas Valley Sanitary District, approved Ordinance No. 181 on January 16, 2020:

The Las Gallinas Valley Sanitary District has passed Ordinance 181 entitled An Ordinance Amending Chapter 1, an Ordinance Regulating Solid Waste, Recyclable and Organic Materials, and The Collection, Removal and Disposal Thereof, Title 4 - Garbage Service. The ordinance amends Appendix A of Title 4, Chapter 1 to increase the refuse collection rates effective January 1, 2020 by 4.38%.

The most common residential, multi-family and commercial services will be increased as follows:

Residential Service and Multi-family Cart Service

Cart Service	1/1/20	
	Monthly	Quarterly
20 Gallon	\$33.54	\$100.62
32 Gallon	\$39.45	\$118.35
64 Gallon	\$78.90	\$236.70
96 Gallon	\$118.35	\$355.05

Commercial Service

Cart Service 1/1/2020	Collections Per Week					
	1	2	3	4	5	6
20 Gallon	\$34.30	\$68.60	\$102.90	\$137.20	\$171.50	\$205.80
32 Gallon	\$40.34	\$80.68	\$121.02	\$161.36	\$201.70	\$242.04
64 Gallon	\$80.68	\$161.36	\$242.04	\$322.72	\$403.40	\$484.08
96 Gallon	\$121.02	\$242.04	\$363.06	\$484.08	\$605.10	\$726.12

A complete text of Ordinance No. 181 is available for public review at the District offices and at the District's web site www.lgvsd.org.

* * * * *

I hereby certify that the foregoing is full, true, and correct summary of the Ordinance duly and regularly passed and adopted by the Sanitary Board of the Las Gallinas Valley Sanitary District of Marin County, California, at a meeting hereof held on January 16, 2020, by the following vote of members thereof:

AYES: Clark, Elias, Murray, Schriebman and Yezman

NOES: None

ABSTAIN: None

ABSENT: None

/s/ Teresa Lerch, District Secretary
Las Gallinas Valley Sanitary District

APPROVED:

/s/ Rabi Elias, President
Las Gallinas Valley Sanitary District

NO. 80 Jan. 27, 2020

Teresa Lerch

From: Mark Millan <millan@datainstincts.com>
Sent: Monday, January 27, 2020 9:10 AM
To: Undisclosed Recipients
Subject: New water recycling projects will help battle Central Coast's seawater invasion - Santa Cruz Sentinel 1/26/19

New water recycling projects will help battle Central Coast's seawater invasion

New wastewater recycling plants to inject millions of gallons of treated wastewater deep underground
Lara Streiff, Santa Cruz Sentinel 1/26/19

Link to article w/photos: <https://www.santacruzsentinel.com/2020/01/26/new-water-recycling-projects-will-help-battle-central-coasts-seawater-invasion/>

For decades, California's coastal aquifers have been plagued by invading seawater, turning pristine wells into salty ruins.

But the state's coastal water agencies now plan to get more aggressive in holding back the invasion by injecting millions of gallons of treated sewage and other purified wastewater deep underground. The additional groundwater will both enhance potable water supplies and help prevent saltwater from seeping further into coastal California's massive subterranean reservoirs.

A decade ago, Orange County was the first in California to successfully employ this tactic — mocked by critics as a “toilet to tap” solution. Now, two Northern California water districts are following suit, arguing that there is little choice.

“Seawater intrusion is in about 70% of the populated coastal regions of the world that rely on groundwater,” said Ron Duncan, general manager of the Soquel Creek Water District. “The other 30% just haven't been hit yet.”

The encroachment occurs when the amount of water pumped from freshwater aquifers exceeds what winter rains can replenish, causing saltwater from the Pacific Ocean to march inland to fill the void.

In recent decades, California's water agencies have battled water shortages that can lead to seawater intrusion through conservation efforts such as low-flow shower heads and drip irrigation, reducing the amount of water pumped from coastal wells. But scientists say the problem is getting worse and that water districts need to do more.

“Historically you could just drill deeper,” said Meredith Goebel, a Stanford University geophysicist who has extensively studied saltwater intrusion in the Monterey Bay area. “Now, a lot of the time it's too expensive.”

More than two decades ago, the Salinas Valley won a victory in its long-running war against seawater intrusion after farmers experienced first-hand the damage it could do.

In Castroville, Ocean Mist Farms saw its fields of salt-sensitive strawberries as well as salt-tolerant artichokes wilting when saltwater surged inland. Improvements to a water treatment plant in 1998, however, made highly treated effluent safe to use on Castroville's crops.

Since then, “we have never suffered one sickness or one foodborne illness,” said Dale Huss, Ocean Mist's vice president of artichoke production. “If it isn't the safest, it's one of the safest waters for crop irrigation in the world.”

As a result, the saltwater intrusion slowed and the crops recovered in the northern stretch of the fertile Salinas Valley.

“We may not be farming along the coast if it weren’t for water reclamation projects,” Huss said.

Now, advancements in water treatment are taking recycling of the precious resource to a new level: An innovative project in the Monterey Peninsula area is about to go live, and a second is planned in Santa Cruz County.

In Monterey County, reducing saltwater intrusion is an added benefit of a project aimed at replenishing the Seaside Groundwater Basin to produce more potable water, helping the county to comply with a state mandate to reduce pumping from the Carmel River. But in the Soquel area, fighting intrusion is the main focus of the effort.

The California Department of Water Resources has identified the Santa Cruz Mid-County Basin and the Salinas Valley Basin as two of the state’s 21 critically overdrafted aquifers. Water districts are required to stabilize their water sources by 2040 to ensure a sustainable freshwater supply for their customers.

Without action, periods of drought or further overdrafting will allow additional seawater intrusion to taint more wells, with rippling effects that would threaten the agricultural industry and drinking water supplies. For the Seaside aquifer, which invading saltwater has not yet reached, replenishment will help prevent future intrusion.

Monterey County’s \$124 million project was born out of the regional collaboration of nine local entities, including the wastewater treatment agency Monterey One Water.

A new advanced treatment facility just north of Marina is expected to be up and running within the next few weeks, according to Mike McCullough, director of external affairs for Monterey One Water. A pipeline will then transport the treated water more than eight miles to two shallow wells and two deep wells on the Seaside Groundwater Basin.

Testing at the plant is nearing completion, and the agency is waiting for state water officials to sign off on the project — after which the aquifer will be replenished with purified water. Nine to 12 months later, water customers on the Monterey Peninsula will see the highly treated wastewater, mixed with existing groundwater, in their taps.

It’s the first water recycling project in the state to use supplies from four different sources: wastewater, stormwater, food industry processing water and agricultural runoff. The project will pump 3,500 acre-feet of recycled water into the Seaside aquifer annually, roughly the equivalent of four feet of water flooding New York’s Central Park.

The project’s new water sources will also feed the recycled agricultural water project in the Castroville area, bolstering the battle there against seawater intrusion and providing more irrigation water to Salinas Valley farmers.

About 30 miles north in Soquel, the local water district and the city of Santa Cruz are collaborating on a \$90 million project that will pump treated sewage and other wastewater into three wells by 2022.

Santa Cruz currently dumps nine million gallons of wastewater treated at its plant next to Neary Lagoon into the Pacific Ocean every day. But in a few years, 25% of that water will go through a new advanced treatment facility off Soquel Avenue, where it will be further purified through microfiltration, reverse osmosis and ultraviolet light, then injected into the ground.

“It’s probably overkill, but nothing trumps water quality,” said the Soquel water district’s Duncan of the treatment process.

Mixing treated wastewater with well water has long been controversial. In recent years, both San Diego and Los Angeles had plans for similar projects derailed by public perceptions when the projects “became politicized,” said Ellen Hanak, director of the Water Policy Center at the San Francisco-based Public Policy Institute of California.

Some San Diego customers threatened to move out of state, with one proclaiming that if “my dog doesn’t drink out of a toilet ... why should I?” while supporters contended that the recycled water is cleaner than what currently comes out of the tap.

But scientists say that Monterey Bay area residents have nothing to worry about. Both the Soquel Creek Water District and Monterey Peninsula Water Management District held public meetings and even demonstrations at the new Marina plant to dispel misconceptions about the treatment processes. And little opposition emerged in a region known for its strong environmental ethos.

In 2017, Stanford University scientists used an innovative mapping technique and found that saltwater is perilously close to contaminating every clean well along the shoreline of Monterey Bay.

Never before attempted in waters as deep as the bay, the technique sought to graphically display saltwater intrusion along the coastline. A helicopter flew along 12.5 miles of the local coast along the top half of Monterey Bay, dragging a massive hexagonal ring. It detected electrical resistivity — a simple measure that distinguishes between saltwater and freshwater — of the water 200 meters below the ocean surface.

The results, Stanford’s Goebel said, confirmed the suspicions of just how extensive saltwater intrusion is around the bay.

“It’s been the holy grail of what we needed to know,” Duncan said.

Duncan and other water officials say that fast-rising water rates, government mandates, droughts and new technological advancements make wastewater treatment and aquifer replenishment a far more attractive solution than expensive new supply projects such as ocean desalination or much deeper drilling.

Monterey County’s new water purification plant emulates Orange County’s facility. But with an additional first step: Ozone — the same chemical that helps prevent ultraviolet rays in the atmosphere from scorching our skin — will be added to the wastewater acting as a powerful disinfectant to destroy bacteria and pathogens.

The Carmel River and Seaside Groundwater Basin, which currently supply 99% of the water for 100,000 customers on the Monterey Peninsula, have been overexploited for years. By introducing the new supply of recycled water and reducing the water removed from natural sources, the project will help protect the Seaside aquifer from the sea itself.

If successful, both Central Coast projects may expand. Soquel’s pipeline is designed to handle twice the planned capacity, and Monterey One Water has already launched expansion plans that would be implemented if controversial plans for an ocean desalination plant in Marina fall through.

With the availability of the new aquifer-replenishing technologies, Duncan said, “there is no need for any city to ever have saltwater intrusion again.”

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