Las Gallinas VALLEY SANITARY DISTRICT

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
Dale McDonald, Administrative Services Manager

BOARD MEETING AGENDA

November 19, 2020

On March 12, 2020, Governor Newsom issued Executive Order N-25-20, which enhances State and Local Governments' ability to respond to COVID-19 Pandemic based on Guidance for Gatherings issued by the California Department of Public Health. The Executive Order specifically allows local legislative bodies to hold meetings via teleconference and to make meetings accessible electronically, in order to protect public health. In light of this, November 19, 2020 meeting of the LGVSD Board will be held via Zoom electronic meeting. There will be NO physical location of the meeting. Due to the current circumstances, there may be limited opportunity to provide verbal comments during the meeting. Persons who wish to address the Board for public comment or on an item on the agenda are encouraged to submit comments in writing to the Board Secretary (tlerch@lgvsd.org) by 5:00 pm on Wednesday, November 18, 2020. In addition, Persons wishing to address the Board verbally must contact the Board Secretary, by email (tlerch@lgvsd.org) and provide their Name; Address; Tel. No.; and the Item they wish to address by the same date and time deadline for submission of written comments, as indicated above. Please keep in mind that any public comments must be limited to 3 minutes due to time constraints. Any written comments will be distributed to the LGVSD Board before the meeting.*

**Prior to the meeting, participants should download the Zoom app at: https://zoom.us/download A link to simplified instructions for use of the Zoom app is:* https://blog.zoom.us/wordpress/2018/07/03/video-communications-best-practice-guide/

REMOTE CONFERENCING ONLY
Join Zoom Meeting online at:
https://us02web.zoom.us/j/83729256288
OR
By teleconference at: +16699009128 Meeting ID: 837 2925 6288

MATERIALS RELATED TO ITEMS ON THIS AGENDA ARE AVAILABLE FOR PUBLIC INSPECTION ON THE DISTRICT WEBSITE WWW.LGVSD.ORG

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

OPEN SESSION:

3:30 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.

3:35 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 November 5, 2020
B. Approve the Warrant List for November 19, 2020
C. Approve Board Compensation for October 2020
D. Approve Murray attending the California Bioresources Alliance Symposium November 12-13, 2020
E. Approve Murray attending the Covid-19 CWEA Webinar on November 17, 2020
F. Approve Award of Contract for Design of Digester Room MCC-2 Upgrades
G. Approve Disposition of Surplus Property by Resolution 2020-2205
H. Approve the Capital and Facilities Charge Accounting and Reporting Annual Report
I. Approve Designation of the Secondary Treatment Process Upgrade and Recycled Water Expansion Project as an Essential Governmental Function per Marin County Public Health Order

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

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

3:45 PM **3. INFORMATION ITEMS:**

STAFF/CONSULTANT REPORTS:

1. October 2020 Department Reports
2. Quarterly Financial Reports & Treasurer's Reports as of September 30, 2020

4:45 PM **4. APPROVE AMENDMENT 1 TO KENNEDY JENKS FOR INTEGRATED WASTEWATER MASTER PLAN**

Board to review and approve the Amendment 1 to Kennedy Jenks for Phase 2 of the District's Integrated Wastewater Master Plan.

5:00 PM **5. APPROVE CONTRACT AMENDMENT 2 TO MWA ARCHITECTS**
Board to review and approve Contract Amendment 2 to MWA Architects for preliminary conceptual Administration Building layout.

5:15 PM **6. 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.

5:20 PM **7. BOARD MEMBER REPORTS:**

1. CLARK
    a. NBWA Board Committee, 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: 2020 GM Evaluation Other Reports
4. SCHRIEBMAN
    a. JPA Local Task Force, NBWA Tech Advisory Committee, Other Reports
5. YEZMAN
    a. Gallinas Watershed Council/Miller Creek Watershed Council, Flood Zone 7,CSRMA, Ad Hoc Engineering Committee re: STPURWE, Ad Hoc HR Committee re: 2020 GM Evaluation Other Reports

5:30 PM **8. BOARD REQUESTS:**

A. Board Meeting Attendance Requests – Verbal

B. Board Agenda Item Requests – Verbal

C. Pending Board Agenda Item Requests

i. Donation Policy

ii. Pump Station Vegetation and Safety Report

iii. Video Recoding of Board Meetings

iv. Relocation Assistance Act Policy for Real Estate Acquistions

v. Meet and Greet new San Rafael Councilmember

vi. RFP for Legal Services

5:35 PM **9. VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE**

5:40 PM **10. ADJOURNMENT**

FUTURE BOARD MEETING DATES: DECEMBER 3, DECEMBER 17, 2020 AND JANUARY 7, 2021

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 November 16, 2020 at 3:30 p.m., I posted the Agenda for the Board Meeting of said Board to be held November 19, 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 first and third 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.

Agenda Item 2A
Date November 19, 2020

MINUTES OF NOVEMBER 5, 2020

THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT MET IN OPEN SESSION BY ZOOM CONFERENCE ON NOVEMBER 5, 2020 AT 3:33 PM AND STAFF BY ZOOM CONFERENCE AT THE DISTRICT OFFICE, 101 LUCAS VALLEY ROAD, SUITE 300 CONFERENCE ROOM, SAN RAFAEL, CA. 94903

BOARD MEMBERS PRESENT:	(By Roll Call): M. Clark, R. Elias, C. Murray, J. Schriebman, C. Yezman
BOARD MEMBERS ABSENT:	None.
STAFF PRESENT:	Mike Prinz , General Manager; Teresa Lerch, District Secretary; Mike Cortez, District Engineer; Dale McDonald, Administrative Services Manager
OTHERS PRESENT:	Pat Richardson, District Counsel
ANNOUNCEMENT:	President Elias announced that the agenda had been posted as evidenced by the certification on file in accordance with the law.

1. **PUBLIC COMMENT:** None.

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 October 15, 2020
   - B. Approve the Warrant List for November 5, 2020
   - C. Appprove Murray attending the Asset Management Planning Workshop Webinar on 10-8-20
   - D. Approve Murray attending the CWEA CASA COVID 19 Webinar on 10-27-20
   - E. Approve Vehicle Procurement – Forklift, Ford F-350 flatbed, (2) Ford -250 and F-150 Van
   - F. Approve Application of Allocation of Capacity for APN 179-17-325 - 28 Washington Ave Accessory Dwelling Unit
   - G. Approve Resolution 2020-2203 Project Approval and Notice of Exemption – Miscellaneous Paving 2020
   - H. Approve Designation of the Secondary Treatment Process Upgrade and Recycled Water Expansion Project as an Essential Governmental Function per Marin County Public Health Order

Items B, C, E were pulled for discussion.

ACTION:
Board approved (M/S Schriebman/Clark 5-0-0-0) the Consent Calendar items A through H.
Roll Call:

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

3. **INFORMATION ITEMS:**
STAFF / CONSULTANT REPORTS:
   1. General Manager Report – Verbal- Prinz reported.
   2. Board Conference Registration Assistance – McDonald reported. Board members want to revisit this policy.
   3. Award of Contract for Alternative Funding and Grant Consulting Services – Prinz reported

4. **TOPICS FOR THE WINTER 2020 NEWSLETTER**
Board and staff discussed and approved topics for the Winter 2020 Newsletter.

5. **REGIONAL GOVERNMENT SERVICES – MASTER AGREEMENT**
Board and staff reviewed the Regional Government Services Master Agreement.

ACTION:
Board approved (M/S Murray/Schreibman 5-0-0-0) the one-year master agreement with Regional Government Services in an amount not to exceed $126,000 for the period of November 6, 2020 to October 31, 2021 with corrected scope of work.
Roll Call:

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

6. **APPROVE RESOLUTION 2020-2204 GRANTING A PG&E EASEMENT**
Board reviewed Resolution 2020-2204 and a grant of an Easement to Pacific Gas and Electric Company (PG&E) for Phase 2 PG&E Power Relocation and the Board President, pursuant to Health and Safety Code § 6487, to execute an "Easement Deed" and any other document(s) necessary to grant and record the easement.

ACTION:
Board approved (M/S Murray/Yezman 5-0-0-0) Resolution 2020-2204 and a grant of an Easement to Pacific Gas and Electric Company (PG&E) for Phase 2 PG&E Power Relocation and the Board President, pursuant to Health and Safety Code § 6487, to execute an "Easement Deed" and any other document(s) necessary to grant and record the easement contingent upon District Counsel reviewing Exhibit J and other documents.
Roll Call:

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

7. **PUBLIC COMMENT:** **None.**

8. **BOARD MEMBER REPORTS:**
   1. CLARK
      a. NBWA Board Committee –no report
      b. Other Reports– verbal report – 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– no report
    c. 2020 GM Evaluation Ad Hoc Committee- No report
    d. Other Reports– Asset Management Webinar – will be in the next board packet

4. SCHRIEBMAN
    a. JPA Local Task Force– no report
    b. NBWA Tech Advisory Committee– no report
    c. Other Reports- CSDA CASA Conference – written / Gallinas Watershed Council- Verbal report

5. YEZMAN
    a. Gallinas Watershed Council/Miller Creek Watershed Council– Schriebman reported.
    b. Flood Zone 7– no report
    c. CSRMA– no report
    d. Ad Hoc Engineering Committee– no report
    e. 2020 GM Evaluation Ad Hoc Committee- no report
    f. Other Reports–no report

9. BOARD REQUESTS:

A. Board Meeting Attendance Requests – Murray requested to attend the COVID-19 CWEA Webinar on November 17, 2020 and the California Bioresources Alliance Symposia Conference on November 12 and 13th November 12 – 13, 2020

B. Board Agenda Item Requests –Schriebman requested a plant tour with a Board meet and greet for newly elected Councilmember Rachel Kertz and the Board look into whether or not to proceed with an RPF for legal services.

10. VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE:

Discussion ensued.

11. ADJOURNMENT:

Board approved (M/S Clark/Schriebman) the adjournment of the meeting at 5:39 pm.
Roll Call:

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

The next Board Meeting is scheduled for November 19, 2020.

ATTEST:

_____
Teresa Lerch, District Secretary

APPROVED:

_____ SEAL
Judy Schriebman, Vice President

Agenda Item 2B

Date November 19, 2020

Las Gallinas Valley Sanitation District
Warrant List 11/19/2020 DRAFT

	Date	Num	Vendor	Original Amount	Addition and Adjustment	Total Amount	Description for items
1	11/19/2020	EFT1	ADP Payroll	110,087.06		110,087.06	Paydate & Processing Charges
2	11/19/2020	ACH	A&P Moving Inc.	169.40		169.40	Records Retention (storage) 2 Months
3	11/19/2020	N/A	ADT	25.00		25.00	Monthly Monitoring Service
4	11/19/2020	N/A	Allmax Software Support	1,920.00		1,920.00	Wastewater Annual Support 5-Seat Historian through 12/31/2021
5	11/19/2020	N/A	Aqua Engineering, Inc.	14,060.00		14,060.00	STPURWE - Engineering Services
6	11/19/2020	N/A	Aramark Uniform Services	221.35		221.35	Uniform Laundry
7	11/19/2020	N/A	ArcSine Engineering	51,028.90		51,028.90	STPURWE - Programming Services
8	11/19/2020	N/A	ArcSine Engineering	9,829.40		9,829.40	SCADA support services
9	11/19/2020	N/A	AT&T Teleconference Services	186.06		186.06	Teleconference Lines
10	11/19/2020	EFT	Bank of Marin Credit Card Services	18,572.62		18,572.62	Credit Card Purchases 8/06-9/3
11	11/19/2020	N/A	Banner Bank	60,172.95		60,172.95	STPURWE - Retention for Myers & Sons
12	11/19/2020	N/A	Bay Area Background Checks	63.00		63.00	Pre-Employment Background Check
13	11/19/2020	ACH	Bellecci & Associates	4,514.00		4,514.00	Kaiser Sewer Inspection
14	11/19/2020	ACH	Brown & Caldwell	10,274.70		10,274.70	STPURWE - Engineering Services
15	11/19/2020	ACH	Buck's Saw Services	11.33		11.33	Replacement parts for water trailer
16	11/19/2020	ACH	Cal-Steam	276.84		276.84	Parts for Eye Wash
17	11/19/2020	EFT	CalPERS 457 Plan	6,838.30		6,838.30	EE's Deferred Comp
18	11/19/2020	EFT	CalPERS Retirement	18,762.01		18,762.01	EE & ER Payment to Retirement Paydate 11/06
19	11/19/2020	ACH	Campbell, Chris	150.00		150.00	CEWA Renewal Reimbursement
20	11/19/2020	N/A	CD & Power	7,297.98		7,297.98	4- 40 KW Generators for PSPS Events
21	11/19/2020	ACH	Central Marin Sanitation Agency	4,644.23		4,644.23	FOG Control
22	11/19/2020	N/A	Cintas Corporation	125.06		125.06	Safewasher Service & Filter Change
23	11/19/2020	N/A	City National Bank	644,166.20		644,166.20	Loan Agreement #13-038 - Certificate of Participation Bonds
24	11/19/2020	ACH	Contractor Compliance & Monitoring Inc.	4,608.86		4,608.86	Labor Compliance
25	11/19/2020	ACH	CORE Utilities	1,530.00		1,530.00	IT Services
26	11/19/2020	N/A	CPM Construction Inc.	14,355.00		14,355.00	STPURWE - On Call Scheduling & Estimating Support
27	11/19/2020	ACH	CRS HR Consulting	1,765.48		1,765.48	Expenses related to the recruitment of the new ASM
28	11/19/2020	N/A	Cropper Accountancy	2,500.00		2,500.00	2019/2020 Audit Services - Progress Payment
29	11/19/2020	ACH	Data Instincts	1,145.00		1,145.00	Provide Public Information & Awareness to LGVSD

Las Gallinas Valley Sanitation District
Warrant List 11/19/2020 DRAFT

	Date	Num	Vendor	Original Amount	Addition and Adjustment	Total Amount	Description for items
30	11/19/2020	EFT	Direct Dental	2,907.89		2,907.89	EE's Dental Plan
31	11/19/2020	EFT	Discovery Benefits	50.00		50.00	FSA Administration
32	11/19/2020	ACH	Du-All Safety	2,408.00		2,408.00	LGVSD Safety Compliance
33	11/19/2020	ACH	Elias, Rabi	200.00		200.00	Health Reimbursement
34	11/19/2020	N/A	Environmental Systems Research Inst.	10,000.00		10,000.00	GIS- Small Utility Enterprise Agreement License for 2020/21
35	11/19/2020	N/A	Federal Express	211.78		211.78	Express Mail
36	11/19/2020	N/A	G3 Engineering Inc.	15,933.31		15,933.31	Grundfos 27 HP Pump & Flygt Adaptor Kit - Descanso Pump Station
37	11/19/2020	ACH	Gardeners Guild	1,123.00		1,123.00	Landscape Maintenance
38	11/19/2020	ACH	Gopher-IT Trenchless Sewer	9,650.00		9,650.00	Sewer Lateral Replacement for 524 Miller Creek Rd.
39	11/19/2020	ACH	Grainger	158.22		158.22	Coated Gloves
40	11/19/2020	N/A	GraphicSmiths	88.80		88.80	Internet Site Design
41	11/19/2020	N/A	Hach Company	11,334.37		11,334.37	UV VIS Spectrophotometer/Reator 110V, Vinyl Tubing, DRB 200 Reactor, Taxes & Freight
42	11/19/2020	ACH	Hanford ARC	6,927.50		6,927.50	LMC Revegetation Maintenance Services
43	11/19/2020	N/A	HDR Engineering Inc.	597.50		597.50	District Rate Study
44	11/19/2020	N/A	Instrument Technology Corporation	2,400.00		2,400.00	Educational - Theory of Pipe & Cable Location
45	11/19/2020	N/A	Jackson's Hardware	39.22		39.22	Misc. Supplies
46	11/19/2020	N/A	JDB Systems	1,270.35		1,270.35	Troubleshoot and repair F6 flow meter
47	11/19/2020	N/A	Jefferson Security Systems	1,477.00		1,477.00	Fire Detection System for 300 Smith Ranch Road - 10% Deposit
48	11/19/2020	ACH	Kenwood Energy	1,462.50		1,462.50	Sharp Solar Panel Replacement Project
49	11/19/2020	N/A	Kleinfelder Inc.	1,794.50		1,794.50	STPURWE - Const Inspection & Materials Testing
50	11/19/2020	ACH	Koff & Associates	7,130.00		7,130.00	Classification and Compensation Study
51	11/19/2020	N/A	Maltby Electric Supply Company	1,308.00		1,308.00	Filter Cap for Solar Inverter
52	11/19/2020	N/A	Marin Ace	221.56		221.56	Misc Supplies
53	11/19/2020	N/A	Marin Municipal Water District	627.20		627.20	Meter Reads for Pump Stations
54	11/19/2020	N/A	Marin Sanitary Service	148.00		148.00	Garbage Bins
55	11/19/2020	N/A	Marin/So Mosquito & Vector Cont. Dist	729.29		729.29	Mosquito Abatement
56	11/19/2020	ACH	Murray, Craig	125.00		125.00	Health Reimbursement
57	11/19/2020	N/A	Myer & Sons Construction	1,143,286.02		1,143,286.02	STPURWE - Construction Contract (Ret #20)
58	11/19/2020	N/A	North Bay Gas	1,250.35		1,250.35	Purchase of Oxygen, Acetylene and a torch set

Las Gallinas Valley Sanitation District
Warrant List 11/19/2020 DRAFT

	Date	Num	Vendor	Original Amount	Addition and Adjustment	Total Amount	Description for items
59	11/19/2020	N/A	North Bay Petroleum	2,851.37		2,851.37	Fuel
60	11/19/2020	N/A	North Bay Watershed Association	5,239.08		5,239.08	Overhead and General Benefits for the Stewardship Plan
61	11/19/2020	N/A	North Valley Labor Compliance	818.75		818.75	Labor compliance services for LMC revegetation maintenance services
62	11/19/2020	N/A	Operating Engineers	510.00		510.00	Union Dues 11/6 Paydate
63	11/19/2020	EFT	Pacific Crest Group	2,400.00		2,400.00	HR Management Services
64	11/19/2020	N/A	Pacific Gas & Electric	6,116.57		6,116.57	Electricity Charges
65	11/19/2020	N/A	Pacific Gas & Electric	6,633.64		6,633.64	Pump Stations
66	11/19/2020	N/A	Pacific Gas & Electric	3,004.11		3,004.11	Solar
67	11/19/2020	N/A	Rathlin Properties	8,829.00		8,829.00	Rent at 101 Lucas Valley
68	11/19/2020	ACH	Retiree Augusto	188.03		188.03	Retiree Health
69	11/19/2020	ACH	Retiree Burgess	188.03		188.03	Retiree Health
70	11/19/2020	ACH	Retiree Cummins	200.43		200.43	Retiree Health
71	11/19/2020	ACH	Retiree Cutri	515.06		515.06	Retiree Health
72	11/19/2020	ACH	Retiree Emanuel	245.78		245.78	Retiree Health
73	11/19/2020	ACH	Retiree Gately	212.39		212.39	Retiree Health
74	11/19/2020	ACH	Retiree Guion	212.39		212.39	Retiree Health
75	11/19/2020	ACH	Retiree Johnson	664.55		664.55	Retiree Health
76	11/19/2020	ACH	Retiree Kermoian	200.43		200.43	Retiree Health
77	11/19/2020	ACH	Retiree Mandler	200.43		200.43	Retiree Health
78	11/19/2020	ACH	Retiree McGuire	591.50		591.50	Retiree Health
79	11/19/2020	ACH	Retiree Memmott	200.43		200.43	Retiree Health
80	11/19/2020	ACH	Retiree Petrie	188.03		188.03	Retiree Health
81	11/19/2020	ACH	Retiree Pettey	184.74		184.74	Retiree Health
82	11/19/2020	ACH	Retiree Provost	245.78		245.78	Retiree Health
83	11/19/2020	ACH	Retiree Reetz	539.86		539.86	Retiree Health
84	11/19/2020	ACH	Retiree Reilly	200.43		200.43	Retiree Health
85	11/19/2020	ACH	Retiree Vine	200.43		200.43	Retiree Health
86	11/19/2020	ACH	Retiree Wettstein	628.00		628.00	Retiree Health
87	11/19/2020	ACH	Retiree Williams	628.00		628.00	Retiree Health

Las Gallinas Valley Sanitation District
Warrant List 11/19/2020 DRAFT

	Date	Num	Vendor	Original Amount	Addition and Adjustment	Total Amount	Description for items
88	11/19/2020	ACH	Schriebman, Judy	200.00		200.00	Health Reimbursement
89	11/19/2020	N/A	Sewer Works Inc.	7,640.00		7,640.00	Sewer Lateral Replacement for 124 Esmeyer Drive
90	11/19/2020	N/A	SiteOne Landscape Supply	49.51		49.51	Misc. Supplies
91	11/19/2020	N/A	Spiess, Robert	382.50		382.50	Support LGVSD in calculating & submitting sewer service charges or tax assessments to County of Marin tax roll
92	11/19/2020	N/A	Stroupe Petroleum Maintenance Inc.	3,135.52		3,135.52	Installed New Impact Valve & Re-Fit Piping
93	11/19/2020	N/A	Synectic Technologies	531.98		531.98	Wireless Headset & Base, Quarterly Warranty Agreement
94	11/19/2020	N/A	Terminix	172.00		172.00	Pest Control Services
95	11/19/2020	N/A	TPx Communications	661.66		661.66	Phone Services
96	11/19/2020	ACH	Univar	11,978.91		11,978.91	Furnish Sodium Bisulfite & Sodium Hypochlorite
97	11/19/2020	N/A	Verizon Wireless	2,282.76		2,282.76	Cell Phones & Modems
98	11/19/2020	N/A	Vista Marin Homeowners Assoc.	2,481.00		2,481.00	MH Frame & Cover Adjustment
99	11/19/2020	N/A	Water Components & Building Supply	1,855.48		1,855.48	Misc. Supplies
100	11/19/2020	N/A	West Coast Electric Service Company	3,640.00		3,640.00	Torque & tighten motor control conter terminations- Reclamation pump station MCC
101	11/19/2020	ACH	Yezman, Crystal	200.00		200.00	Health Reimbursement
102	11/19/2020	N/A	Zee Medical	165.97		165.97	Replenish First Aid Kits

Do not change any formulas below this line.

	TOTAL	$ 2,292,374.62	$ -	$ 2,292,374.62
EFT1	EFT1 = Payroll (Amount Required)	110,087.06		110,087.06
EFT2	EFT2 = Bank of Marin loan payments	0.00		0.00
PC	Petty Cash Checking	0.00		0.00
>1	Checks (Operating Account)	0.00		0.00
N/A	Checks - Not issued	2,055,669.05		2,055,669.05
EFT	EFT = Vendor initiated "pulls" from LGVSD	49,530.82		49,530.82
ACH	ACH = LGVSD initiated "push" to Vendor	77,087.69		77,087.69
	Total	$ 2,292,374.62		$ 2,292,374.62

Approval:

Finance
GM
Board

Difference: $ -

STPURWE Costs 1,294,972.07

Agenda Item 2C
Date November 19, 2020

Directors' Meeting Attendance Recap

Name	Total Meetings
Megan Clark	4
Rabi Elias	3
Craig Murray	6
Judy Schriebman	2
Crystal Yezman	5
Total	20

Meeting Date: 11/19/2020
Paydate: 11/20/2020

Las Gallinas VALLEY SANITARY DISTRICT

300 Smith Ranch Road, San Rafael, CA 94903
Office: 415.472.1734 Fax: 415.499.7715

BOARD MEMBER ATTENDANCE FORM

Director's Name: Megan Clark Month: October 2020

Board Members shall be compensated for up to the legal limit of six (6) meeting per month and one (1) per day. Board members are limited to four (4) conferences or seminars per year. For multi-day conferences, compensation shall be at a maximum of one (1) meeting per day.

REGULAR and SPECIAL MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10-1	Regular	X	
10-15	Regular	X	
TOTAL		2	

OTHER MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10-2	NBWA	X	
10-14	CWEA – Brave Blue World	X	
TOTAL		2	

Total Meetings for which I am Requesting Payment: **Max of six (6) per Health & Safety Code §4733**	**4**

I hereby certify that the meetings as set forth above are true and correct and are for the purpose of conducting official business for the Las Gallinas Valley Sanitary District.

Megan Clark
Signature

11-11-20
Date

11/12/20
Approved By/ Date

Pay Date

Las Gallinas VALLEY SANITARY DISTRICT

300 Smith Ranch Road, San Rafael, CA 94903
Office: 415.472.1734 Fax: 415.499.7715

BOARD MEMBER ATTENDANCE FORM

Director's Name: Rabi Elias Month: October2020

Board Members shall be compensated for up to the legal limit of six (6) meeting per month and one (1) per day. Board members are limited to four (4) conferences or seminars per year. For multi-day conferences, compensation shall be at a maximum of one (1) meeting per day.

REGULAR and SPECIAL MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/1/20	Regular	✓	
10/15/20	Regular	✓	
TOTAL		2	

OTHER MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/5/20	Engineering Sub Committe	✓	
TOTAL		1	

TOTAL MEETINGS CHARGED (Max of six per Health & Safety Code #4733):	3

I hereby certify that the meetings as set forth above are true and correct and are for the purpose of conducting official business for the Las Gallinas Valley Sanitary District.

R Elias
Signature

11/11/2020
Date

11/12/20
Approved By/ Date

Pay Date

Las Gallinas VALLEY SANITARY DISTRICT

300 Smith Ranch Road, San Rafael, CA 94903
Office: 415-472-1734 Fax: 415-499-7715

BOARD MEMBER ATTENDANCE FORM

Director's Name: MURRAY, Craig K. Month: October 2020

Board Members shall be compensated for up to the legal limit of six (6) meeting per month and one (1) per day.
Board Members are limited to four (4) conferences or seminars per year.
For multi-day conferences, compensation shall be at a maximum of one (1) meeting per day.

REGULAR and SPECIAL MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/1/20	Board Meeting	X	
10/8/20	GM Ad Hoc Committee	X	
10/15/20	Board Meeting	X	
zTOTAL		3/3	

OTHER MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/5,23/20	Merrydale Road/Las Gallinas Creek Headwater Litter Removal c/o City of San Rafael: 10/5: 0.5 hours; 10/23: 1.5 hours; 10/29: 0.5 hours		XXX
10/6/20	MCSDA Executive Board Meeting		X
10/7/20	San Rafael Bicycle Ped Advisory Committee Meeting		X
10/8/20	Marin LAFCo Regular Meeting		X
10/8/20	Asset Management Planning and Resources Part 2 of 2 RCAC	X	
10/14/20	CalPERS – Power of Attorney Webinar		X
10/14/20	International Right of Way Association, San Francisco Bay Area Chapter 2, Appraisal in the COVID Era		X
10/15/20	State of California – Great CA Shake-Out Earthquake Drill		X
10/15/20	LAFCo Vice Chair EO Coordinating Meeting		X
10/22/20	CASA Air Quality, Climate Change & Energy (ACE) Workgroup Meeting	X	
10/23/20	LGVSD Board Member General Manager Coordinating Meeting		X

Las Gallinas VALLEY SANITARY DISTRICT

300 Smith Ranch Road, San Rafael, CA 94903
Office: 415-472-1734 Fax: 415-499-7715

BOARD MEMBER ATTENDANCE FORM

10/27/20	CWEA CASA COVID #6 Webinar Management Issues	X	
10/28/20	Safe Routes To School Wendi Kallins Transportation Committee – North San Rafael Routes		X
10/28/20	PFAS Per- and Poly Fluoroalyl Substances – State Water Board PFAS Order Compliance Webinar Part 2		X
~~**10/29/20**~~	~~U.S. EPA Biosolids Webinar Series: Biosolids PFAS Research at the EPA~~		~~X~~
10/29/20	International Right of Way Association, San Francisco/Santa Rosa Chapter 2 Board and Member Appreciation Event		X
TOTAL		3/17	

Total Meetings for which I am Requesting Payment/Approved: **Board Members maximum of six (6) per Health & Safety Code §4733**	**6/20**

I hereby certify that the meetings as set forth above are true and correct and are for the purpose of conducting official business for the Las Gallinas Valley Sanitary District.

Signature

October 29, 2020
Date

11/12/20
Approved By/ Date

Pay Date

Las Gallinas VALLEY SANITARY DISTRICT

300 Smith Ranch Road, San Rafael, CA 94903
Office: 415.472.1734 Fax: 415.499.7715

BOARD MEMBER ATTENDANCE FORM

Director's Name: Judy Schriebman Month: Oct. 2020

Board Members shall be compensated for up to the legal limit of six (6) meeting per month and one (1) per day. Board members are limited to four (4) conferences or seminars per year. For multi-day conferences, compensation shall be at a maximum of one (1) meeting per day.

REGULAR and SPECIAL MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/1	Reg. Mtg	X	
10/15	Reg Mtg	X	
TOTAL		2:2	

OTHER MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/10	LVE Outdoor Classroom Planting/watering/weeding		X
10/12	One on One with GM		X
10/12	MCL Fire and Environment Working Group		X
10/29	Floating Island Working Group mtg		X
TOTAL		0:4	

Total Meetings for which I am Requesting Payment: **Max of six (6) per Health & Safety Code §4733**	**2**

I hereby certify that the meetings as set forth above are true and correct and are for the purpose of conducting official business for the Las Gallinas Valley Sanitary District.

Judy Schriebman
Signature

11/4/2020
Date

11/12/2020
Approved By/ Date

Pay Date

Las Gallinas VALLEY SANITARY DISTRICT

300 Smith Ranch Road, San Rafael, CA 94903
Office: 415.472.1734 Fax: 415.499.7715

BOARD MEMBER ATTENDANCE FORM

Director's Name: Crystal Yezman Month: October 2020

Board Members shall be compensated for up to the legal limit of six (6) meeting per month and one (1) per day. Board members are limited to four (4) conferences or seminars per year. For multi-day conferences, compensation shall be at a maximum of one (1) meeting per day.

REGULAR and SPECIAL MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/01	Regular Board Mtg	X	
10/15	Regular Board Mtg	X	
TOTAL		2	

OTHER MEETINGS		CHARGING DISTRICT	
Date	Description of meeting	Yes	No
10/05	Engineering SubCommittee	X	
10/08	Gm Evaluation Ad Hoc	X	
10/14	Las Gallinas Watershed Mtg	X	
TOTAL		3	

Total Meetings for which I am Requesting Payment: **Max of six (6) per Health & Safety Code §4733**	5

I hereby certify that the meetings as set forth above are true and correct and are for the purpose of conducting official business for the Las Gallinas Valley Sanitary District.

Crystal J Yezman — Signature

11/11/2020 — Date

11/12/2020 — Approved By/ Date

Pay Date

c:\users\aschultz\appdata\local\microsoft\windows\inetcache\content.outlook\pjp5y02x\board meeting attendance yezman oct_2020.docx

AGENDA ITEM 2D
DATE November 19, 2020

Las Gallinas VALLEY SANITARY DISTRICT

BOARD MEMBER MEETING ATTENDANCE REQUEST

Date: 11/5/20 Name: MURRAY, CRAIG K.

I would like to attend the 15TH ANNUAL SYMPOSIUM Meeting

of CALIFORNIA BIORESOURCES ALLIANCE (CBA)

To be held on the 12TH day of NOVEMBER from 9:00 a.m. / p.m. to

13TH day of NOVEMBER from 4:00 a.m. / p.m.

Location of meeting: ONLINE

Actual meeting date(s): 11/12-13/2020

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

Purpose of Meeting: BUILDING CALIFORNIA ECONOMY

Other meeting attendees: UNKNOWN

Meeting relevance to District: BIORESOURCES, RELATED TECH.; EPA

Frequency of Meeting: 1X

Estimated Costs of Travel (if applicable): N/A

Date submitted to Board Secretary: 11/5/20

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.

An official website of the United States government.

California Bioresources Alliance Symposia

The California Bioresources Alliance Symposium focuses on management of organic residuals in California including manure, biosolids, food waste, agricultural wastes, green waste and wood waste. The organizers include representatives from US EPA Region 9, Natural Resources Conservation Service, California Air Resources Board, State Water Resources Control Board, Central Valley Regional Water Quality Control Board, University of California Davis, California Association of Sanitation Agencies, Association of Compost Producers, Los Angeles County Sanitation Districts, Inland Empire Utilities Association, City of Bakersfield, and JDMT Press.

Save the Date!

California Bioresources Alliance Symposium 2020: Building the Regenerative Carbon Economy in California

Work with colleagues in the field of organic residuals to develop community resiliency and put California's bioresources to their best uses.

Thursday, Nov 12, 2020, 9:00 AM – Friday, Nov 13, 2020, 4:45 PM PST

- **Register Now!** EXIT
- **View the Program**

California Bioresources Alliance 2020 Symposium

November 12, 2020
Virtual Meeting

- View the Program

California Bioresources Alliance 2019 Symposium

November 14–15, 2019
Sacramento, CA

- View the Presentations

California Bioresources Alliance 2018 Symposium

"Implementing Organics Recycling in Your Community"

November 15–16, 2018
Sacramento, CA

- View the Presentations

California Bioresources Alliance 2017 Symposium

"Building California's Sustainable Bioresource Economy"

November 1–2, 2017

- View the Presentations

California Bioresources Alliance 2016 Symposium

"Renewable Carbon Management in California"

November 2–3, 2016

- View the Presentations

Past Meeting Summaries and Presentations

Meeting Summaries and Presentations from 2015 and Prior Years can be found at archives.epa.gov.

Contact

For Symposium Details
Lauren Fondahl (fondahl.lauren@epa.gov)
(415) 972-3514

LAST UPDATED ON NOVEMBER 2, 2020

CBA 15th Annual Symposium: Building the Regenerative Carbon Economy in California

Thursday, November 12th – Deploying Technologies That Meet Local Market Needs

Time	Topic	Presenter	Organization
9:00-9:35	**Introductions and Welcome** *Sara Hammes, Chris Seney & Dan Noble*		
	Analysis of the Progress Toward the SB 1383 Organic Waste Reduction Goals: The Starting Reference Point for CA	Timothy Hall	CalRecycle
9:35-10:30	**Top Down Perspective: Investing in the Circular Bioeconomy** *Moderator: Tom McGrath*		
	Rialto Project	Yaniv Scherson	Anaergia
	System Integration of Bioresource Technologies	Joe Maceda	Zero Net Farms
	Technology Innovation Pipeline & Countywide Program for Managing Biomass and Drawdown	Chad White	BAAQMD
10:30-10:40	**Break**		
10:40-11:45	**Bottom Up Perspectives: Market Ready Solutions** *Moderator: Sara Hammes*		
	Distributed Wastewater Processing and Biosolids Distribution	Aaron Tartakovsky	Epic Cleantech
	Community Composting	Michael Martinez	LA Compost
	Approach of Smaller Scale Facilities	Jim McNelly	RCM-NaturTech Soils
11:45-12:30	**Product Quality: Removing Contaminants** *Moderator: Dan Noble*		
	Distributed Bioproduct Portfolio Production and Use	Patrick Browne	BioCarbon Technologies
	ACP Contamination Reduction Guidebook	Dan Noble	Association of Compost Producers (ACP)
	New Technology on Digester Gas Cleanup of New Compounds	Joerg Blischke	Black and Veatch

12:30-1:15	**Lunch Break**		
1:15-2:00	**Emerging Constituents of Concern** *Moderator: Lauren Fondahl*		
	CARB on Air Toxics in Compost	David Rothbart	LACSD
	PFAS in Biosolids and Compost	Ryan Batjiaka	SFPUC
	Orchestrating Agency Collaboration	Tung Le	CAPCOA
2:00-4:00	**Agricultural Residue Management and Healthy Soil** *Moderators: Ruihong Zhang & Tyler Barzee*		
	Climate Smart Alternatives for Agricultural Residues	Geetika Joshi	CA Department of Agriculture
	Putting Almond Biomass into Optimal Use	Guangwei Huang	Almond Board of CA
	Composting and Application of Dairy Manure and Almond Biomass for Healthy Soils	Ruihong Zhang	UC Davis
	Manure as a Foundation to a Renewable, Circular Fertilizer Economy	J.P. Cativiela	Dairy Cares

Friday, November 13th – Regulation, Compliance, and Research Updates

Time	Topic	Presenter	Organization
9:00-10:30	**SB 1383 Implementation** *Moderator: Greg Kester*		
	Overview of The Regulations to Implement SB 1383 and How They Impact the Wastewater and Solid Waste Sectors	Ashlee Yee	Calrecycle
	Overview of Successful Co-Digestion Program at a POTW With Lessons Learned	Jason Dow	Central Marin Sanitiion Agency
	Overview of Organic Waste Processing Requirements from a Solid Waste Perspective	Hillary Gans	Rethinkwaste
	Key Takeaways of Co-Digestion Capacity Analysis and How State Water Boards are Facilitating Projects	Charlotte Ely	SWRCB
	Overview of Committee and Upcoming Legislative Efforts for 2021	CA Senator Ben Allen	Chair of Senate Environmental Quality Committee

10:30-10:45	**Break**		
10:45-11:45	**Lawrence Berkeley Laboratories - Bioresources Research Update** *Moderator: Lauren Fondahl*		
	Accelerating Deployment of Recovery Infrastructure: 2020 Update	Chelsea Preble, Corinne Scown, & Sarah Smith	Lawrence Berkeley Labs
11:45-12:00	**Flash Presentations**		
	Battery Storage of Energy from Biogas	Kelly Sarber	
	ACP Environmental Justice Toolkit	Janaki Jagannath	
12:00-1:00	**Lunch Break**		
1:00-2:30	**Emerging Bioresource Solutions & Barriers** *Moderator: Chuck White*		
	Manufacturing Biofuels and Renewable Chemical Products from Non-Recyclable Waste	Denis Arguin	Enerkem
	Bioelectrical Conversion of Organic Waste to Hydrogen Fuels	Alex Lewis & Abhijeet Borole	Electro-Active Technologies
	California's decarbonization targets and beyond: Decentralized Waste to Hydrogen solutions	Jean-Louis Kindler	Ways2H
2:30-3:30	**Reclamation of Fire-Damaged Lands** *Moderator: Greg Kester*		
	Research at Las Virgenes	Harry Allen	US EPA Region 9
	Compost Remediation	Dr. David Crohn	UC Riverside
	Restoration of Fire Damaged Forest Lands	Bill Stewart	Co-Director, Berkeley Forests
3:30-4:00	**Where are we going in the future? Building Bioeconomy with Bioresources** *Moderator: Dan Noble*		
	ACP SB 1383 Compost Marketing/Procurement Plan	Sara Hammes	
	Bioresource to Regenerative Economic Planning	Dan Noble	

The symposium is organized by US EPA Region 9, CA Air Resources Board, CA State Water Resources Control Board, Bay Area Air Quality Management District, Association of Compost Producers, CA Association of Sanitation Agencies, Institute for Global Communications, Manatt Phelps & Phillips, Vital Clean Tech Ventures, and JDMT Press.

Registration is free and can be found at California Bioresources Alliance Symposium 2020

AGENDA ITEM 2E
DATE November 19, 2020

Las Gallinas VALLEY SANITARY DISTRICT

BOARD MEMBER MEETING ATTENDANCE REQUEST

Date: 11/5/20 Name: MURRAY, CRAIG K.

I would like to attend the COVID-19 NOVEMBER UPDATE Meeting

of CWEA-CASA

To be held on the 17th day of NOVEMBER from 11:00 a.m. / p.m. to

17th day of NOVEMBER from 12:30 a.m. / p.m.

Location of meeting: ONLINE

Actual meeting date(s): 11 17 20

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

Purpose of Meeting: WASTEWATER RELATED COVID UPDATES

Other meeting attendees: UNKNOWN

Meeting relevance to District: WASTEWATER COVID

Frequency of Meeting: 1X

Estimated Costs of Travel (if applicable): N/A

Date submitted to Board Secretary: 11/5/20

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.

MEMBERSHIP EVENTS ABOUT CWEA AWARDS CAREERS CERTIFICATION

Webinar: Food Waste Diversion Project LABS-CWEA (Free)

TBD
Contact Hours: 0

INDIVIDUAL REGISTRATION
GROUP REGISTRATION

11/12/2020

Webinar: CWEA-CASA COVID-19 November Update (Free)

CWEA
Collection Systems, Electrical/Instrumentation, Engineering, Mechanical Technology, Operations, Pretreatment/Source Control, Safety, Wastewater, Water Distribution, Water Treatment
We've brought together leading national and California experts for a COVID-19 update free webinar. ...

Contact Hours: Estimated 1.8

INDIVIDUAL REGISTRATION
GROUP REGISTRATION

11/17/2020

Webinar: Emerging Contaminants at Wastewater Treatment Plant presented by SARBS PDC - CWEA

INDIVIDUAL REGISTRATION
GROUP REGISTRATION

MEMBERSHIP EVENTS ABOUT CWEA AWARDS CAREERS CERTIFICATION

Event Profile

GO BACK

Webinar: CWEA-CASA COVID-19 November Update (Free)

INDIVIDUAL REGISTRATION

Share:

Date(s): November 17, 2020
Event start time: 11:00am
Website: Not available
Fee(s): Free Event
Description: Members: Free
Non-Members: Free

CWEA Hours: 1.8 towards ALL CWEA Certifications

We've brought together leading national and California experts for a COVID-19 update free webinar.

More details and speaker information to come...

Las Gallinas Valley Sanitary District

Item Number 2F

Agenda Summary Report

To: Mike Prinz, General Manager
From: Michael P. Cortez, PE, District Engineer
(415) 526-1518; mcortez@lgvsd.org
Meeting Date: November 19, 2020
Re: Award of Contract for Design of Digester Room MCC-2 Upgrades
Item Type: **Consent** X **Action** ____ **Information** ____ **Other** ____
Standard Contract: **Yes** X **No** ____ **(See attached)** **Not Applicable** ____

STAFF RECOMMENDATION

Board to Award Contract for Engineering Design Services for Digester Room Motor Control Center (MCC-2) Upgrades to Hazen & Sawyer in the amount of $142,375.

BACKGROUND

On October 16, 2020, the District received proposals from [1] Hazen & Sawyer and [2] ArcSine Engineering in response to the Request for Proposals (RFP) for the Digester Room MCC-2 Upgrades project issued on August 31, 2020. The RFP provides for engineering services for the upgrades and relocation of the existing Digester Room MCC-2 installed in 1964. MCC-2 presents a safety risk due to its age and location within the digester gallery, which has potential for flammable atmospheric conditions. MCC-2 controls motors associated with two digester scum eliminator pumps, hot water boiler pump recirculation, heated sludge liquor pump, and a lighting panel and is a critical component of plant infrastructure. The scope of work includes the preparation of plans and specifications, detailed cost estimates, and engineering services during bid and construction phases.

Staff has reviewed the proposals and found that Hazen & Sawyer best meets the requirements of the RFP. Prior to submitting a proposal, Hazen conducted a thorough discussion with District staff of current issues related to MCC-2 and RFP requirements. Hazen has prior experience with electrical distribution equipment in Napa Sanitation District and Eastern Municipal Water District.

Both Hazen and ArcSine are currently working on multiple on-going District projects. ArcSine is the design engineer for Marin Lagoon Pump Station No.1 Improvements in addition to being the SCADA consultant for the Secondary Treatment Plant Upgrade and Recycled Water Expansion project and overall District facilities. Hazen is the consultant for the Flow Equalization Basin project and is one of two on-call engineering consultants. Both consultants are technically capable of performing the work; however, staff does have concerns about ArcSine's ability to provide timely, responsive service due to their preexisting District workload.

PREVIOUS BOARD ACTION

N/A

ENVIRONMENTAL REVIEW
N/A

FISCAL IMPACT
Up to $142,375 for design, which is within the project budget for FY 2020-21. Staff will request a budget reallocation or amendment as appropriate for construction after completion of engineering design and an engineer's estimate has been established.

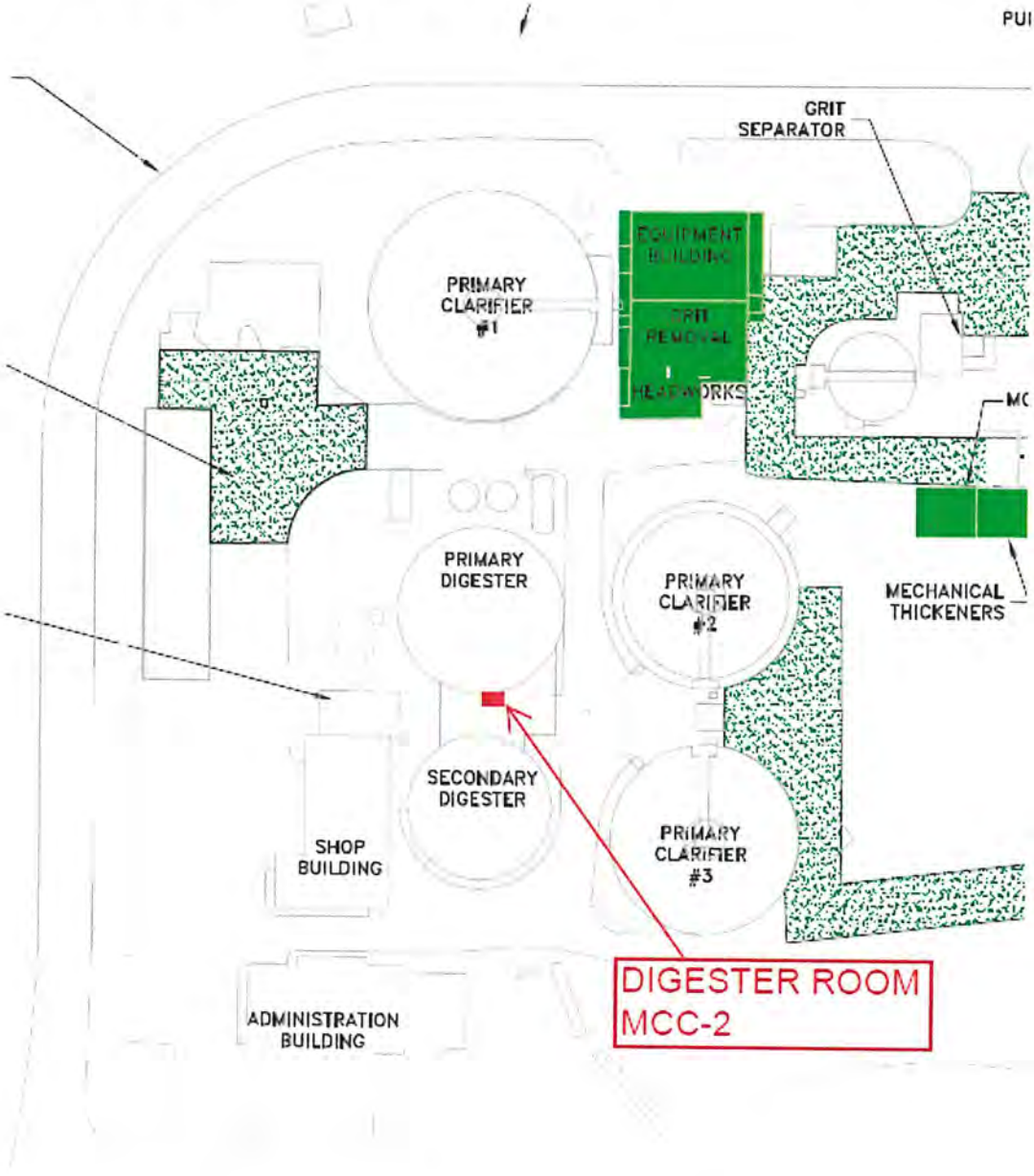
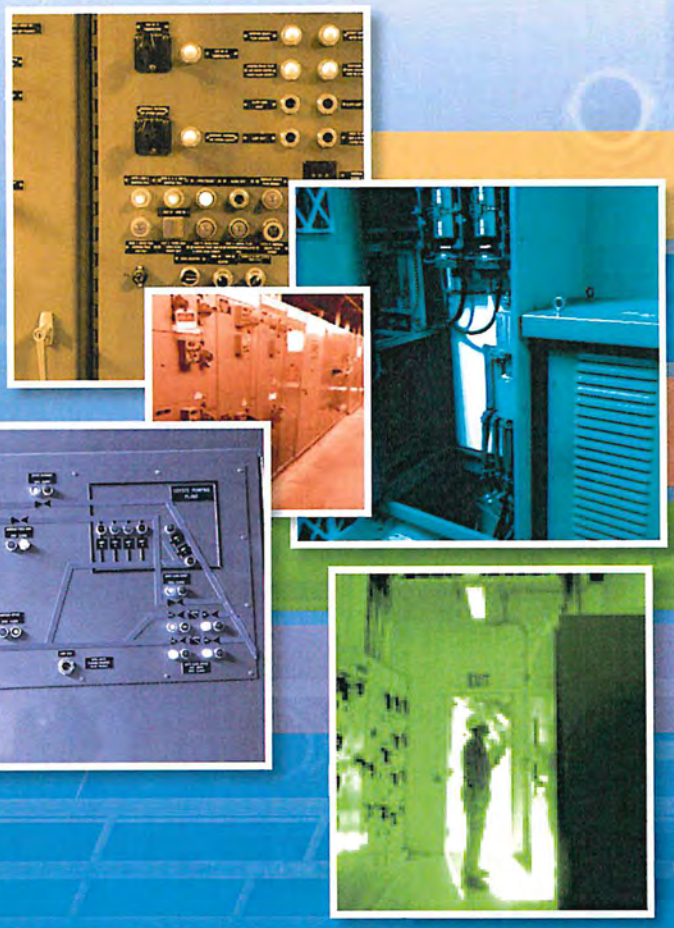


Figure 1: Location Map

Hazen



Las Gallinas
VALLEY SANITARY DISTRICT

Proposal for

Digester Room MCC-2 Upgrades

Job No. 21600-06

October 8, 2020

Hazen and Sawyer
90 New Montgomery Street, Suite 333
San Francisco, CA 94105

October 9, 2020

Mr. Mike Cortez, PE
District Engineer
Las Gallinas Valley Sanitary District
101 Lucas Valley Road Suite 300
San Rafael, CA 94903

Re: Digester Room MCC-2 Upgrades Job No. 21600-06

Dear Mr. Cortez:

Hazen and Sawyer (Hazen) understands that existing Motor Control Center 2 (MCC-2) is located in an existing Digester Room, which is considered to be a classified (hazardous) area as defined in the National Fire Protection Association Standard 820: Standard for Fire Protection in Wastewater Treatment and Collection Facilities (NFPA 820). Hazen understands the primary purpose of the MCC-2 Upgrades is to relocate the existing MCC-2 to an unclassified (non-hazardous) location. MCC-2 is critical to provide reliable power for two digester "scum buster" pumps, hot water boiler pump recirculation, heated sludge liquor pump, and lighting panel. Therefore, maintaining electrical reliability and a safe work environment while minimizing operational risk during and after construction will be our top priority.

With that background, Las Gallinas Valley Sanitary District (District) is faced with an important decision. Your challenge will be to distinguish between the firms proposing. Each firm will offer extensive experience and staff qualifications and provide supporting documentation about their unique knowledge of District's facilities. The following are key messages that help define and distinguish the Hazen and Sawyer (Hazen) Team, who have completed similar assignments locally as well as throughout the country:

Understanding the Importance of Electrical Infrastructure. The District's top priority is safety of their staff, and we fully understand the potential safety issues associated with the MCC in its current classified/hazardous area. Hazen has provided similar MCC design services for Santa Rosa, Union San, Eastern Municipal Water District, and South Orange County Wastewater Authority, and understands the importance of replicating the functionality of the existing MCC in the new installation.

The Hazen Team's WWTP Electrical Experience

Hazen

October 9, 2020

A Proven Team with a Local, Committed, and Accessible Project Manager Who Produces Results. Our Team, led by Gregg Cummings, consists of the same core members who recently delivered on a similar MCC Replacement Project for Eastern Municipal Water District and past projects for the District, including electrical work for the Marin Lagoon Pump Station under Task Order 1.

Integration of Operations & Maintenance (O&M). Hazen recognizes that the ultimate success of any engineered solution rests with the individuals who are responsible for the day-to-day operations and maintenance. That is why we inherently consider Operation and Maintenance (O&M) concerns from the outset of a project. Our approach recognizes the need to work closely with engineering staff, while listening and delivering on the needs of O&M staff.

Our Familiarity with the District will Result in Minimizing Risk During Construction. Our team's familiarity with the District's WWTP, gained during our On-Call Task Orders and Flow Equalization System Project, and our knowledge of continuously operating wastewater treatment plants fosters our ability to work alongside the District to develop detailed sequencing plans which will minimize plant interruption and maximize safety.

The local Hazen Team offers proven electrical design expertise, exceptional service, and attention to safety during construction and operation that makes Hazen an outstanding choice for this assignment. We confirm that Hazen can meet the required insurance levels, agrees to the previously negotiated contract language, and that Marc Solomon has authority to negotiate and contractually bind Hazen. If you have any questions about this proposal, please do not hesitate to contact Gregg Cummings at gcummings@hazenandsawyer.com or 415-307-9505.

Sincerely,
Hazen

Gregg A. Cummings, PE
Project Manager/Senior Associate

Marc Solomon, PE, BCEE, D.WRE
Principal-In-Charge/Vice President

Project Understanding and Approach

Understanding

It is important to select an appropriate location and relocate MCC-2 to an unclassified (non-hazardous) location. This MCC-2 was installed as part of the original installation in 1964 and is currently used to provide reliable power for two digester "scum buster" pumps, hot water boiler pump recirculation, heated sludge liquor pump, and lighting panel.

Project Approach

Hazen will perform the following tasks as part of this project:

1. Coordinate a virtual Kickoff Meeting to review the scope, schedule, and budget for the project with District staff, obtained available background information,. For meetings included for this project Hazen will prepare and distribute agenda in pdf format via email.
2. Review available record drawings information and other background information provided by the District.
3. Preliminary Design:
    a. Evaluate the existing digester control room for compliance with NFPA 820: Standard for Fire Protection in Wastewater Treatment and Collection Facilities.
        i. Walk the site with Operations staff to better understand their concerns and goals for this project and evaluate existing equipment against NFPA 820.
        ii. This evaluation will take into consideration the scope of this project and recommend replacement of any equipment not properly rated for the area of classification within the digester control room.
    b. Evaluate feasibility of District's prefered location and work with Operations Staff to determine and evaluate an alternative location if necessary, verifying the new location(s) meet the following criteria:
        i. Compliance with current electrical code requirements and NFPA 820 in order to verify safety of Plant staff
        ii. Ease of access and maintenance
        iii. Proximity to equipment being served by MCC-2
    c. Develop a sequencing plan for maintaining existing equipment and service during installation and tie over, with the goal that functionality and controls of the existing equipment will be replicated with the new MCC.
    d. Preliminary Design 1-hour virtual meeting to cover findings of preliminary design and receive feedback from The District.

4. Prepare a 90 percent design, which is anticipated to include two General drawings, one Civil drawing, and seven Electrical drawings; technical specifications, and cost estimate.
5. Coordinate (including agenda and minutes preparation) a 90% Review conference call with District staff to review the project drawing and specifications and receive District comments.
6. Finalize the drawings and specifications, and provide one reproducible copy stamped and signed by a California Professional Engineer.
7. Provide bid support services:
    a. Attend a pre-bid meeting to be coordinated by District staff.
    b. Respond to contractor questions as requested by the District
    c. Prepare up to two addenda.
    d. Review up to four bids and provide input via email to the District.
8. Provide engineering services during construction:
    a. Attend a pre-construction meeting to be coordinated by District staff.
    b. Review up to 20 submittals and up to 10 resubmittals
    c. Review and provide responses for up to 5 requests for information (RFIs).
    d. Review and provide input for up to 2 change order requests
    e. Conduct up to two site visits during construction.
    f. Participate in a punch list site visit and provide input via email for the District's punchlist.
    g. Perform a final walkthrough with District staff to prepare a corrective action list.
    h. Prepare record drawings based on contractor redlines and provide in pdf and AutoCAD format.

Firm Project References

Moreno Valley RWRF - TEPS MCC Replacement Project

Eastern Municipal Water District

The original electrical distribution equipment at the MVRWRF Tertiary Effluent Pump Station (TEPS) was located within a highly corrosive environment in an electrical room above the TEPS wet well. As a result, the existing equipment showed signs of corrosion and deterioration. The TEPS is a critical part of the MVRWRF, therefore the decision was made to replace and relocate the distribution and motor control equipment to an environmentally controlled TEPS Electrical Building.

Relevant Highlights

- MCC Replacement
- Maintenance of plant operations
- Expedited Schedule

Reference

Erik Jorgensen, PE | Eastern Municipal Water District
(951) 928-3777 | jorgense@emwd.com

12-kV System Condition Assessment

Napa Sanitation District

This project looked at the condition of the existing 12kV system and included development of an asset register and criticality rankings for the 12-kV, the Main Switch-board (SB-1) power distribution that feeds the MCC assets at the SWRF. This was incorporated into the asset management program and combined with condition assessment results, to develop strategies for their maintenance and/or replacement. The project also looked to develop a revised single line diagram for the electrical system, evaluate the redundancy and establish design standards and proposed maintenance and O&M for the 12KV system. The findings and recommendations of this condition assessment effort will be used to define future design and construction work to repair and/or replace selected 12kV electrical components.

Relevant Highlights

- MCC Maintenance and/or Replacement
- Maintenance of plant operations

Reference

Mr. Karl Ono, PE | Napa Sanitation District
(707) 258-6013 | kono@napasan.com

J.B. Latham Treatment Plant MCC-M Replacement

South Orange County Wastewater Authority (SOCWA)

The scope of the project involves the relocation and replacement of MCC-M which services the non-potable water pumping area. The MCC has exceeded its rated useful like and shows signs of corrosion and deterioration. Therefore, the decision was made to replace and relocate the MCC in an climate-controlled space.

Relevant Highlights

MCC Replacement

Reference

Jason Manning, PE | Director of Engineering
(949) 234-5435 | jmanning@socwa.com

Organizational Chart

The Hazen Team presented in the oraganizational chart below was selected based on two very important criteria: **familiarity** with the District and **experience** designing MCC rehabilitation and retrofit projects. Our team members have the required technical and management expertise and are prepared to begin your project immediately.

A summary of Key Staff qualifications is presented below:

Gregg Cummings, PE, Project Manager
M.S., Environmental/Structural Engineering, San Jose State University
B.S., Civil Engineering, University of California, Berkeley
Professional Engineer

Gregg will be the Project Manager and the day-to-day contact for the District. He has over 34 years of experience in the planning, design, and construction support of water, wastewater, and recycled water projects, utility upgrades, groundwater treatment systems and soil remediation systems. An accomplished project manager, he provides technical and management capabilities to work in collaborative settings involving complex projects and community interests. He has managed a wide variety of projects from initial planning, through design, construction and operation. He is currently Assistant Project Manager for the District's Flow Equalization System and Assistant Contract Manager for our existing On-Call contract for the District, including electrical work for Task Order 1 Marin Lagoon Pump Station.

Marc Solomon, PE, BCEE, W.DRE, Principal in Charge
B.S., Civil Engineering, Duke University, North Carolina M.S., Public Health, Tulane University, Louisiana
Professional Engineer, Water Treatment Plant Operator; Water Distribution System Operator,
Board Certified Environmental Engineer Diplomate, Water Resource Engineer, Value Engineering Certification

Marc will be the Principal-in-Charge and responsible for ensuring that the resources are available for these projects. Marc is an accomplished principal and project manager on a wide range of wastewater projects. Marc's broad project experience has exposed him to all phases of project planning, design, system modeling, system controls, construction management, and operational reliability. This unique and diverse experience enhances his project management abilities and his ability to work effectively with project teams and externally with elected officials, engineers, operators, contractors, and the general public. Marc is Project Manager/Contract Manager for several current District projects and is managing electrical projects at Santa Rosa, Union San, and Napa San.

Chris Thunhorst, PE, QA/QC
B.S. Electrical Engineer, North Carolina State University
Professional Electrical Engineer

Mr. Thunhorst has over 20 years of experience in electrical engineering for building systems, water and wastewater treatment facilities, and pumping stations associated with water distribution and wastewater collection systems.
Chris serves as Hazen's Electrical and Instrumentation Group Leader for California. His experience includes design of medium and low voltage power distribution systems that includes switchgear, motor control centers, panel boards, motor soft starters, VFDs, and UPS charger/battery systems.

Alan Mlakar, PE, Electrical Engineer
B.S., Electrical Engineering, California Polytechnic State University, California, CA
Professional Electrical Engineer

Mr. Mlakar serves as a Senior Principal Electrical and Instrumentation Engineer. He has over 9 years in the Water/Wastewater industry. He specializes in electrical and instrumentation design, electrical system studies, and engineering services during construction. This encompasses knowledge of electrical distribution systems, motor control centers, programmable logic control (PLC), process control related to water, wastewater and power projects.

Shishir Doctor, PE, Electrical Engineer
M. S., North Dakota State University, Fargo, ND
Professional Electrical Engineer
Shishir Doctor is a proficient Senior Engineer with nearly 50 years of project management, engineering design and construction management experience on a wide variety of electrical/mechanical projects for wastewater and water treatment facilities; semiconductor production, research and testing facilities; testing laboratories and data centers. Shishir provided electrical support for the District's Task Order 1 Marin Lagoon Pump Station. Shishir's project experience has largely been focused in the Bay Area, where he has assisted clients with power generation, distribution, and reliability. He is a recognized expert in medium and high voltage power distribution and back-up power systems. His background has exposed him to all phases of project planning, design, system analysis and modeling, system controls, construction management, functional acceptance testing and operational reliability. His ability to work effectively with project team members, management, engineering, O&M, and contractors combined with his strong power background makes him an ideal team member for the Sunnyvale WPCP project.

Daniel Loza, Electrical Engineer
B.S., Electrical Engineering, California State Polytechnic University, Pomona, CA
Mr. Loza has over 14 years of experience in electrical engineering both in the petrochemical industry and in the water/wastewater industry. He has demonstrated technical, design, and leadership capabilities to work in collaborative settings involving complex projects. He has been a lead electrical responsible for the execution, planning, managing of budget and schedule through design, construction and operation. He has provided engineering services during construction including construction support and commissioning of electrical equipment.

Arty Lau, EIT, Assistant Engineer/CAD
B.S., Electrical Engineering, California Polytechnic State University, San Luis Obispo, CA
Mr. Lau is a recent addition to Hazen and part of the electrical engineering team. He has assisted on many projects for public utilities throughout the Western U.S.

Hourly Rates

Name	Classification	Hourly Rate
Marc Solomon	Principal in Charge	$310
Gregg Cummings	Project Manager	$300
Chris Thunhorst	QA/QC	$280
Alan Mlakar	Electrical Engineer	$205
Shishir Doctor	Electrical Engineer	$260
Daniel Loza	Electrical Engineer	$205
Arty Lau	Assistant Engineer/CAD	$125
Reimbursable Charges		Rates
Mileage		IRS Rate
Consumable Charge		$6/hour
Prints, Plots, Messenger Services and other direct expenses markup		Cost + 10%
Outside Consultant Services Markup		10%
Other		Cost + 10%

Billing Rates are subject to yearly escalation based on cost of living

Las Gallinas
VALLEY SANITARY DISTRICT

Hazen

Hazen and Sawyer
90 New Montgomery Street, Suite 333, San Francisco, CA 94105

Hazen

Las Gallinas Valley Sanitary District Headworks Screen Evaluation Fee

		LGVSD MCC-2	Project Director	Project Manager	QA/QC	Electrical Engineer	Electrical Engineer	Electrical Engineer	Engr/CAD	Cost Estimate	Admin	Total Hours	H&S Labor Cost
			Marc Solomon	Gregg Cummings	Chris Thunhorst	Alan Mlakar	Shishir Doctor	Daniel Loza	Arty Lau	Chris Portner	Vanessa Avila		
		Billing Rate	$300	$285	$280	$205	$280	$205	$125	$195	$150		
	Technical Memo												
	1	1 hour Kickoff Meeting / 1 hour site visit		3		16						19	$ 4,135
	2	Review available record drawings, info		1		4			4			9	$ 1,605
	3	Perform NFPA 820 evaluation (including virtual meeting)		2	16	20			20			58	$ 11,650
	4	Evaluate MCC-2 location				10			8			18	$ 3,050
	5	Develop sequencing plan				4			4			8	$ 1,320
	6	Prepare draft TM		1		4			4		1	10	$ 1,755
	7	TM Review Meeting (1 hour)		2		2						4	$ 980
	8	Finalize TM		1		2			2		1	6	$ 1,095
	Final Design												
	9	90% drawings (7)		11	22	84			138			255	$ 43,765
	9	90% technical specifications (20)		4	4	12			12		4	36	$ 6,820
	9	90% cost estimate								8		8	$ 1,560
	10	90% Review meeting		2		4						6	$ 1,390
	11	Bid documents		2	2	12			16		2	34	$ 5,890
	Bid Support and Engineering Services During Const												
	12.1	2 hour pre-bid meeting		2		12						14	$ 3,030
	12.2	Respond to contractor questions				8						8	$ 1,640
	12.3	Prepare two addenda				8			8			16	$ 2,640
	12.4	Review four bids				8						8	$ 1,640
	13.1	2 hour pre-construction meeting		2		12						14	$ 3,030
	13.2	Review 20 submittals / 10 resubmittals				50			90			140	$ 21,500
	13.3	Respond to 5 RFIs				10			10			20	$ 3,300
	13.4	Review 2 change orders		2		12			4			18	$ 3,530
	13.5	Two 2-hour site visits				24						24	$ 4,920
	13.6	3-hour punch list site visit				12						12	$ 2,460
	13.7	3-hour final walkthrough				12						12	$ 2,460
	13.8	Record drawings		2		8			40			50	$ 7,210
		OTHER DIRECT COSTS (ODCs)											
		Labor Sub Total	0	37	44	350	0	0	360	8	8	807	$ -
		TOTAL											$ 142,375
		Grand Total											$ 142,375

	Dwg No.	Description
	G-01	Cover Sheet
	G-02	Sheet Index and Notes
	C-01	Civil Site Plan
	E-01	Legend and Symbols
	E-02	Notes and Abbreviations
	E-03	Partial Site Plan
	E-04	Digester Control Room Plan
	E-05	Single Line Diagram and Elevation
	E-06	Control One-line and Schematics
	E-07	Panel, conduit, and wire schedules
	E-08	Details - I
	E-09	Details - II

Las Gallinas Valley Sanitary District

Item Number 2G

Agenda Summary Report

To: Mike Prinz, General Manager

From: Dale McDonald, Administrative Services Manager
(415) 526-1519 dmcdonald@lgvsd.org

Meeting Date: November 19, 2020

Re: Disposition of Surplus Property by Resolution No. 2020-2205

Item Type: Consent X Action ____ Information ____ Other ____.

Standard Contract: Yes ____ No ____ (See attached) Not Applicable X .

STAFF RECOMMENDATION

Board to adopt Resolution No. 2020-2205 disposing of the District owned 2004 Ford F-650 Flusher Camera Truck and authorize its sale or disposal.

BACKGROUND

The District owns a Ford F-650 Combo Flusher Camera Truck that was placed in service in 2004. The vehicle was beginning to need extensive maintenance and was replaced with a Freightliner CNG Camera/Flusher Truck in 2016. The Ford F-650 was recently serviced and currently runs. District staff has determined that the vehicle has reached the end of its useful life and it is no longer needed in the operations of the collections department.

Adoption of the resolution will allow the sale of the proposed vehicle as surplus through the authorized disposition procedures as required under District Policy F-130-10 Sale of Surplus Equipment.

PREVIOUS BOARD ACTION

None

ENVIRONMENTAL REVIEW

N/A

FISCAL IMPACT

Upon sale of the surplus vehicle, the District could realize a small amount of revenue that will be deposited into the Vehicle Replacement Reserve and reported as Sale of Assets.

Additionally, a minor amount of staff time will be necessary to assist with processing the necessary documentation to liquidate the vehicle.

RESOLUTION NO. 2020-2205

A RESOLUTION DECLARING THAT CERTAIN PROPERTY IS SURPLUS PROPERTY AND MAY BE DISPOSED OF

LAS GALLINAS VALLEY SANITARY DISTRICT

WHEREAS, from time to time the staff of the Las Gallinas Valley Sanitary District inventories District property to determine the continued usefulness of such property in the operations of the District, and

WHEREAS, District staff has determined that certain property as listed on Attachment A is surplus and is no longer needed in the operations of the District;

NOW, THEREFORE, be it resolved that the Board of Directors approves the sale or disposal of such surplus property, pursuant to California Health and Safety Code § 6514, listed on Attachment A which is no longer utilized or necessary in the operations of the Las Gallinas Valley Sanitary District.

* * * * * * * * * *

I hereby certify that the forgoing is a full, true and correct copy of a resolution duly and regularly passed and adopted by the Sanitary Board of the Las Gallinas Valley Sanitary District, Marin County, California, at a regular meeting thereof held on November 19, 2020, by the following vote of the members thereof:

AYES, and in favor thereof, Members:
NOES, Members:
ABSENT, Members:
ABSTAIN, Members:

_____
Teresa L. Lerch, District Secretary
Las Gallinas Valley Sanitary District

APPROVED:

(seal)

_____
Judy Schriebman, Board Vice-President

RESOLUTION NO. 2020-2205

ATTACHMENT A

LAS GALLINAS VALLEY SANITARY DISTRICT

SURPLUS PROPERTY

Surplus property consists of the following items:

(1) Ford F-650 Flusher Camera Truck – Collection Department Equipment - Asset ID 145

Las Gallinas Valley Sanitary District

Item Number 2H

Agenda Summary Report

To: Mike Prinz, General Manager

From: Dale McDonald, Administrative Services Manager
(415) 526-1519 dmcdonald@lgvsd.org

Meeting Date: November 19, 2020

Re: Capital Facilities Charge Accounting and Reporting

Item Type: **Consent** X **Action** ____ **Information** ____ **Other** ____.

Standard Contract: **Yes** ____ **No** ____ **(See attached) Not Applicable** X .

STAFF RECOMMENDATION:
Receive report to comply with reporting provisions of Government Code Section 66013.

BACKGROUND:
California Government Code Section 66013 was substantially amended in 1998 which imposed more stringent accounting and reporting requirements for fees collected for sewer connection and capacity charges. Capacity charge is defined as a charge for facilities in existence at the time a charge is imposed or charges for new facilities to be constructed in the future that are of benefit to the person or property being charged.

The accounting requirements stipulate that the District deposit its Capital Facilities Charges (CFC) and related interest earned into a separate Connection Fees account and to account for those charges in a manner to avoid commingling with other monies of the District and to expend those charges only for the purposes for which the charges were collected. The law also requires that this information simply be made available to the public within 180 days after the end of the fiscal year.

Pursuant to the District's Ordinance Code, Title 2, Chapter 1, the District charges a Capital Facilities Charge for each Equivalent Sewer Unit as outlined in Section 907 for new connections and for the additions or alterations of existing structures. The District identifies projects which expand existing capacity and allocates funding from the Capital Facilities Charge fund as part of the annual budget.

Attached for information only is a copy of the District's annual Revenue and Expenditure Report for the fiscal year ended June 30, 2020 and report of Capital Projects budgeted for 2019/20 that fully comply with the accounting and reporting provisions of Government Code Section 66013.

PREVIOUS BOARD ACTION: None

ENVIRONMENTAL REVIEW: N/A

FISCAL IMPACT: None

Las Gallinas Valley Sanitary District
Capital Facilities Funded Project Detail
July 2019 through June 2020

5025 · Money Mrkt-Connection Fee-9510 - BEGINNING BALANCE July 1, 2019 53,281.87

Date	Type	Memo	Debit	Credit	Balance
5001A · Operating Accounts					
5025 · Money Mrkt-Connection Fee-9510					
07/18/2019	Deposit	Deposit	2,121.00		55,402.87
07/31/2019	Deposit	Deposit	14.44		55,417.31
08/31/2019	Deposit	Interest	13.43		55,430.74
09/30/2019	Deposit	Deposit	13.89		55,444.63
10/31/2019	Deposit	Interest	13.90		55,458.53
11/30/2019	Deposit	Interest	13.00		55,471.53
12/31/2019	Deposit	Interest	14.35		55,485.88
01/31/2020	Deposit	Interest	13.90		55,499.78
02/12/2020	Deposit	Deposit	5,374.37		60,874.15
02/24/2020	General Journal	Reclass deposit to Connection	2,725.20		63,599.35
02/25/2020	Deposit	Deposit	5,287.00		68,886.35
02/29/2020	Deposit	Interest	12.82		68,899.17
03/31/2020	Deposit	Interest	12.02		68,911.19
04/30/2020	Deposit	Interest	8.21		68,919.40
05/11/2020	Deposit	Deposit	8,025.00		76,944.40
05/27/2020	Deposit	Deposit	0.00		76,944.40
05/27/2020	Deposit	Deposit	0.00		76,944.40
05/29/2020	Deposit	Interest	8.64		76,953.04
06/22/2020	Deposit	Deposit	19,782.00		96,735.04
06/30/2020	Deposit	Interest	9.78		96,744.82
Total 5025 · Money Mrkt-Connection Fee-9510			43,462.95	0.00	96,744.82
Total 5001A · Operating Accounts			43,462.95	0.00	96,744.82
TOTAL - ENDING BALANCE June 30 , 2020 *			**43,462.95**	**0.00**	**96,744.82**

* Annex and Capital Facilities Charges revenue in FY 2019-20	43,314.57
* Interest on Connection Fees revenue in FY 2019-20	148.38
	43,462.95

CAPACITY RELATED REVENUE BUDGETED FOR FY 2019-20

No Capital Facilities Charges (CFC) was budgeted for in FY 2019-20.
No Capital Facilities Fund (CFF) reserve was utilized in FY 2019-20.

Balance in CCF of **$96,744.82** can be utilized in future years for expanding of existing capacity through projects, such as STUWRWE, identified durig the budget process.

LAS GALLINAS VALLEY SANITARY DISTRICT
2019-20 REVENUE & FUNDS BUDGET
Approved June 6, 2019

FUNDS AVAILABLE	2016-17 Final Actual	2017-18 Final Actual	2018-19 Projected Actual	2019-2020 Approved Budget	Change	% Change from PY
OPERATING REVENUE						
User Charges	$ 13,059,850	$ 13,634,548	$ 14,220,000	$ 14,602,912	$ 382,912	2.69%
Educational Revenue Augmentation Fund	366,078	372,411	319,000	325,000	$ 6,000	1.88%
Recycled Water	45,548	61,080	39,000	42,000	$ 3,000	7.69%
Franchise Fees	25,000	25,000	70,000	149,422	$ 79,422	113.46%
Inspections/Permits/Application Fee	8,957	11,678	22,038	8,500	$ (13,538)	-61.43%
Interest	532	425	531	500	$ (31)	-5.89%
Interest on Reserves	72,856	269,180	388,665	400,000	$ 11,335	2.92%
Suppl. Property Tax Assess.	15,409	27,670	13,000	16,000	$ 3,000	23.08%
Homeowner Property Tax Relief	4,363	4,354	3,240	4,300	$ 1,060	32.70%
Private Sewer Lateral Assistance Program	76,027	101,368	87,721	80,000	$ (7,721)	-8.80%
Miscellaneous Revenue	33,057	29,521	1,575	-	$ (1,575)	-100.00%
Sale of Assets	(6,267)	29,012	75	-	$ (75)	-100.00%
Operating Transfer In	-	-	-	-	$ -	0.00%
Total Operating Revenue	**13,701,410**	**14,566,247**	**15,164,845**	**15,628,634**	$ 463,789	3.06%
OTHER SOURCES OF FUNDS						
CAPACITY RELATED FUNDS						
Annex and Capital Facility Charges	39,580	228,625	-	-	$ -	0.00%
Interest on Connection Fees	451	242	124	300	$ 176	141.25%
Total Capacity Related Revenue	**40,031**	**228,867**	**124**	**300**	$ 176	141.25%
GENERAL CONSTRUCTION FUNDS						
Property Tax	856,873	890,205	888,554	890,000	$ 1,446	0.16%
Operating Transfer In	-	-	-	-	$ -	0.00%
	856,873	**890,205**	**888,554**	**890,000**	$ 1,446	0.16%
OTHER SOURCES						
Marin Municipal Water District	436,837	455,057	463,145	463,353	$ 208	0.04%
2017 Bond Sale	41,039,514	-	-	-	$ -	0.00%

LAS GALLINAS VALLEY SANITARY DISTRICT
2019-20 REVENUE & FUNDS BUDGET
Approved June 6, 2019

FUNDS AVAILABLE	2016-17 Final Actual	2017-18 Final Actual	2018-19 Projected Actual	2019-2020 Approved Budget		Change	% Change from PY
2019 Ibank Loan			12,000,000	-	$	(12,000,000)	-100.00%
Federal Grant	-	-	169,004	847,150	$	678,147	401.26%
State Grant	-	362,033	-	-	$	-	0.00%
	41,476,351	**817,090**	**12,632,149**	**1,310,503**	$	(11,321,646)	-89.63%
UTILIZATION OF BOND FUNDS AND RESERVES							
Reserves	366,256	-	-	-	$	-	
Private Sewer Lateral Assistance Funds	-	-	-	-	$	-	
Prior Year Capital Project Carryover	4,046,259	1,359,494	-	10,552,150	$	10,552,150	0.00%
Construction Project Reserve		791,158		-	$	-	0.00%
Interest Earned on Unspent Bond Funds		567,986	709,744	580,000	$	(129,744)	-18.28%
Transfers from Bond Fund	65,955	-	-	39,592,193	$	39,592,193	0.00%
Marin Lagoon Reserve Fund	-	13,580	74,000	74,000	$	-	0.00%
Captains Cove Reserve Fund	-	236	2,695	2,695	$	-	0.00%
Capital Facilities Fund	350,056	300,300	-	-	$	-	0.00%
	4,828,526	**3,032,754**	**786,439**	**50,801,039**	$	50,014,600	6359.63%
					$	-	
TOTAL FUNDS AVAILABLE FOR EXPENDITURES	**$ 60,903,191**	**$ 19,535,163**	**$ 29,472,111**	**$ 68,630,476**	$	39,158,364	132.87%

Las Gallinas VALLEY SANITARY DISTRICT

Item Number 2 I

Agenda Summary Report

To: Mike Prinz, General Manager MDP
From: Michael P. Cortez, PE, District Engineer
(415) 526-1518; mcortez@lgvsd.org
Meeting Date: November 19, 2020
Re: Designation of the Secondary Treatment Process Upgrade and Recycled Water Expansion Project as an Essential Governmental Function per Marin County Public Health Order
Item Type: **Consent** X **Action** _____ **Information** _____ **Other** _____
Standard Contract: **Yes** _____ **No** _____ **(See attached)** **Not Applicable** X

STAFF RECOMMENDATION

Board to approve continued Designation of the Secondary Treatment Process Upgrade and Recycled Water Expansion Project as an Essential Governmental Function per Marin County Public Health Order.

BACKGROUND

The shelter-in-place order issued by Marin County Health Officer in effect as of the writing of this report allows recurring designation of projects previously designated by the lead agency as Essential Governmental Functions.

PREVIOUS BOARD ACTION

The Board approved Resolution 2020-2184 on April 16, 2020 designating the Secondary Treatment Process Upgrade and Recycled Water Expansion (STPURWE) Project as an Essential Governmental Function as defined in the Order of the Marin County Health Officer dated March 31, 2020, section 13.f.v.4.

The Board has approved the continued designation of the Project at every regular Board meeting since the original designation on April 16, 2020.

ENVIRONMENTAL REVIEW

N/A

FISCAL IMPACT

N/A

Las Gallinas VALLEY SANITARY DISTRICT

Item Number 3.1

Agenda Summary Report

To: LGVSD Board of Directors
From: Mike Prinz, General Manager
(415) 526-1511 mprinz@lgvsd.org
Meeting Date: November 19, 2020
Re: October Departmental Reports

Item Type: **Consent** _____ **Action** _____ **Information** __X__ **Other** _____.
Standard Contract: **Yes** _____ **No** _____ **(See attached) Not Applicable** __X__.

STAFF RECOMMENDATION
None. Informational only.

BACKGROUND
The attached departmental reports reflect primarily the activities for October, 2020, although additional items of note since the beginning of the fiscal year are notated where applicable. Future departmental reports are anticipated to be issued on a bimonthly basis starting with the November/December reports, which will be issued in January, 2020.

October highlights of note include the following:

Administration
An accounting and financial systems needs assessment has commenced under the guidance of Regional Governmental Services staff who have substantial expertise in Enterprise Resource Planning (ERP) systems implementation. ERP refers to a type of software that organizations use to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations. The needs assessment will generate valuable input for the upcoming ERP Request for Proposals (RFP) for the District's ERP project, which was originally budgeted in the FY 19/20 budget. The RFP is not yet ready to be issued but is anticipated to be published in the next few months.

Collections and Maintenance
The collections group is focusing strictly on flushing and rodding gravity mains in order to ensure functionality of the entire gravity main network prior to recommencing televising of mains. October production was approximately 10% of the District's gravity main network.

The District has been undertaking a knowledge transfer effort in order to shift all pump station responsibility to the collections group who have historically operated most, but not all of the District's pump stations. Prior to this effort, the District's 5 largest pump stations were operated exclusively by the plant operations group. This shift is partially facilitated by the addition of a collection system operator and will allow the plant operations group to focus more attention on the treatment works of the District.

Plant Operations
The official end of the reclamation season occurred on October 1, on which date the normal 'wet weather' discharge season commenced and the District's discharge to Miller Creek began.

Staff facilitated the installation of a pH and temperature probe in the headworks of the plant. The previous instrument did not log temperature, which is critical information to have on hand for future nutrient removal planning purposes.

Biogas microturbine 'uptime' was 100%, which is a milestone worthy of noting due to historical reliability challenges associated with the District's microturbine system. The total utility power cost offset attributable to this system and the District's solar array was nearly $15,000.

Engineering
The District's 2 staff member engineering division is extremely busy with a very wide array of projects, the most significant of which is the District's $60M Secondary Treatment Process Upgrade and Recycled Water Expansion.

Engineering staff are working very closely with Kennedy Jenks consultants regarding contract approval for phase 2 of the District's Integrated Wastewater Master Plan. This is a very significant effort and the first of its kind for the District.

The Engineering division is managing a range of projects in various stages of completion and is emphasizing 4 in design and 7 in construction, with a range of other projects as described in the comprehensive report attachment.

Other Area of Note
The General Manager has been steadily advancing the District's Strategic Initiative Number 2 to establish beneficial use of biosolids. This has included working with the District's consultant, HDR, to complete the Biosolids Land Application Feasibility Report, as well as preliminary efforts to determine regulatory requirements associated with potential land application operations. Additionally, in order to ascertain potential feasibility of a regional biosolids program, a solicitation of letters of interest to participate in a potential regional program was drafted.

PREVIOUS BOARD ACTION
N/A

ENVIRONMENTAL REVIEW
N/A

FISCAL IMPACT
N/A

FINANCE

- Regional Governmental Services (RGS) – master agreement for continued financial services finalized. Multiple meetings with Mark Moses and Roberto Moreno occurred facilitating transfer of knowledge on various financial issues.
- Audit FY 2019-2020 – Cropper worked on audit the week of Oct 12, anticipate completed audit to the Board on December 17 or January 7.
- Depreciation Schedule as of June 30, 2020 was updated by RGS and provided to auditor.
- HDR Sewer Service Rate Study is approximately 65% complete, presentation planned for January 2021.
- QuickBooks – upgraded to latest version and began clean-up of Class codes.
- Capital Improvement Project (CIP) Budget for FY 2020-2021 has been recorded.
- Amy Schultz completed recycled water billing to North Marin Water District.

ADMINSTRATION

- Data Instincts – met with Mark Millan and began planning for Winter newsletter.
- Teri Lerch attended 2020 Virtual Board Secretary/Clerk Conference.
- Sewer Lateral Ordinance - Pam Amatori provided administrative support on 29 inspections in October.

HUMAN RESOURCES

- Compensation Study – Koff Associates completed interviews with key staff and revised Job Descriptions were drafted.
- Amy Schultz onboarded two new hires: Dave Hamby and Dale McDonald.
- Weekly Wellness Tips being provided to all employees by Pacific Crest Group.

REQUEST FOR PROPOSALS

- Needs Analysis initiated to support development of RFP for Enterprise Resource Planning (ERP) software which will replace QuickBooks and integrate with CityWorks in use at the plant. RFP anticipated in early 2021.

SSO SPILL SUMMARY

- None for October.

KEY MAINTENANCE PROJECTS

- Reclamation Shop Roof Repair – Completed.
- Maintenance Shop Improvements – In Progress.
- Tool Inventory – Replenished – Completed.
- Tool Management – Webinar Completed for application-based tracking – In Progress.
- Pump Station Assessments (general appearance/signage/lighting/valve pit piping and valve condition) – Completed.
- Mulligan Pump Station – Fence Replacement Project – Completed.
- Parking Lot – Lighting Installed – Completed.
- ARV Maintenance – (17) ARV's Cleaned of (28).
- Generator Hookup Training – Completed.
- Force main Valve exercising – All Completed.

SAFETY ISSUES AND TRAINING

- Pier Closures in Reclamation – (2) closed indefinitely, replacement project underway.
- Temporary Generator connection at Industrial Park Pump Station – Electrical connection Hazard. Repair Completed.
- Lockout Tagout Training – Completed.
- Annual Facility Safety Assessment – Completed.

OTHER

- Multiple Plant Maintenance repairs in preparation for discharge season -September 2020.
- 51 Gallon SSO on 9/11/2020, 1956 Las Gallinas Ave. Category 3 (meaning it did not make it to waters of the state and < 1,000 gallons).
- Repair Bioassay equipment – September 30, 2020.
- Collection System - Wet weather preparation includes siphon cleaning, "Hotspot" maintenance, etc. – August/September 2020. Freeway Undercrossing inspection and cleaning scheduled for November 2020.
- Pump Station Training – Continued field training for Pump Station Responsibility Transfer to Collections Department – August/September 2020.
- Deep Bed Filter Cell #6 – Anthracite replacement completed September 2020.

- Fleet Maintenance – Application based software implemented and equipment populated. The application now used to track fleet maintenance and weekly inspection of the entire fleet.

REQUESTS FOR PROPOSALS

- None.

PERFORMANCE METRICS

Collection System Cleaning and CCTV Inspection

- Flushed/Rodded = 54,530 feet; Percent of District = 9.8%.
- CCTV Inspected = 0 feet; Percent of District = 0.0%.

CNG Fueling

- Total D.G.E (Diesel Gallon Equivalent)
  - Plant time fill = not available.
  - Smith Ranch = 0 DGE.
- % Uptime
  - Plant time fill = not available.
  - Smith Ranch = 0%.

Sewer Lateral Ordinance Inspections - Number of Applications Processed

- Home Sale Applicants = 29 submitted.
- Home Sale Letter of Findings Issued = 30; 11- require replacement, 12 -have defects that require monitoring, 7 - no work or monitoring required.

CRITICAL PROCESS

- Treatment Plant Effluent was directed to Miller Creek Discharge on October 1st. SWRCB Staff notified.
- Operations staff coordinated with the STPURWE Project General Contractor for 6 service outage requests that included bypassing of the deep bed filters and the secondary clarifier to perform yard piping connections.
- Operations Staff continued to train Collections Staff in the Operation and Maintenance of Major Pump Stations.
- A pH/Temperature instrument was installed at the treatment plant headworks. The new device replaces a failed unit that was limited to pH only.

NON-CRITICAL PROCESS

- A photovoltaic service firm performed inspections, cleaning, and maintenance of District solar power inverters.

PERSONNEL

- 10-2-20 Operations staff attend Suez provided membrane filtration training
- 10-20-20 - Operations and Collections Crews conducted annual refresher training for standby generator connection procedures at Smith Ranch Pump Station.
- 10-27-20 - Operations staff attended Hach Turbidity Meter training via video conference call.
- Elena Knuutti began employment as the District's Laboratory Technician on 8-31-20.
- Three cell phones, shared by staff responsible for afterhours standby duty, are now running a lone worker monitoring and alerting application/service to improve staff safety when working solo.
- A treatment plant & reclamation area housekeeping map with divisions of responsibility for individual operators was implemented.

REGULATORY COMPLIANCE

- All treatment processes remained within permissible limits and no self-determined violations were reported.
- 10-23-20 Title 22 Engineering Report was submitted to the Water Board Staff for the recycled water facility expansion.

REQUESTS FOR PROPOSALS

- Annual service agreement for solar power O&M support.
- Secondary Digester Cleaning.

PERFORMANCE METRICS

Sewage Treated

- October average dry weather influent flow was 1.9 million gallons per day.

Recycled Water Production

- 1,729,080 Gallons was conveyed to North Marin Water District for distribution.
- No Recycled Water was Produced by MMWD per Operational Agreement to facilitate STPURWE Project.

Reclamation

- Pond Levels Beginning of Month – Pond #1 = 8.48' - Pond #2 = 8.78' ~ 95.5 % of Capacity
  Pond Levels at End of Month – Pond #1 = 6.20' - Pond #2 = 6.00' ~ 67 % of Capacity
- 26.5 million gallons of effluent storage pond water was applied to the irrigation pastures.

Solar Power Generation

- 46,040 kWh offsetting approximately $8,287 in PG&E/MCE electrical usage costs.

Biosolids

- 1.5 Million Gallons of biosolids applied to the District's dedicated land disposal site in FY 20-21.

Biogas Utilization

- Total Digester Gas Produced – 1,320,772 scf – Microturbines at 100% uptime producing a total of 36,555 kWh, offsetting approximately $6580 in PG&E/MCE electrical usage costs.

DESIGN ***(Number of projects in design phase: 4)***

- Administration Building Site Evaluation - Staff visited DHA's project in San Rafael on 10/15/2020.
- Reclamation Pond Diversion Boxes Bridge Re-decking - Staff is working with a contractor for installation of two galvanized walkways in place of the existing wood piers.
- Flow Equalization Basin - Hazen & Sawyer is developing site layout for future Flow Equalization Basin, Primary Clarifier #1, and Headworks.

CONSTRUCTION ***(Number of projects in construction: 7)***

- Rafael Meadows Pump Station Standby Generator Installation - Responded to contractor submittals for materials with long lead time.
- Air Release Valve & Vault Replacements - Held pre-con meeting.
- Automated Gate for Reclamation Bridge - Responded to contractor submittals.

REQUEST FOR PROPOSALS

- **Issued: 6**
  - Smith Ranch Pump Station Electrical Upgrades
  - Pump Station Site Lighting Improvements
  - Automatic Transfer Switches for Pump Stations
  - Emergency Bypass Pumping Analysis & Emergency Response Plan
  - Standby Generator System Installation for Minor Pump Stations
  - Digester Room MCC#2 Upgrade
- **Near Term/Anticipated**
  - Force Main Assessment, Cleaning, Location Marking, & Mapping
  - Arc Flash Study for Pump Stations, Treatment Plant, and Reclamation Facilities
  - Grit Chamber Coating and Auger Replacement (UPCCAA)
  - Contempo Marin Manhole Replacement (UPCCAA or On-Call)
  - Miscellaneous Paving 2020 (UPCCAA)
  - Venetia Harbor Fencing & Paving (UPCCAA)

CALL FOR BIDS

- Marin Lagoon Pump Station No.1 Improvements
- Bioassay Test System Installation
- Sludge Thickener Structure Removal

OTHER

- Integrated Wastewater Master Plan
  - Received final version of Business Vulnerability Risk Assessment Memo.
  - Discussed changes to Phase 2 scope and budget with Kennedy Jenks.

Engineering Monthly Report (October 2020)

Job No.	Project Name/Updates	% Completion
DESIGN PROJECTS		
11200-03	**John Duckett Sewage Main Capacity and Storage** • GHD exploring land acquisition opportunity.	30%
20100-02	**Administration Building Site Evaluation** • Conceptual design amendment for MWA Architects, pending Board approval.	Site Evaluation: 100%; Conceptual Design: 0%
20500-02	**Reclamation Pond Diversion Boxes Bridge Re-decking** • On-going design by District staff.	75%
20600-04	**Flow Equalization Basin** • Design by Hazen in progress.	20%
CONSTRUCTION PROJECTS		
11500-09	**Miller Creek Vegetation Maintenance** • On-going with Hanford ARC.	8%
12300-05	**Rafael Meadows Pump Station Standby Generator Installation** • Submittal review for NBC Construction & Engineering in process.	10%
12600-07 & 16650-02	**Secondary Treatment Plant Upgrade & Recycled Water Expansion** • On-going with Myers & Sons Construction.	55%
19200-01	**Air Release Valve and Vault Replacements** • Pre-con meeting with CATS4U held on 10/20/2020. • Will issue Notice to Proceed week of 11/2/2020.	
20125-01	**On-Call Construction Contract** • Piazza repaired water leak in reclamation area.	N/A 100%
21500-06	**Automated Gate for Reclamation Bridge** • Submittal review for NBC Construction & Engineering in process.	10%
21600-13	**Flare Vertical Support Repair** • Ferguson Welding completed repair of cracked vertical support of flare stack enclosure.	100%
REQUESTS FOR PROPOSALS		
	ISSUED	
20300-09	**Smith Ranch Pump Station Electrical Upgrades** • Proposals due 10/28/2020.	
21300-04	**Pump Station Site Lighting Improvements** • Proposals due 10/28/2020.	
21350-01	**Automatic Transfer Switches for Pump Stations** • Proposals due 10/28/2020.	
21600-01	**Emergency Bypass Pumping Analysis & Emergency Response Plan** • Proposals due 10/28/2020.	
21300-03	**Standby Generator System Installation for Minor Pump Stations** • Proposals due 12/11/2020. • Submitted CalOES grant application on 10/30/2020 with KJ's help.	
21600-07	**Digester Room MCC#2 Upgrade** • Received proposals from Hazen and Sawyer and ArcSine Engineering.	
	NEAR TERM/ANTICIPATED	
20200-01	**Force Main Assessment, Cleaning, Location Marking, & Mapping**	
21300-07, 21500-07, & 21600-16	**Arc Flash Study for Pump Stations, Treatment Plant, and Reclamation Facilities**	
21600-08	**Grit Chamber Coating and Auger Replacement (UPCCAA)**	
21300-01	**Contempo Marin Manhole Replacement (UPCCAA or On-Call)**	
21600-03, 21600-11	**Miscellaneous Paving 2020 (UPCCAA)**	
21300-06	**Venetia Harbor Fencing & Paving (UPCCAA)**	
CALL FOR BIDS		
18360-01	**Marin Lagoon Pump Station No.1 Improvements** • Bids due 11/16/2020.	

Job No.	Project Name/Updates	% Completion
21600-14	**Bioassay Test System Installation** • Bids due 11/6/2020.	
21600-17	**Sludge Thickener Structure Removal** • Bids due 11/13/2020.	
OTHER		
17500-05	**McInnis Marsh Restoration** • Continue to review and provide comments to Descanso force main relocation design by BKF Engineers.	N/A
20100-04	**Integrated Wastewater Master Plan** • Received final Business Risk Vulnerability Assessment memo. • Updated Phase 2 scope and budget, pending Board approval.	33%
20125-01	**On-Call Engineering Contract** • Completed Mulligan Trunk Sewer Analysis.	N/A
20500-05	**Marsh Pond Long Term Vegetation Management** • Staff to complete review of the plan and coordinate with Marin/Sonoma Mosquito & Vector Control District and Audubon Society.	75%
21125-01	**Archive Development** • Initiated archive development process. Nute received quotes from digitalizing company and provided recommendation to District staff.	10%
21125-03	**Alternative Funding Pursuit** • Submitted CalOES grant application on 10/30/2020 for 3 standby gensets for 3 minor pump stations.	N/A
21500-03	**Reclamation Bridge Load Capacity & Seismic Analysis** • MGE Engineering completed inspection on 10/21/2020.	50%
LAND DEVELOPMENT		
	350 Merrydale Townhomes - 350 Merrydale Rd • Project on hold.	
	Airport Recreational Facility - 400 Smith Ranch Rd • Reviewing revised sewer plans.	
	Guide Dogs for the Blind - 350 N. San Pedro Rd • See District Counsel.	
	Kaiser Parking Garage/Medical Office Building - 1650 Los Gamos Dr • Requested and received payment for third-party consultant costs.	
	Kaiser - 99 Montecillo Rd • Reviewed and provided response for Trailer 9 and Lot B Trailer.	
	Northgate III Shopping Center - 496 Las Gallinas Ave • Adjusted PFU count.	
	Oakmont - 3773 Redwood Hwy • Scheduling field inspection with building owners.	
	1 Thorndale Dr, Suite 325 • Reviewed and provided response.	
	4000 Civic Center Drive, Suite 300 • Reviewed and provided response.	
	Reviewed and Issued Will Serve Letters to the following: • 642 Woodbine Dr • 1012 Las Pavadas Ave • 28 Washington Ave	

Las Gallinas VALLEY SANITARY DISTRICT

Item Number 3.2

Agenda Summary Report

To: Mike Prinz, General Manager
From: Dale McDonald, Administrative Services Manager
(415) 526-1519 dmcdonald@lgvsd.org

Meeting Date: November 19, 2020
Re: Quarterly Financial Reports & Treasurer's Reports as of September 30, 2020

Item Type: **Consent** _____ **Action** _____ **Information** X **Other** _____.
Standard Contract: **Yes** _____ **No** _____ **(See attached) Not Applicable** X .

STAFF RECOMMENDATION
Information only

BACKGROUND
Treasurer's Report:
Pursuant to the State of California Government Code Section 56300, and the District's investment policy adopted on February 23, 2017, and industry best practices, staff prepares a quarterly report on the District's cash position, investments, and liquidity.

As specified in California Government Code Section 53646(e), if all funds are placed in Local Agency Investment Fund (LAIF), FDIC-insured accounts and/or in a county investment pool, the reporting elements may be replaced by copies of the latest statements from such institutions.

The attached Treasurer's Report presents the District's bank and investment account balances as of September 30, 2020. Total Cash and Investments of $34.1 million reflect a decrease of $27.0 million during the previous twelve month period. This decrease is the result of major capital project expenditures from funds that were accumulated specifically for those capital projects. The previous Quarterly Treasurer's Report as of June 30, 2020 is also provided. Included with the Treasurer's Report are the LAIF remittance advices from the State Controller which includes report on earnings ratio, interest rate, and current market value as of September 30, 2020.

The District's investments comply with its investment policy and the District has sufficient funds available to meet its obligations for the next six months.

Quarterly Financial Report:
Quarterly reviews can include comparisons of financial plans and budgets, current forecasts, and actual results. Highlights and summaries of financial activities can be provided. The General Manager used outside resources during the reporting period to ensure that the recording of the District's financial transactions was timely and accurate.

The vacant Administrative Services Manager position was filled towards the end of the reporting period, on September 28, 2020.

The 2017 Revenue Bonds issued to fund the Secondary Treatment Plant Upgrade Recycled Water Expansion (STPURWE) project has been drawn down from its starting inception balance of $41,000,000 on April 28, 2017 to $2,634,840 as of September 30, 2020. The remaining bond investment balance has since been depleted and the details will be reported as such on the next quarterly financial report.

California Infrastructure and Economic Development Bank (IBank) Installment Agreement funds in the amount of $12,000,000 will be available for use towards the STPURWE project. The drawdown has not yet begun. Unlike the Bond fund, IBank disbursements will occur as payment requests from Meyers & Sons Construction are received.

A combined department roll-up financial review was undertaken and Profit & Loss Budget vs. Actual report summary for the period July through September 2020 is being provided. The column "*Annual Budget*" is what was adopted for the 12-month fiscal year. Until the budget is broken down across each month the "*% of Budget*" column can be misleading as it is the percentage of the annual budget, not the actual *"Jul-Sep 20"* reported. For example, we know that revenue from *#9000 Property Tax Revenue* and *#9011 User Charge* will both be recognized in the 2nd quarter of FY 2020-2021 and therefore there is no concern that the actual amount reported to date is only a fraction of the annual budget expectation. For relatively stable expenses, such as *Salaries* and *Employee Benefits*, the "*% of Budget*" column is beneficial as it can easily identify expenses that are over or under budget for the reporting period. The summary report serves as a useful tool to management and the Board in being able to quickly draw attention to certain areas that may need focused attention.

PREVIOUS BOARD ACTION
N/A

ENVIRONMENTAL REVIEW
N/A

FISCAL IMPACT
None

Las Gallinas Valley Sanitary District
Treasurer's Report - Operating and Investment Accounts
September 30, 2020

I. Account Summary: Bank and Investment Accounts Accounts Summary	September 2020	September 2019	Change from Previous Year
Summary of Bank and Investment Accounts			
OPERATIONS:			
Bank of Marin			
Operating Accounts	5,587,030	4,306,221	1,280,809
Liquid Savings	225,187	2,377	222,810
Private Sewer Lateral Rehab	174,187	200,270	(26,083)
Surcharge-Marin Lagoon	84,503	84,323	180
Surcharge-Captains Cove	17,248	17,211	37
Connection Fee	113,145	55,445	57,701
Capital Project Reserve Fund	2,610,771	2,608,710	2,061
Petty cash	848	811	38
Investment Accounts			
Debt Service Reserve-Recycled Water	597,460	592,734	4,726
Debt Service Reserve-SRF Loan	299,346	296,978	2,368
Local Agency Investment Fund	21,803,176	19,131,959	2,671,218
Cash and Investments	$ 31,512,902	$ 27,297,039	$ 4,215,863
BOND INVESTMENTS:			
Local Agency Investment Fund	$ 2,634,840	$ 33,823,887	$ (31,189,047)
TOTAL CASH AND INVESTMENTS	**$ 34,147,742**	**$ 61,120,926**	**$ (26,973,184)**

II. Account Activity for Bank of Marin Accounts

Bank of Marin operating account activity is for paying regular operating expenses of the District. Funds are transferred from the Liquid Savings to the Operating account as needed.

Statement of Compliance:
The investments accounts are invested in compliance with the District's investment policy, adopted at the February 23, 2017 Board meeting and California Government Code Section 53600. In addition, the District does have the financial ability to meet its cash flow requirements for the next six months.

Prepared by:
Dale McDonald, Administrative Services Manager

Approved by:
Mike Prinz, General Manager
11/5/2020

Las Gallinas Valley Sanitary District
Treasurer's Report - Operating and Investment Accounts
June 30, 2020

I. Account Summary: Bank and Investment Accounts **Accounts Summary**	June 2020	June 2019	Change from Previous Year
Summary of Bank and Investment Accounts			
OPERATIONS:			
Bank of Marin			
Operating Accounts	3,183,366	673,427	2,509,939
Liquid Savings	225,105	490,446	(265,341)
Private Sewer Lateral Rehab	170,422	150,556	19,867
Surcharge-Marin Lagoon	84,472	84,259	213
Surcharge-Captains Cove	17,241	17,198	43
Connection Fee	96,745	53,282	43,463
Capital Project Reserve Fund	2,610,344	2,608,072	2,272
Petty cash	928	1,606	(678)
Investment Accounts			
Debt Service Reserve-Recycled Water	596,269	591,552	4,717
Debt Service Reserve-SRF Loan	298,755	296,392	2,363
Local Agency Investment Fund	27,884,307	27,069,352	814,956
Cash and Investments	$ 35,167,955	$ 32,036,142	$ 3,131,812
BOND INVESTMENTS:			
Local Agency Investment Fund	$ 8,632,794	$ 36,628,065	$ (27,995,271)
TOTAL CASH AND INVESTMENTS	**$ 43,800,749**	**$ 68,664,207**	**$ (24,863,459)**

II. Account Activity for Bank of Marin Accounts

Bank of Marin operating account activity is for paying regular operating expenses of the District. Funds are transferred from the Liquid Savings to the Operating account as needed.

Statement of Compliance:
The investments accounts are invested in compliance with the District's investment policy, adopted at the February 23, 2017 Board meeting and California Government Code Section 53600. In addition, the District does have the financial ability to meet its cash flow requirements for the next six months.

Prepared by:
Dale McDonald, Administrative Services Manager

Approved by:
Mike Prinz, General Manager
11/5/2020

BETTY T. YEE

California State Controller

LOCAL AGENCY INVESTMENT FUND
REMITTANCE ADVICE

Agency Name	LAS GALINAS VLY SANITARY DIST
Account Number	70-21-005

As of 10/15/2020, your Local Agency Investment Fund account has been directly credited with the interest earned on your deposits for the quarter ending 09/30/2020.

Earnings Ratio		.00002309407394024
Interest Rate		0.84%
Dollar Day Total	$	2,354,028,069.26
Quarter End Principal Balance	$	21,803,176.49
Quarterly Interest Earned	$	54,364.10

BETTY T. YEE

California State Controller

LOCAL AGENCY INVESTMENT FUND
REMITTANCE ADVICE

Agency Name	AB3107 LAS GALLINAS VLLY SAN
Account Number	11-21-012

As of 10/15/2020, your Local Agency Investment Fund account has been directly credited with the interest earned on your deposits for the quarter ending 09/30/2020.

Earnings Ratio		.00002309407394024
Interest Rate		0.84%
Dollar Day Total	$	624,758,431.00
Quarter End Principal Balance	$	2,634,729.07
Quarterly Interest Earned	$	14,428.22

Las Gallinas Valley Sanitary District
Profit & Loss Budget vs. Actual
July through September 2020

	Jul - Sep 20	Annual Budget	% of Budget
Ordinary Income/Expense			
Revenue			
9000 · Property Tax Revenue	58,752.65	962,419.00	6.11%
9040 · Supp. Assmnts - Property Tax	158.58	16,000.00	0.99%
9046 · ERAF	10,328.06	325,000.00	3.18%
9011 · User Charge	12,277.40	15,330,111.00	0.08%
9010 · Federal and State Grants	441,228.70	847,150.00	52.08%
9880 · Recycled Water	33,612.15	42,000.00	80.03%
9881 · MMWD Reimbursement	51,637.13	463,395.00	11.14%
9021 · Franchise Revenue	32,092.82	137,081.00	23.41%
9023 · Connection Fees	0.00	7,720.00	0.0%
9034 · Connection Fee refund	-3,794.30	0.00	100.0%
9022 · Permits and Inspection Fees	20,820.00	3,500.00	594.86%
9024 · Application Fees	0.00	20,413.00	0.0%
9773 · Miscellaneous Income	0.00	750.00	0.0%
9100 · Reimb. for Lateral Repairs	3,723.31	66,500.00	5.6%
9280 · HOPTR	0.00	4,300.00	0.0%
9200 · Interest Income	2,946.68	800,900.00	0.37%
Total Revenue	663,783.18	19,027,239.00	3.49%
Expense			
1001.1 · Salaries	662,259.30	3,605,600.00	18.37%
1001.2 · Employee Benefits	493,272.46	1,946,662.00	25.34%
1006 · Payroll Processing Fees	3,826.75	12,729.00	30.06%
2059 · Insurance	7,906.50	175,076.00	4.52%
2080 · Repairs and Maintenance	314,717.79	717,394.00	43.87%
2331 · Reclamation Expenses	44,200.00	270,834.00	16.32%
2101 · Chemicals and Lab Supplies	18,496.15	187,000.00	9.89%
2111 · Pollution Prevention	0.00	12,500.00	0.0%
2117 · Lab Contract Services	3,492.21	43,000.00	8.12%
2249 · Small Tools	1,650.31	25,000.00	6.6%
2320 · Outside Services	159,466.11	403,502.00	39.52%
2330 · Damage Claims	0.00	10,000.00	0.0%
2356 · Engineering	8,146.38	210,300.00	3.87%
2362 · General Operating Supplies	14,136.30	40,250.00	35.12%
2535.1 · Utilities	54,264.89	300,117.00	18.08%
2501 · Fuels	9,463.53	33,802.00	28.0%
2389 · Misc Safety Exp - Lgvsd only	7,663.29	38,450.00	19.93%
2397 · Safety Contractor Services	7,224.00	60,000.00	12.04%
2801 · Lateral Rehab Assistance Prog	19,820.00	100,000.00	19.82%
2400 · General and Administrative	171,190.89	709,903.00	24.12%
9781 · Interest Expense (Gen Admin)	601,472.17	2,074,725.00	28.99%
9920 · Reserve Uses	0.00	1,326,507.00	0.0%
Total Expense	2,001,196.86	10,228,626.00	19.57%
Net Ordinary Revenue	-1,337,413.68	8,798,613.00	-15.2%

Las Gallinas Valley Sanitary District

Item Number 4

Agenda Summary Report

To: Mike Prinz, General Manager MP
From: Michael P. Cortez, PE, District Engineer
(415) 526-1518; mcortez@lgvsd.org
Meeting Date: November 19, 2020
Re: Approve Amendment 1 to Kennedy Jenks for Integrated Wastewater Master Plan
Item Type: Consent_____ Action__X__ Information_____ Other_____
Standard Contract: Yes__X__ No_____(See attached) Not Applicable_____

STAFF RECOMMENDATION

1. Board to authorize District staff and Kennedy Jenks (KJ) to proceed with Phase 2 of the Integrated Wastewater Master Plan (IWMP) in the amount of $767,000.
2. Board to approve a budget revision and reallocation in the amount of $267,000 as outlined below.
3. Board to approve Contract Amendment 1 to Kennedy Jenks for additional engineering services for Phase 2 of the Integrated Wastewater Master Plan in the amount of $275,200.

BACKGROUND

The scope of work that staff developed in the Request for Proposals for the IWMP and as outlined in the current IWMP contract with KJ includes typical levels of condition assessment. The Business Risk Vulnerability Assessment (BRVA) technical memorandum prepared by KJ during Phase 1 of the IWMP has provided the District with a better understanding of the current condition of existing District facilities. As depicted in the attached risk-based matrix (heat map) presented by KJ to the Board on April 16, 2020, most District facilities are generally in worse condition and in need of more extensive condition assessment than initially scoped. Furthermore, some District facilities are at greater risk due to sea level rise than initially thought.

In response to a staff request to continue with a more thorough evaluation of the highest-risk systems at the plant and in the collection system, KJ has submitted a proposal for an additional amount of $275,200 for Phase 2 of the IWMP, which is 25% above their original total fee proposal. Based on Phase 1 results, the level of effort for Phase 2 tasks was increased for project management, detailed collection system condition assessment, collection system capacity analysis, and climate change. Five pump stations, one force main, and 50 manhole inspections were added to the original scope. Furthermore, some Phase 1 on-site condition assessments were deferred until Phase 2 due to COVID-19. The budget for this task was made available to cover additional efforts requested by District Staff for one additional BRVA workshop day, Bio-wheel modeling, and analysis of potential developer driven infrastructure improvements. The detailed scope of work and budget are shown in the attached proposal and Figure 1. Staff reviewed the proposal and deemed the additional services and fee estimate reasonable and appropriate.

Figure 1: Summary of Phase 2 Budget (Excerpt from KJ's 10/23/2020 proposal)

The adjusted contract amount for Phase 2 based on KJ's current proposal is $767,000. To cover the overage above the $500,000 budgeted for Phase 2 in FY 2020-21, staff recommends reallocating $112,000 currently budgeted for master plan placeholder projects. Staff also recommends reallocating flow monitoring budget because it is more appropriate to include this effort as part of collection system condition assessment, which negates the need to conduct this work separately. In addition, the Annual Facilities Painting and Reclamation Pasture Irrigation System Study are not essential this time and will be addressed at more appropriate time in the future.

	FY 2020-21 CIP Project	Budget Reduction	Impact/Mitigation
1.	IWMP Collection System Project (Placeholder)	$50,000 out of $100,000 budget	Use remaining budget for BRVA recommended Arc Flash Study for Collection System pump stations.
2.	IWMP Treatment Plant Projects (Placeholder)	$42,000 out of $100,000 budget	Use remaining budget for BRVA recommended Arc Flash Study for treatment plant facilities.
3.	IWMP Reclamation Projects (Placeholder)	$20,000 out of $50,000 budget	Use remaining budget for BRVA recommended Arc Flash Study for reclamation facilities.
4.	Flow Monitoring Support	$50,000 out of $50,000	Merged into KJ Phase 2 scope.
5.	Annual Facilities Painting	$60,000 out of $60,000	Deferred until completion of STPURWE project.
6.	Reclamation Pasture Irrigation System Study	$45,000 out of $45,000	Deferred until completion of IWMP Phase 3.
	Total:	**$267,000**	

PREVIOUS BOARD ACTIONS

1. Board approved the award of a contract to Kennedy Jenks for Engineering Services for the Integrated Wastewater Master Plan project in the amount of $300,000 for Phase 1 on December 5, 2019.
2. Board pre-authorized the expenditure of $800,000 for Phase 2 and Phase 3 in FY 2020-21 and FY 2021-22, respectively, as funds are allocated for those fiscal years on December 5, 2019.

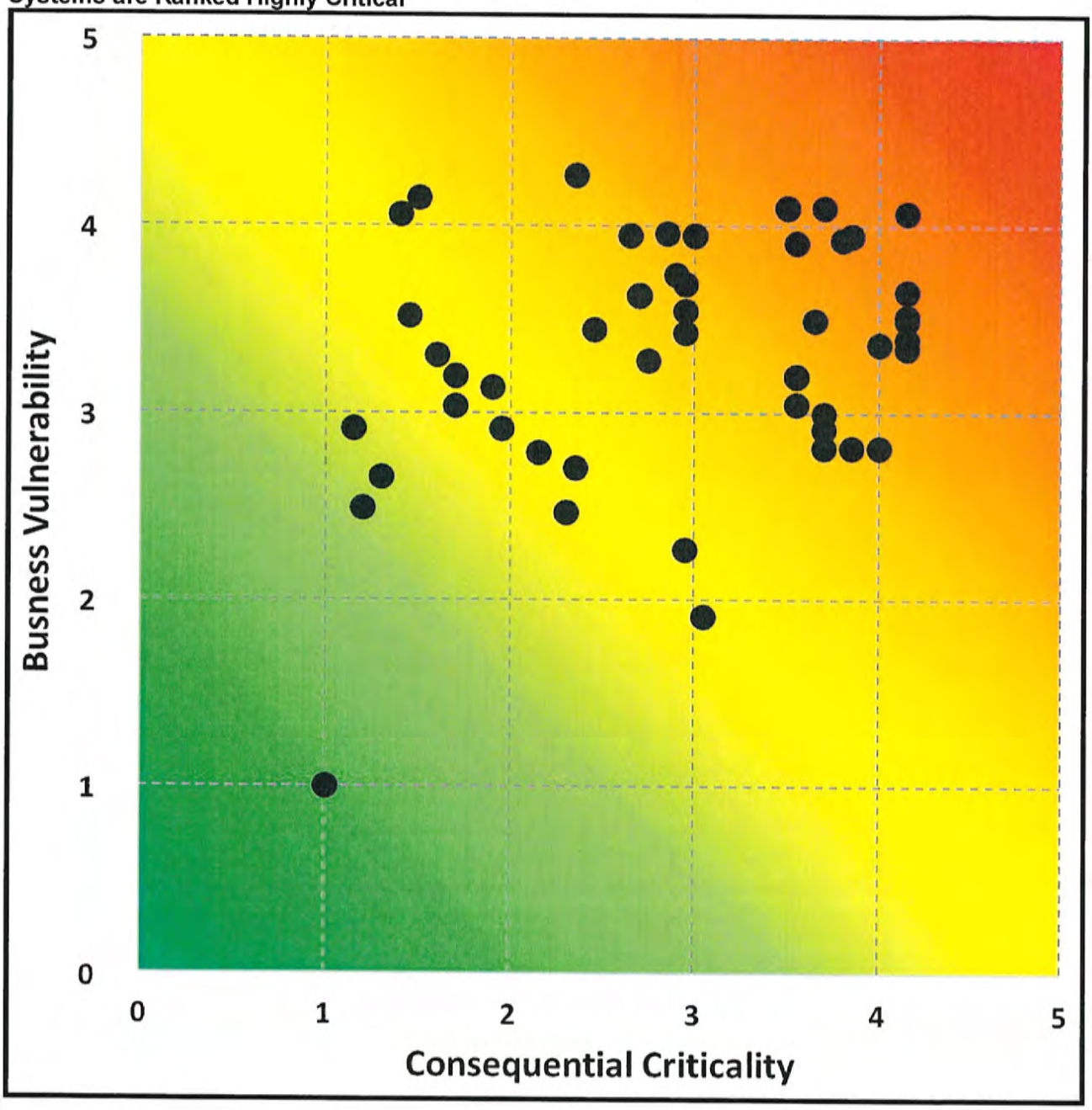
ENVIRONMENTAL REVIEW

N/A

FISCAL IMPACT

Up to $767,000. Phase 2 was already budgeted in FY 2020-21 CIP Budget at $500,000.

Figure 7: Total Risk Score Scatter Plot Shows that Approximately 40% of District Systems are Ranked Highly Critical



Integrated Wastewater Master Plan – BRVA

Kennedy Jenks

Unit Process	Risk Score
Waste Gas Burner	16.89
Sodium Hypochlorite Feed	15.21
Sodium Hypochlorite Storage	15.21
Sodium Bisulfite Storage	15.17
Civic Center Pump Station	15.15
Headworks	14.93
Biogas Energy Recovery System (BERS)	14.61
Descanso Sub-basin, Pump Station, and Force Main	14.53
Sodium Bisulfite Feed	14.35
Outfall Box	14.35
Pond Diversion Box and Compliance Monitoring Structure	14.35
Smith Ranch Pump Station	14.11
Mulligan Sub-basin (Gravity Line)	13.90
Mulligan Pump Station & Force Main	13.88
SCADA	13.48
Staffing Analysis	12.78
Chlorine Contact Chamber	11.85
Chlorine Conctact Chamber Weir Box	11.85
John Duckett (Terra Linda) Force Main and Pump Station	11.36
John Duckett Sub-basin (Gravity Line)	11.36
Primary Clarifier 1	11.29
Terra Linda Siphon	11.28
Operator Routine Duties (ORD)	11.10
Fan Pumps	10.89
Freeway Under-Crossing	10.86
Secondary Clarifier	10.85
Marinwood Pump Station and Force Main	10.83
Marinwood Sub-basin (Gravity Line)	10.80
Sludge Disposal Site	10.47
Filtered Water Storage	10.47
Old Gallinas Sub-basin (Gravity Line)	10.43
Marin Lagoon Pump Station	10.12
Sludge Storage Ponds (Lagoons)	10.03
Reclamation Area Pastures	9.80
Reclamation Area Ponds	9.80
Reclamation System	9.80
MMWD Clearwell	9.80
MMWD Tank	9.80
San Rafael Meadows Pump Station	9.02
Deep Bed Filters	8.45
Financial Systems	6.23
Captains Cove	6.70
Primary Clarifier 2 & 3	6.37
Fixed Film Reactor	6.00
Primary & Secondary Biofilter	5.97
Laboratory Building	5.83
Data Management Systems	5.69
Aerated Grit Chambers & Separator	5.68
Miller Creek Outfall Pipeline	5.68
Primary Digester	5.44
Bar Screens & Compactors	5.30
Secondary Digester	5.17
Antero & Cityworks CMMS	5.10
Laboratory Information Management System (LIMS)	3.46
Recycled Water Treatment Facility	3.36
Influent Flow Mag Meter	2.99
MMWD Water Reclamation Facility	1.00
Sludge Thickener	1.00

Kennedy Jenks

23 October 2020

Mr. Michael P. Cortez, P.E.
District Engineer
Las Gallinas Valley Sanitary District
300 Smith Ranch Road
San Rafael, CA 94903

Subject: Proposal for Professional Services for an Integrated Wastewater Master Plan Phase 2 Amendment – Draft update 2
KJ 2068001*01

Dear Mr. Cortez:

This letter scope is provided at your request for Professional Services for Phase 2 of the Integrated Wastewater Master Plan (IWMP) for the Las Gallinas Valley Sanitation District (LGVSD or District). Phase 1 of the IWMP is completed as noted below and this proposed amendment seeks to provide a more comprehensive scope for Phase 2 activities, with the addition of a staff augmentation task to support data collection, engineering services, and improved operations, as requested by the District.

Phase 1 established a baseline understanding of the District's portfolio of assets to define a risk profile, prioritize assessments, and focus resources on the most critical needs. For similar facilities, most system risk analyses identify 20% of assets as highly critical, on average. In the District's case, the Phase 1 analysis found that 40% of the District's assets are highly critical, as illustrated in Figure 1.

Phase 2 builds upon the results of Phase 1 to further investigate critical assets for development of the District's IWMP, which will be documented under Phase 3. Phase 2 will:

(1) evaluate the increased number of high risk assets identified (from 20% to 40%),
(2) collect data not currently available for many of the District's processes and facilities, and
(3) provide new requested scope items to support the District.

Your IWMP is essential to prioritizing critical near-term needs while defining long-term opportunities for sustainable stakeholder service levels. This proposal describes our scope of services to implement your IWMP; providing a description of tasks, deliverables, assumptions, schedule, and budget.

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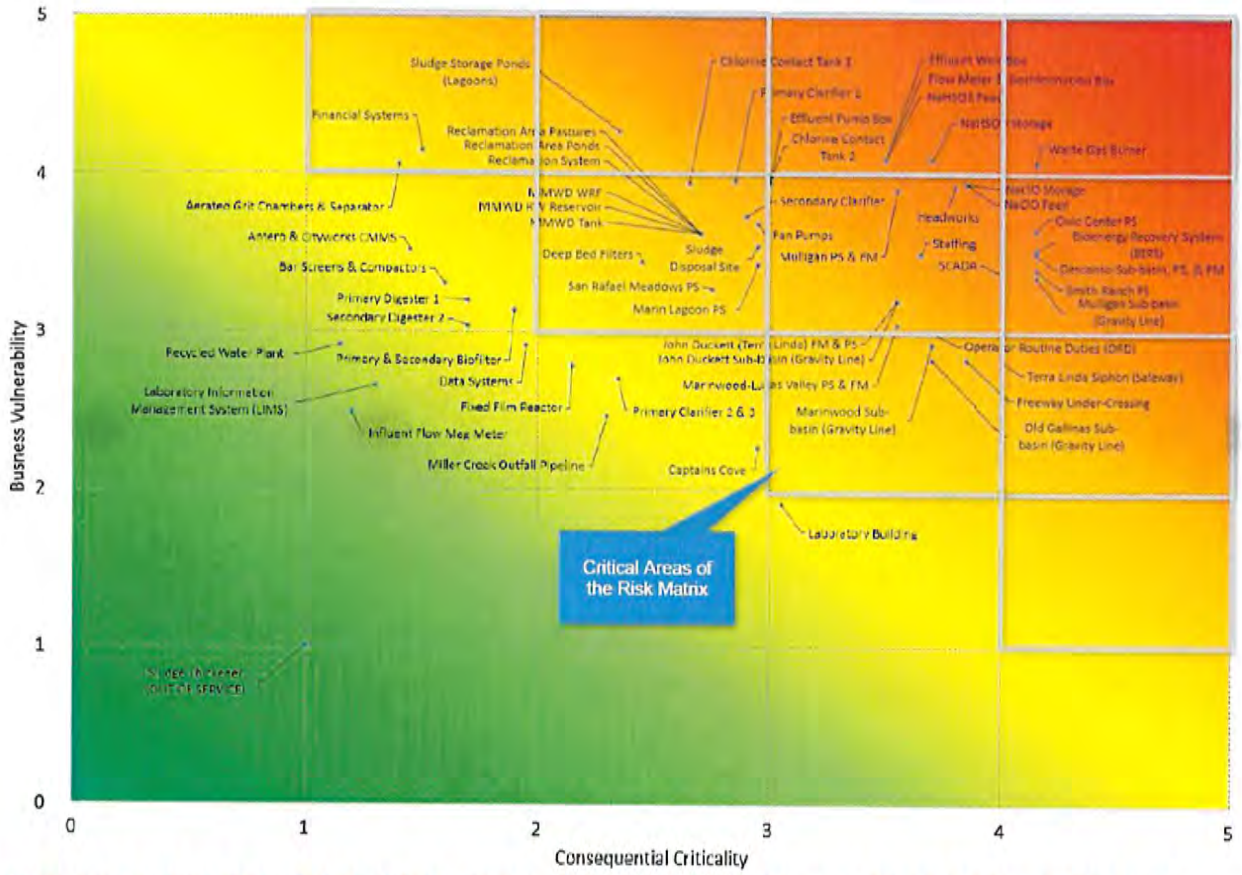


Figure 1: District Total Risk Score Scatter Plot Shows that 40% of District Systems are Ranked Highly Critical

Strategic Initiatives and Long-range Goals

KJ understands the importance of the District's goals to its overall mission success. We recognize that our work is focused on performing tasks that support the District in achieving these goals. We see our work as partnering with the District in its efforts to improve operational efficiency, resilience and asset management while also helping to increase organization efficiencies to meeting these goals and supporting other District efforts.

The District's long-term plan is to programmatically develop the following six strategic initiatives, with specific tactical goals identified for each category. The following categories provide the framework for the District's efforts and are used to guide and focus the work scope detailed in this amendment: (1) Improved Operational Efficiency, (2) Beneficial Use of Biosolids, (3) Improved Operational Resilience, (4) Conduct Organizational Review, (5) Asset Management and (6) Facility Use, Access, and Facility Planning.

Scope of Services

The District's overarching IWMP is divided into three phases, as follows:

- Phase 1: BRVA / Preliminary Assessments (FY 19/20)
- Phase 2: Detailed Assessments (FY 20/21)
- Phase 3: Integrated Wastewater Master Plan Recommendations (FY 21/22)

Phase 1 has been completed, this proposal addresses Phase 2 and Phase 3 will bring together the outcomes from Phases 1 and 2. Phase 1 and 2 activities are summarized by task in Table 1, which indicates where site assessment field activities were moved from Phase 1 to 2 as well as identifying new tasks added to the Phase 2 scope since the original IWMP scope of work (SoW) was drafted. Tasks completed as part of Phase 1 and scoped for Phase 2 are described in more detail in the following sections, including an explanation of task updates.

Table 1: IWMP Phases 1 and 2 Task Updates

Phase 1 BRVA & Preliminary Assess. FY-19/20		Phase 2 Detailed Assessments FY-20/21	
1.1	**Project Management - QAQC**	**2.1**	**Project Management - QAQC**
1.2	**Business Risk and Vulnerability Assess. (BRVA)**	**2.2**	**Assessment of Assets**
1.3	**Assessment of High Risk Assets**	A	Collection System Cond./Perform. Assessment [a]
A	Collection System Cond./Perform. Assessment [a]	B	Collection System Capacity Analysis
B	Collection System Capacity Analysis	C	WWTP Condition/Performance Assessment [a]
C	WWTP Condition/Performance Assessment [a]	D	WWTP Basis of Planning and Sec. Assess.
D	WWTP Basis of Planning and Sec. Assessment	E	Biosolids Disposal System Assessment [c]
E	Biosolids Disposal System Assessment	F	Recycled Water System Assessment [c]
F	Recycled Water System Assessment	G	Climate Change Assessment
G	Climate Change Assessment	H	Physical and Digital Security Assess. [a]
H	Physical and Digital Security Assessment [a]	I	Asset Management Program Assessment
I	Asset Management Program Assessment [b]	**2.3**	**Risk Mitigation Solutions - Urgent CIP**
1.4	**Risk Mitigation Solutions - Urgent CIP**	**2.4**	**Miller Creek Management**
		2.5	**Disaster Resilience Assessment**
		2.6	**Land Management and Optimization**
		2.7	**Staff Augmentation [d]**

[a] Site Assessments expanded upon from visual preliminary assessments under Phase 1 to detailed condition assessments under Phase 2

[b] An additional 5th day of the four-day BRVA was supported by a reallocation of subtask 1.3.I budget as agreed upon by the District.

[c] Detailed Assessments scope of work moved from Phase 2 to 3

[d] New Task since original SoW

Phase 1: BRVA / Preliminary Assessments (FY 19/20)

Phase 1 was completed in September 2020 following the results of the five-day BRVA workshop series. Phase 1 also involved a review of information received from the District and from other District resources. KJ completed a desktop analysis of this information to develop a better understanding of existing conditions, risks, and to better focus where further analysis of assets may be necessary via a detailed condition assessment in Phase 2. Travel and schedule constraints due to COVID-19 impacted anticipated site assessments, which were moved to Phase 2 to improve the team's efficiency by leveraging the desktop analysis results from Phase 1.

The Final BRVA Technical Memorandum (TM) dated October 2020 documents the results of Phase 1. Summaries of completed Task 1.3 subtasks are provided below. The Final BRVA TM also provides a list of preliminary risk mitigation solutions and delineates between anticipated capital improvement projects (CIPs) and O&M opportunities to be addressed in the near term.

1.3A: Collection System Condition / Performance Assessment (Phase 1)

KJ completed a desktop analysis of gravity sewers, force mains, and pump stations based on a review of existing record documents and other data provided by the District pertaining to equipment and infrastructure within the collection system. Data was gathered for all fifteen pump stations to get a better understanding of the equipment, locations, size, and design criteria for each pump station. We analyzed the pumps at each station based on design criteria to identify their preferred operating range (POR) based on optimal efficiency points, which was plotted over a curve. For the five stations that have flow meters, the daily flows were used to create system curves, which were overlaid on the POR curves to assess if the pumps were operating within range. A histogram of the flow range for each of those five pump stations was also completed within this analysis. Onsite assessments will be completed under Phase 2 in addition to pump tests at select sites to evaluate the efficiency of the pumps.

1.3B: Collection System Capacity Analysis (Phase 1)

KJ completed a desktop analysis of the collection system gravity mains, force mains, and pump stations based on review of existing GIS maps, record document review, and flow data provided. We evaluated pipe capacities and hydraulic properties for the five pump stations that had available flow data. Using information from GIS and record documents we identified pipe diameter, material, and length. Profiles of the sewer system were not available from the provided data and manhole invert elevations were found to be inaccurate on the GIS maps, so we took rough surface elevations from Google Earth maps and approximated slopes in order to get estimates for the pipe capacities. Further hydraulic analysis is needed to achieve a more accurate understanding of the collection system capacity.

1.3C: WWTP Condition / Performance Assessment (Phase 1)

KJ completed desktop evaluations of existing information provided by the District pertaining to equipment and infrastructure within the wastewater treatment plant (WWTP). This review focused on the urgent needs of five process areas as determined by the results of the BRVA: Headworks, Digesters, Disinfection, Effluent, and Secondary Clarifiers. Each process area underwent an extensive review of the record drawings, available process data, and historical facility and capital improvement project reports, and historical review of available maintenance mechanical equipment and SCADA data. This assessment identified current vulnerabilities (potential or observed) as well as provided some suggested actions for future investigative, onsite inspection. The inspections will confirm vulnerabilities associated with these assets. The CMMS database for the WWTP, Antero, was not reviewed under this Phase since it is only accessible onsite.

1.3D: WWTP Basis of Planning and Secondary Process Assessment (Phase 1)

KJ developed a BioWin model of the new BioWheel system being constructed to replace part of the WWTP's existing secondary system. The BioWin model focused on a review of three (3) future state conditions of the plant since the new BioWheel system will be operational in early 2021. Additional data collection in Phase 2 will allow the model to be calibrated to optimize its operation once the BioWheel comes online.

1.3E: Biosolids Disposal System Assessment (Phase 1)

KJ obtained five years of historical biosolids data from the District, including available disposal site land application data and compiled quality and quantity data into a comprehensive soil and groundwater characterization spreadsheet. An initial review of this data determined preliminary trends, identified potential technical and regulatory issues, and evaluated the District's data tracking procedures. KJ also completed an evaluation of local, state, and federal biosolids regulations for recent and proposed changes, and disposal site to determine potential impacts to the District's program. Preliminary results suggest the need for additional analysis on metals loading and soil sampling of the disposal site. Thus, Phase 2 will involve analysis to help determine short and long-term viability of the existing disposal site and options for the District's biosolids management program.

1.3F: Recycled Water System Assessment (Phase 1)

KJ reviewed the local farmer agreement and compared this to the actual irrigation use between 2015-2019. KJ also reviewed recycled water agreements with North Marin Water District (NMWD) and Marin Municipal Water District (MMWD), compared historical demands to contracted deliveries and looked at potential future recycled water demands, both of which have no significant increase planned based on Unified Wastewater Master Plans (UWMPs). KJ provided a brief overview of historical data analysis and evaluation of crop alternatives.

1.3G: Climate Change Assessment (Phase 1)

Working with ESA, KJ defined sea-level rise projections for the next 20 years, defined exposure pathways based on available flood hazard maps, and provided initial assessment of seven (7) priority assets, including for the location of the District's proposed new Administration Building Site #2.

1.3H: Physical and Digital Security Assessment (Phase 1)

Due to impacts from COVID-19 mentioned earlier, the physical and digital security assessments have been moved to Phase 2

Phase 2: Detailed Assessments (FY 20/21)

Phase 2 builds upon the results of the BRVA workshop and Phase 1 analyses to further investigate critical assets.

The Phase 2 scope below provides for program improvements and includes site assessments shifted from Phase 1 due to COVID-19 disruption (as shown in Table 1). The description of the detailed assessments (Task 2.2) follows the work completed in Phase 1 and the work scheduled or rescheduled to Phase 2. Figure 2 summarizes the high-risk assets prioritized from Phase 1 and indicates where detailed assessments will be completed under Phase 2.

Unit Process	Risk Score	Assessment	Unit Process	Risk Score	Assessment
Waste Gas Burner	16.89	☑	Chlorine Contact Tank 1	10.47	☑
NaClO Feed	15.21	☑	Old Gallinas Sub-basin (Gravity Line)	10.43	☑
NaClO Storage	15.21	☑	Marin Lagoon PS	10.12	☑
NaHSO3 Storage	15.17	☑	Sludge Storage Ponds (Lagoons)	10.03	☑
Civic Center PS	15.15	☑	Reclamation Area Pastures	9.80	☑
Headworks	14.93	☑	Reclamation Area Ponds	9.80	☑
Bioenergy Recovery System (BERS)	14.61	☑	Reclamation System	9.80	☑
Descanso Sub-basin, PS, & FM	14.53	☑	MMWD RW Reservoir	9.80	
NaHSO3 Feed	14.35	☑	MMWD Tank	9.80	
Effluent Weir Box	14.35	☑	MMWD WRF	9.80	
Flow Meter & Dechlorination Box	14.35	☑	San Rafael Meadows PS	9.02	☑
Smith Ranch PS	14.11	☑	Deep Bed Filters	8.45	
Mulligan Sub-basin (Gravity Line)	13.90	☑	Captains Cove	6.70	☑
Mulligan PS & FM	13.88	☑	Primary Clarifier 2 & 3	6.37	☑
SCADA	13.48	☑	Financial Systems	6.23	
Staffing Analysis	12.78	☑	Fixed Film Reactor	6.00	
Chlorine Contact Tank 2	11.85	☑	Primary & Secondary Biofilter	5.97	
Effluent Pump Box	11.85	☑	Laboratory Building	5.83	
John Duckett (Terra Linda) FM & PS	11.36	☑	Data Management Systems	5.69	
John Duckett Sub-basin (Gravity Line)	11.36	☑	Aerated Grit Chambers & Separator	5.68	☑
Primary Clarifier 1	11.29	☑	Miller Creek Outfall Pipeline	5.68	
Terra Linda Siphon (Safeway)	11.28	☑	Primary Digester 1	5.44	☑
Operator Routine Duties (ORD)	11.10	☑	Bar Screens & Compactors	5.30	☑
Fan Pumps	10.89	☑	Secondary Digester 2	5.17	☑
Freeway Under-Crossing	10.86	☑	Antero & Cityworks CMMS	5.10	☑
Secondary Clarifier	10.85	☑	Laboratory Information Management System (LIMS)	3.46	
Marinwood-Lucas Valley PS & FM	10.83	☑	Recycled Water Plant	3.36	☑
Marinwood Sub-basin (Gravity Line)	10.80	☑	Influent Flow Mag Meter	2.99	☑
Sludge Disposal Site	10.47	☑	Sludge Thickener	1.00	

Figure 2: Majority of High Risk Assets to be Further Evaluated under Phase 2

2.1: Project Management – QA/QC (Phase 2)

KJ will manage the proposed scope, schedule, and budget to provide technical products adhering to client's expectations in a cost-effective manner. Effort includes:

2.1A Project Management: Project setup, contracting, and subcontract execution. Monthly invoices and status reports.

2.1B Meetings and Coordination:

- Phase 2 Kickoff with project team.
- Monthly (Project Manager (PM), Deputy PM, and/or task lead) conducted in person or by phone, as appropriate.
- Monthly status calls (PM, Deputy PM and/or task lead) by phone.
- Coordination with project team.

2.1C Health and Safety:

2.1D Quality Assurance/Quality Control (QA/QC): for all technical deliverables.

Assumptions: KJ and District staff maintains communication and coordination throughout project and provides District staff availability for meetings.

2.2: Detailed Assessment of Assets (Phase 2)

KJ will build upon the results of the BRVA and Phase 1 to perform detailed assessments of the most high-risk assets that warrant further evaluation to refine risk estimates and to support further identifying and developing risk mitigation solutions. Phase 2 assessments may include destructive and/or non-destructive testing, which will be determined based on the BRVA and preliminary assessment results of Tasks 1.3 A through I. The results of these assessments will be documented in the respective subtasks technical memoranda (TM) and incorporated into the results of the BRVA to support the IWMP recommendations and risk mitigation solutions.

Detailed assessment subtasks are further explained below.

2.2A: Collection System Condition / Performance Assessment (Phase 2)

Pump Stations and Force Mains

KJ will perform a Tier 2 condition and performance assessment at up to fifteen (15) of the District's pump stations (PS) and will record assessment notes using the Esri GIS Collector mobile application to facilitate the recording of information and to capture photos. Tier 1 condition assessments are expected to take 4 hours for each pump station. Assessments at each pump station will consist of:

- visual inspections of structures, mechanical & electrical equipment
- pump performance measurements (vibration, flow, head, efficiency, specific energy)
- SCADA evaluation (instrumentation for condition monitoring, alarm telemetry to dispatcher, UPS)

- thermal imaging at motor control centers
- safety inspection covering:
  - ✓ fall protection
  - ✓ lighting (interior and exterior)
  - ✓ arc-flash signage
  - ✓ thermal imaging of motor control centers, distribution panels
  - ✓ rotating equipment protection.

Condition assessment of the pumps will cover the following:

- Assessment of internal wear
- Operation with the preferred operating region (POR)
- NPSH margin ratio
- Specific energy
- Wire-to-water efficiency
- Visual condition assessment of protective coatings
- Vibration within HI tolerance
- Station firm capacity

KJ will also perform a Tier 2 condition assessment for up to five (5) force mains (FM). This work will consist of the following:

- Measurements of pump station flow and pressure to assess hydraulic performance (force main testing performed at same time as pumps)
- Visual observations for corrosion at air-release valves and other readily accessible force main appurtenances

KJ will compile findings from the condition assessments and from Phase 1 to draft recommendations for individual pump stations, force mains, and operations and maintenance practices. Anticipated Tiers 1 and 2 locations under Phase 2 are listed in Table 2.

Table 2: Tier 2 Condition Assessment Locations

Priority	Tier 2 Lift Stations	Priority	Tier 2 Force Mains
1	Mulligan PS	1	Mulligan FM
2	Smith Ranch PS	2	John Duckett/Terra Linda FM
3	San Rafael Meadows PS	3	Civic Center FM
4	McInnis Park PS	4	Marinwood/Lucas Valley FM
5	Descanso PS		
6	Civic Center PS		
7	Hawthorne Way PS	Not incl.	Descanso Gravity and FM[1]
8	Venetia Harbor PS		
9	Northgate Industrial Park PS		
10	Adrian PS		
11	McPhail PS		
12	John Duckett PS		
13	Marinwood/Lucas Valley PS		
14	Marin Lagoon PS (one of nine)		
15	Captains Cove PS (one of six)		

[1] The Descanso FM will be relocated in the next 5 years and the County is currently reviewing the vertical alignment. Thus this location has been removed from the priority list. Should the District request peer review of the County's design plans in the future, KJ can provide support under an amendment.

Gravity System

KJ will also complete up to 50 Level 1 gravity sewer manhole (MH) inspections from the ground surface per the Manhole Assessment and Certification Program (MACP) standard. The majority of these MHs are anticipated to be performed in the spring following wet weather) with the assistance of District personnel to facilitate access. A portion of these MHs will include the inlet/outlet manholes of the District's gravity sewer siphons. KJ will complete these inspections using the Esri GIS Collector mobile application to facilitate the recording of information, to capture photos, and to further buildout the District's registry of asset information, which may further facilitate CMMS builds (see Subtask 2.8). These manhole inspections will be located within sub-basins of concern, based on previously noted I/I concerns, and/or strategically located to facilitate the installation of smart covers to monitor potential sanitary sewer overflow (SSO) activity (see Subtask 2.2B). The surface of siphon inlets may be looked at as part of the manhole assessment (e.g. Safeway and John Duckett), but work would not include assessing the condition of the siphon.

A comprehensive flow monitoring program will be planned for the 2021 wet weather season with temporary flow meters installed at strategic locations along the three main trunk sewers (Marinwood, Terra Linda, and Mulligan) implemented by a specialized subconsultant. For purposes of estimating level of effort, we are assuming that up to five (5) meters will be installed on the three trunk sewers during a two to three-month wet-weather monitoring period. To meet the District's budget for this task, one meter is anticipated to be installed near a pump station on the end of the three trunk lines. The other two meters will be placed near expected developments to accurately project flows for capacity analyses Results from this task will provide the basis for quantifying existing inflow and infiltration (I/I) and base flows in the collection system.

Closed-circuit Television (CCTV) inspections of gravity sewers have been completed by the District. Evaluations of the information will require KJ to observe these results on the District's CCTV inspection vehicle as the video files cannot be downloaded for viewing except for on the CCTV truck. Up to one 8-hour day of effort for reviewing this data onsite at the District's CCTV truck is included in this scope (estimated up to eight (8) gravity sewer segments from manhole to manhole) and is expected to be completed early in Phase 2. Upon these reviews and considering related information, such as the I/I Report (circa 2016), additional CCTV inspections may be recommended (CCTV inspections not include in Phase 2).

Assumptions: District will provide an operator who can provide access to physical locations (PS and associated structures, manholes, and gravity system) for field assessments and assist KJ with the following:

- Safely starting and stopping equipment such that performance measurements can be taken
- Provide a verbal summary of known problems
- Facilitate access by an electrician (Licensed C10 electrical contractor subcontracted to KJ) who will take power measurements during pump testing. It is assumed that existing instrumentation is capable of accurately measuring discharge pressure at the force main and water levels in the wet well.
- The District will provide an H2S meter to facilitate the recording of information during manhole inspections and pump station assessments.
- District staff will be responsible for operating any and all equipment.
- Kennedy Jenks will furnish and install a portable flowmeter for pump and force main testing. Our proposed level of effort assumes that the meter can be installed on exposed piping without the need for confined space entry. We further assume that existing pressure and level instrumentation will be available for use during flow testing.
- Assessment of force main condition is limited to hydraulic performance and visual assessment of appurtenances. District will furnish an operator who is familiar with force main alignments and appurtenances to escort Kennedy Jenks' engineer during assessment work.
- Safety inspection is limited to a basic visual assessment of the items listed above. This scope item is not intended to substitute for a comprehensive safety assessment, nor is it intended to confirm compliance with all OSHA requirements.

Pump station assessments will be visual, unless noted otherwise (ex. vibration analysis) and will not include destructive testing (ex. coupon sampling).KJ will provide the following test equipment:

- Vibration analyzer
- Tachometer
- Portable flowmeter
- Power analyzer
- Thermal imaging camera

2.2B: Collection System Capacity Analysis (Phase 2)

KJ will continue working with District staff to review the region's General Plans and for District staff to provide commentary on growth estimates and anticipated target areas over the next 15 years. KJ will use past flow metering studies, pump station flow data, pump run times and current draw for five (5) pump stations along with the results of Subtask 2.2A to produce an Excel-based capacity analysis model of the District's trunk line sewers (up to 5 trunk lines). This analysis will provide a defensible baseline estimate that the District can share with developers that may respond to the needs of Senate Bill 13.

In addition, KJ will also:

- Assess the hydraulic condition of up to four (4) force mains from Subtask 2.2A via existing analyses and results of pump tests.
- Identify gravity 'hot spots' acknowledging built-out system and Senate Bill 13 requirements, capacity assessments completed in Subtask 2.2B, and based on physical assessments from Subtask 2.2A.
- Further review sewer system master plan and I/I Reconnaissance Report dated 2016 from GHD and V&A and relate to findings from Subtasks 2.2A and 2.2B.
- Identify capacity and potential bottleneck risks for further evaluation.
- Conduct cost evaluations for the installation of level detection manhole covers (e.g. 'smart covers') based on inspections completed in Subtask 2.2A at up to ten (10) locations.
    - It is anticipated that locations will be identified on the Mulligan Trunk Line, the Freeway under crossing, and the Terra Linda (Safeway Siphon) sewer at Elena Circle based on historic SSO information.
    - Cost evaluations will facilitate installing smart covers, which can improve operations and provide additional flow information to facilitate KJ's ongoing capacity assessments.
- Evaluate and prepare for the opportunity to upsize up to three (3) trunk line sewers. It is anticipated this could include the freeway crossing pipe from size 18-inch to 24-inch-diameter HDPE and two other locations identified based on the results of Subtasks 2.2A and 2.2B.

Assumptions:

- The capacity analysis will be based on available data collected during Phase 1 desktop review, ongoing data transfers provided by Nute Engineering, and contingent on the results of the pump station testing performed in Subtask 2.2A.
- Level of effort planned for capacity assessment of trunk sewers is based on the understanding that as-built drawings are unavailable, but the size and location of trunk sewers is documented

in the District's utility mapping. Thus, we plan to establish trunk sewer capacity based on the known diameter and an assumed velocity of 2 ft/s.

2.2C: WWTP Condition / Performance Assessment (Phase 2)

KJ will continue the evaluation of the WWTP based on the risks identified during Phase 1 and will complete targeted, on-site evaluations of up to 25 process areas. Examples of areas within the WWTP anticipated for further assessment include, but are not limited to:

- Sodium Hypochlorite Feed and Storage: Tank containment, pump cavitation, pressure valves, pumps, process and control equipment, alarm system, and safety equipment.
- Headworks, Primary Clarifier, and Digesters – comprehensive structural assessment including seismic evaluation, exposed metals, concrete testing, and rebar UT scanning.
- Electrical Evaluation: Comprehensive electrical assessment including, but not limited to switchgear and load centers, MCC and panel assessment, and generator review.
- Bioenergy Recovery System (BERS) and Waste Gas Burner: review the long term contract with vender to identify potential O&M solutions and trouble shoot/optimize the systems, review of workorders and other historical maintenance issues associated with the BERS, review sizing for low BTU tail gas, assessment of the digester gas quality before and after conditioning units.

KJ will focus its assessment of assets (Liquid and Process) on the following classes: Mechanical, Structural, Electrical, Instrumentation & Control/SCADA asset classes. KJ will provide additional context on the detailed assessments to be completed in a WWTP Condition Assessment Workplan to be provided in advance of onsite activities for the District's review and to facilitate shutdown coordination and access with District staff.

Through these assessments, KJ will identify process limitations, including clarifier capacity (secondary capacity assessment per WEF MOP8), process redundancy, water quality concerns (e.g. turbidity), and flow split issues. KJ will also evaluate reliability issues in redundancy, flow-splitting and equalization, off-spec water diversion needs, hydraulic constraints, biogas recovery system, and pending nutrient regulations. Information from these assessments will feed into the risk mitigation solutions to be provided in subsequent tasks (for urgent and non-urgent needs).

Assumptions: KJ assumed that urgent needs, determined by the results of the BRVA workshops, will determine the major process areas for further assessment under this subtask. The quantity of process areas estimated for this subtask will be assessed over consecutive days for efficiency of the team's evaluations. The District will provide access and assistance, as needed, to KJ staff to facilitate these on-site assessments.

2.2D: WWTP Basis of Planning and Secondary Process Assessment (Phase 2)

KJ will continue the new secondary system evaluation by calibrating the BioWin model with full-scale daily monitoring data and additional water quality data. The aeration basins are anticipated to be seeded and it will take some time for the biomass to buildup and reach a steady-state condition to

provide consistent performance. Additional sampling data will be required to help define the wastewater profile characteristics following the initial commissioning period of the Biowheel system and its aeration capacity.

KJ will calibrate the BioWin process simulator developed in Phase 1 based on the full-scale performance data and additional sampling data. The calibrated simulator will be used to run up to four (4) flow and loading conditions to identify secondary process limitations relative to regulatory outlook, capacity, and redundancy.

Assumptions: The District will help facilitate analyses and reviews as noted. It is also assumed that:

- The Biowheels will be in operation by January 2021.
- Daily monitoring data will be logged in the SCADA and collected by District staff once the Biowheel system is placed in operation. District staff will provide the daily monitoring reports (DMR) to KJ every week for the first three months of the operation, so the engineer can advise the optimal time to start the additional sampling. The daily monitoring reports will include all flow and operational parameters logged in SCADA as well as the data routinely collected for the influent, primary effluent, aeration basins (MLSS, SVI, etc.), and secondary effluent.
- The additional sampling will be required once the secondary process appears to be in stable operation (Anticipated to be 6 weeks, equivalent to approximately 3 cycles of a 10-15 day Solids Retention Time (SRT)). Once a stable biomass has been formed on the Biowheel, ten days of sampling, over a three-week period, will be required. At least, 6 samples shall be collected by District staff on the same day as the data routinely collected. Additional sampling may include COD, BOD5, TSS, volatile suspended solids (VSS), total Kjeldahl nitrogen (TKN), ammonia-nitrogen, alkalinity, pH, temperature, nitrate and nitrite, total and ortho-phosphorus (TP and OP), calcium, magnesium, iron, and other wastewater parameters that could impact the performance of the improved WWTP. A written request for additional sampling and analysis will be provided to the District staff once the Biowheels are in operation.
- The DMR data will be required to be provided on a monthly basis after the first three months. The data may be used in Phase 3 to validate the calibrate model under the startup condition.
- Process assessment will consider capacity and redundancy for the aeration basins, aeration system, RAS pumps, WAS pumps, and secondary clarifiers and the ability of these units to support desired effluent quality objectives.
- Capacity assessments will be based on operation within the design flow and load ranges identified in Phase 1 based on the historical data.
- Process simulations will be steady state. Up to four (4) steady-state process simulations are included in this scope and budget plus one condition evaluated with only desktop calculations.
- Further characterization may occur once the final clarifiers are fully commissioned, which may not occur until Phase 3.

Deliverables: The District will help facilitate analyses and reviews as noted. It is also assumed that:

- Phase 2 Secondary Process Evaluation Workshop agenda, presentation materials, and a summary of meeting highlights and action items (electronic, Adobe format).
- Secondary process simulation outputs and hand calculations in a preliminary technical memorandum (electronic, Adobe format). This TM will be updated and added as an attachment to the final Master Plan Report in Phase 3.

2.2E: Biosolids Disposal System Assessment (Phase 2)

The District's consultant (HDR) under a separate contract has completed some initial work related to biosolids. In an effort to avoid overlap, Task 2.2E has been moved to Phase 3.

2.2F: Recycled Water System Assessment (Phase 2)

The Recycled Water System Assessment will be delayed until Phase 3 to allow for greater focus on high priority systems and processes under Phase 2. The Recycled Water System Assessment will be completed under Phase 3 and documented under the IWMP Report.

2.2G: Climate Change Assessment (Phase 2)

Working with its subconsultant ESA, KJ will continue the exposure pathway evaluation to specific exposures from permanent tidal and temporary storm hazards across up to three-time horizons (existing, mid-century, and late-century) for priority collection system and treatment facility assets, including the location of the new Administrative Building.

Sea-level rise projections will be based on State guidance. Risks identified from potential storm and tidal hazards will be mitigated with risk mitigation solutions (concept level only, potential cost estimated to be provided under Phase 3).

In addition, KJ and ESA have included up to 8 hours under this task to coordinate analyses and results of the IWMP with the ongoing progress of the related Administration Building and McInnis Marsh project evaluations.

2.2H: Physical and Digital Security Assessment (Phase 2)

The District has made prior attempts to work with cybersecurity subconsultant to identify cybersecurity risks from potential ransomware attacks. The timing and turnaround of these efforts is not currently aligning with the overall goals of the IWMP. Therefore, to holistically evaluate the District's risks, this task will allow for KJ to work with subconsultant Arcsine to evaluate the District's Pump Station's (and SCADA/WWTP site) risk(s) relative to digital and physical security and will provide preliminary mitigation recommendations accordingly. This task will evaluate the same ten (10) pump station facilities listed in Table 2 under subtask 2.2A and will be scheduled to be performed in unison for efficiency.

Assumptions: District will help facilitate analyses and provide site access and reviews as noted.

2.2l: Asset Management Program Assessment (Phase 2)

KJ will identify gaps in the asset management program based on results of BRVA and will evaluate the potential impact of revenue generating opportunities based on outcomes of the Land Management and Optimization (Phase 2) and Energy Management and Optimization (Phase 3) tasks. These may provide investment strategies and the potential for outside funding. Potential gaps to be identified will be relative to work execution management (WEM), CMMS, information data management systems (IDMS), management of change (MOC), and reliability engineering.

2.3: Risk Mitigation Solutions - Urgent CIP (Phase 2)

KJ will provide recommendations for CIP project repairs, replacements, or for modified management strategies based on evaluations to this point of the 10 key needs identified under Phase 1. Urgent asset needs may be those assets that are easy to access and implement a recommendation for and may be determined to have a critical risk impact to facility operations, warranting urgent action. KJ will complete preliminary alternatives analysis of up to three feasible solutions for the 10 key needs with Level 5 cost estimates and will recommend the preferred solution for each asset need explaining how the solution can be implemented as Urgent CIP projects.

2.4: Miller Creek Management

Working with subconsultant ESA, KJ will provide a detailed assessment of Miller Creek with focus on identifying maintenance needs (ex. rodent control, flood prevention, seismic improvements) to uphold creek quality and performance of WWTP effluent diffusers. These needs will be compared to an evaluation of the District Board's directive to maintain and manage the creek. KJ and ESA will assist the District in determining the internal and external staffing resources and equipment needed to sustain the maintenance of the creek. Based on this analysis, KJ and ESA will establish maintenance goals with the District and provide preliminary recommendations evaluating up to three (3) alternatives for improved permit conditions.

Detailed assessments will include a review of existing SOPs, existing recording/reporting methodologies, and historic inspections that have been completed. Detailed assessments will also evaluate the quality of prior cured-in-place pipe (CIPP) linings (portions of the pipe near the creek), with the option for the District to complete an inspection of existing CIPP installations (inspection to be scoped and budgeted separately). This task will address specific Board Member concerns related to District facilities (e.g. the outfall and levee protecting the reclamation area) only. The results of each specific assessment will provide for improved maintenance recommendations of the Creek.

In addition, this subtask will provide a preliminary analysis for an optional seismic evaluation as it relates to lateral spreading and liquefaction risk (seismic evaluation to be scoped and budgeted separately).

2.5: Disaster Resilience Assessment

KJ will assess the District's ability to recover from a disaster in two steps: (a) assess resiliency levels; and (b) review and assess the completeness of the Districts emergency response plan. KJ will evaluate the District's risk relative to potential disasters (up to five (5) disaster situations based on results of BRVA workshop) and provide mitigation recommendations (up to three (3) recommendations per each disaster situation) accordingly.

The BRVA workshop identified three key areas of disaster risk: flood risk in the areas nearest the Bay, fire risk centered in the region to the west of Highway 101, and earthquake throughout the District. KJ will provide mitigation recommendations for each disaster scenario (up to three (3) recommendations per). These recommendations will be developed to provide Emergency Response Plans and will follow the risk and resiliency guidelines set forth by American Water Infrastructure Act of 2018 (AWIA). These guidelines are intended to maintain quality drinking water under extreme conditions, but the guidelines provide a best practices approach to planning for emergency situations for wastewater districts as well. The Resilience Assessment will be based on the following relevant topics as they relate to disaster response and the ability to continue conveying and treating wastewater:

- Emergency Response Plan and Functional Training
- National Incident Management System (NIMS) Compliance
- Mutual Aid and Assistance
- Emergency Power for Critical Operations
- Minimum Daily Demand/Treatment
- Critical Parts and Equipment
- Critical Staff Resilience
- Business Continuity Plan
- Utility Bond Rating
- Government Accounting Standards Board (GASB) Assessment
- Unemployment
- Median Household Income (MHI)

KJ will assess the completeness of the District's Emergency Response Plan by evaluating:

1. Strategies and mutual aid resources to improve system recovery.
2. Plans and procedures to be implemented in case of emergency conditions.
3. Actions, procedures and recommendations for proactive actions, procedures or equipment which can reduce the impact of disaster scenarios.
4. Strategies to improve detection levels of assets when a threat occurs.
5. Mission Ready Packages or "Rip and Run" procedures.
6. Leveraging the results of ESA's assessments under Tasks 2.2G and 2.4 as they relate to a flooding disaster.

AWIA includes evaluation of physical and cybersecurity due to the necessity of drinking water for public health. While the impact of disruption of wastewater service is less immediate, KJ recommends

including cybersecurity emergency planning and mitigation as a fourth risk, which will be evaluated as part of Subtask 2.2H and included in the Disaster Assessment completed here.

2.6: Land Management and Optimization

The District's consultant (HDR) under a separate contract has completed some initial work related to biosolids. The effort for this task will be focused on areas not covered in the HDR report (see 2.2E).

KJ will evaluate improvements for land acquisition and uses such as Biosolids application and as they relate to the above Urgent (Phases 1 and 2) and Non-Urgent (Phase 3) CIP project recommendations. The goal of this task is to optimize the District's use of existing and potential future properties and to define 503 Rule compliance requirements.

Based on the outcomes of Subtask 2.2E relating to the Biosolids, the economic benefits of regional solutions will be evaluated as they relate to the District's existing operations.

Phase 2 Additional Tasks

Our additional services in Task 2.7 will support the foundation for Asset Performance Management by supporting efforts to populate O&M Asset Management information required for holistic management and to initiate a discussion of performance expectations for both assets and staff. A separate contract is being explored to establish the basic elements required for a functional asset performance management program. That work may be conducted in conjunction with construction activities associated with the Secondary Treatment Plant Upgrade and Recycled Water Expansion as a pilot for a District-wide program, as illustrated in Figure 3. The work presented herein is intended to support, and not overlap with, parallel efforts conducted by other consultants/contracts and will support the District by providing staffing augmentation to populate the Cityworks CMMS system, fill in data gaps and increase functionality.

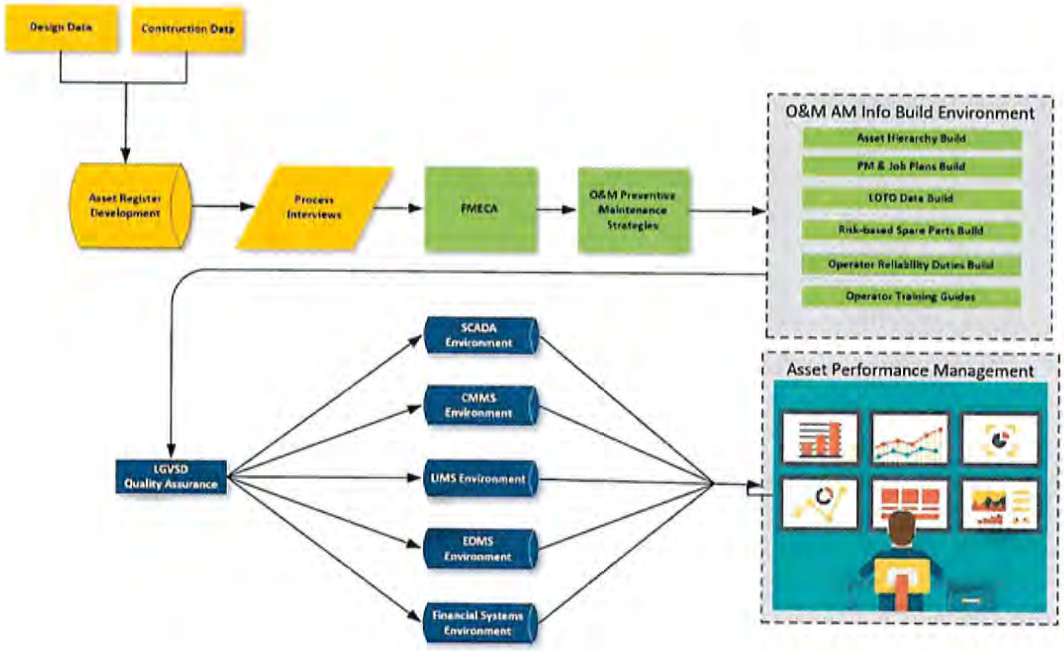


Figure 3: Building an Asset Performance Management Program

2.7: Staff Augmentation

KJ will provide staff augmentation to manage data collection/gathering to support IWMP RFIs, input the structured data build for BioWheel assets, provide record drawing support for the construction management (CM) team, engineering support for the O&M team and entering record information into the CMMS system. Our current estimate assumes an average of 5 to 6 hours per week for this task, which can be adjusted according to demand, with an initial budget not to exceed $50,000.

Phase 3: Integrated Wastewater Master Plan Recommendations (FY 21/22)

The specific scope under Phase 3 will depend on the results of Phase 2, similar to how the scope of Phase 2 was dictated by the outcomes of Phase 1 and the BRVA workshop. The scope below describes the general tasks that are anticipated to be completed as part of a future authorization at the time of this letter scope.

3.1: Project Management - QAQC (Phase 3)

See Task 2.1 scope and assumptions.

3.2: Detailed Assessment of Assets (Phase 3)

This task will build upon the results of and complete Task 2.2.

3.3: Risk Mitigation Solutions - Non-Urgent CIP (Phase 3)

KJ will provide a list of projects to justify a rate increase and to provide support to a connection fee study and rate analysis that will be completed by Others. Through this task, KJ will:

- Identify risk mitigation opportunities for remaining high-risk (Non-Urgent) assets within each system (Collection System, WWTP, Recycled Water Facility, and Biosolids).
- Provide a project description sheet for each asset need and its feasible solution.
- Identify feasible solutions for up to ten (10) key issues in each facility system (Collection System, WWTP, RWF, Biosolid) identified based on the results of Phases 1 and 2 assessments.
- Provide preliminary Alternatives Analysis of up to three (3) feasible solutions with a Class 5 opinion of probable construction cost (OPCC) estimates.
- Recommend preferred solution for each asset need and how they can be implemented in a future CIP project(s).

3.4: Miller Creek Management (Phase 3)

This task will build upon the results of and complete Task 2.4.

3.5: Disaster Resilience Assessment (Phase 3)

This task will build upon the results of and complete Task 2.5.

3.6: Land Management and Optimization (Phase 3)

This task will build upon the results of and complete Task 2.6.

3.7: Conceptual Level Cost Estimates

KJ will provide a Class 5 OPCC estimate for Non-Urgent CIP identified feasible solutions.

3.8: Energy Management and Optimization

KJ will evaluate improvements for energy use and production as they relate to Urgent and Non-Urgent CIP project recommendations.

3.9: Integrated Wastewater Master Plan

The IWMP will document results of assessments completed under Phases 1 through 3. KJ will provide a list of WWTP, collection system, and RWF CIPs for budgeting purposes and a related list of upcoming regulations that may be impacted. KJ will consolidate asset needs into logical CIP projects based on asset type, funding, system location, and other considerations and will then prioritize CIP projects based on risks, regulatory drivers, and financing. This task will integrate Biosolid and RWF recommendations with those at the WWTP and will group asset needs into logical CIP projects based on location, asset type, priority, and financing options and based on preferred alternatives.

KJ will work with the District to incorporate IWMP results into the District's existing GIS database. This information should be accessible online with an ESRI enterprise GIS license. KJ will facilitate providing assessment results in tabular format to be included in GIS attribute tables for mapping and reporting.

The BRVA and risk assessment summaries will provide a streamlined framework that can be repeated for other process area assessments and which will support connection fee and rate studies.

KJ will also provide a financial analysis and recommendations for improved cash flow and funding to support CIP project recommendations. The IWMP will comment on and identify key needs for the District in terms of physical assets and staffing resources.

A Draft IWMP will be submitted for District staff to review and comment on. KJ will then address these comments and provide a Final IWMP complete with CIP project recommendations.

Assumptions: The District's existing GIS database can be viewed via GIS online, which is supported by an ESRI enterprise GIS license (common to most wastewater agencies).

As-Requested Additional Services

A specific scope of work for as-requested additional services may be developed for any phase. The scope and fee would be developed in collaboration with the District's PM and the proposed budget would be authorized on an as-needed basis. Phase 2 Additional Tasks 2.7 through 2.9 were requested by the District to provide additional services to the initial contract developed with the District's tactical

goals in mind. Additional funding is required to support the additional services described in this Phase 2 amendment.

Further tasks may be included in Phase 3 at the District's discretion

Project Deliverables and Anticipated Schedule

As mentioned, the results of Phase 2 assessments will be documented in technical memoranda (TM) by subtask and combined for major processes to improve efficiency and delivery of the IWMP. These TM deliverables are summarized in Table 3. An anticipated schedule for Phase 2 tasks is detailed in Tables 4 and 5.

Table 3: Proposed IWMP Phase 2 Deliverables

Task	Description	Deliverable
PHASE 2 Detailed Assessments		
2.1	**Project Management - QAQC (Phase 2)**	Monthly status reports, Meeting agendas and minutes, QA/QC comments
2.2	**Detailed Assessment of Assets (Phase 2)**	
2.2A	Collection System Cond./Perform. Assess. (Phase 2)	Collection System Assessment TM (Draft and Final)
2.2B	Collection System Capacity Analysis (Phase 2)	
2.2C	WWTP Condition/Performance Assessment (Phase 2)	WWTP Assessment TM (Draft and Final)
2.2D	WWTP Basis of Planning and Sec. Assess. (Phase 2)	
2.2E	Biosolids Disposal System Assessment	~ Biosolids Assessment moved to Phase 3 ~
2.2F	Recycled Water System Assessment	~ RW assessment moved to Phase 3 ~
2.2G	Climate Change Assessment (Phase 2)	Additional Risk Assessments TM (Draft)
2.2H	Physical and Digital Security Assessment (Phase 2)	
2.2I	Asset Management Program Assessment (Phase 2)	Asset Mgmt. Program Assess. TM (Draft)
2.3	**Risk Mitigation Solutions - Urgent CIP (Phase 2)**	Urgent CIP Project Recs TM (Draft and Final)
2.4	**Miller Creek Management**	Additional Risk Assessments TM (Draft) - see Task 2.2 G/H
2.5	**Disaster Resilience Assessment**	
2.6	**Land Management and Optimization**	Land Management TM (Draft)
2.7	**Staff Augmentation**	-

Table 4: Proposed IWMP Phase 2 & 3 Schedule

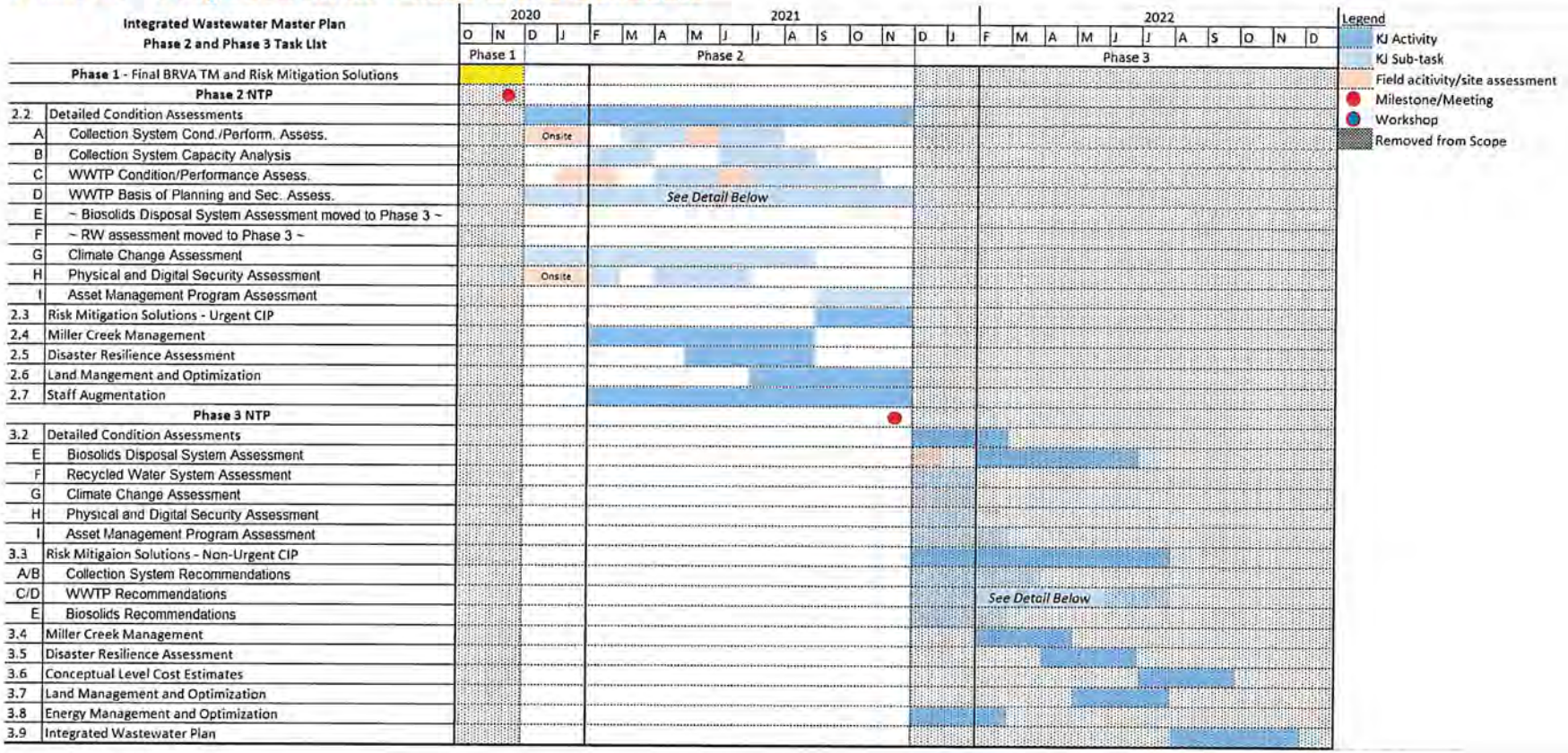
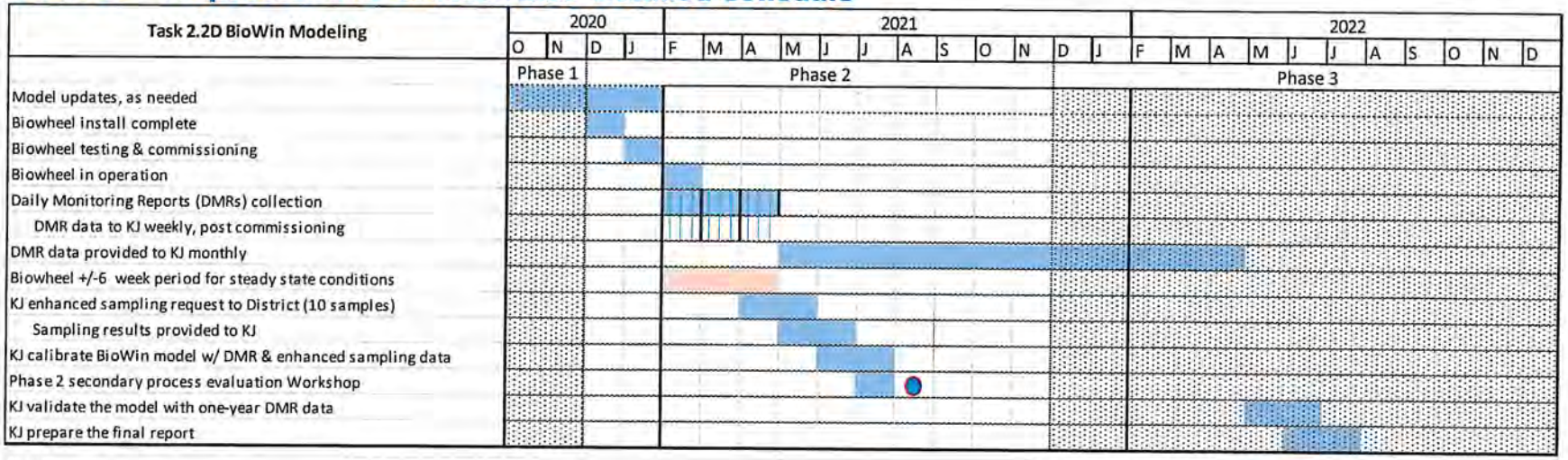


Table 5: Proposed IWMP Subtask 2.2D Detailed Schedule



Notes:

Stable condition in aeration basins may be determined based on MLSS, DO, SRT, WAS, secondary effluent water quality and other parameters.

Additional sampling may include more frequent collection of 24-hr composite samples for the influent and the secondary effluent and analysis on the following parameters

- *Influent COD, BOD5, TSS, VSS, filtered COD, filtered flocculated COD, filtered BOD5, TKN, ammonia, TP, alkalinity, pH, temperature, calcium, magnesium*
- *Secondary effluent filtered COD and filtered TKN*

Additional enhanced sampling may be requested after the two seondary clarifiers are in full operation

Budget

The total Phase 2 budget is $767,000, which includes the initially scoped Phase 2 budget, plus carry over work from Phase 1 (summarized in Table 1), additional effort needed to provide detailed assessments to evaluate the increased number of high risk assets identified (from 20% to 40%) and new requested scope items to support the District, as illustrated in Figure 4. A summary of the IWMP budget, by subtask, is provided in Table 6 with anticipated Phase 2 scope changes detailed. Phase 2 budget will be authorized based on the scope of services detailed herein and will require additional funding for the overall IWMP budget to support additional tasks and services described earlier. Phases 3 scope and budgets may be adjusted based on the results of Phase 1 and 2 and before Board approval.

Figure 4: Summary of Phase 2 Budget

Note: the Carry Over Work from Phase 1 reflects onsite visual assessments that could not be conducted in Phase 1 due to COVID-19 and effort moved to Phase 2 to make budget available to conduct activities requested by the District (e.g. An additional BRVA workshop day, Biowheel modeling and support for developer activities).

Table 6: Summary of Estimated Budget

Phase/Task	Description	Budget Est. November 2019	Budget Est. October 2020	Delta	*Original* Phase 2 Scope Anticipated November 2019	*Updated* Phase 2 Scope Anticipated October 2020
PHASE 1 BRVA / Preliminary Assessments						
	PHASE 1 (FY 19/20) TOTAL	**$300,000**	**$300,000**		On average, most system risk analyses indicate **20% of assets** are highly critical (and constitute 80% of a system's risk)	In LGVSD's case, the Phase 1 BRVA found that **42% of the District's assets** are highly critical
PHASE 2 Detailed Assessments						
2.1	**Project Management - QAQC (Phase 2)**	$85,800	$125,000	$39,200		Additional PM support of the additional tasks listed below
2.2	**Detailed Assessment of Assets (Phase 2)**				Assumed detailed assessments of only **20% of District's assets**	Per BRVA results, **42% of District's assets** are highly critical and warrant detailed condition assessments. This increased count of high risk assets (~2x) has resulted in increased budget needs, as explained below.
A	Collection System Condition / Performance Assessment	$65,000	$160,000	$95,000	- Advance results from **10 PS and 3 force mains** initial visual assessments (2 hrs per each) - Utilize available flow meter information from PS - Use Phase 1 visual assessment to scope detailed condition assessments at critical facilities, if needed	- Increased to **15 PS and 4 force mains (per District's request)** and enhanced from visual to detailed condition assessments (4 hrs per each) - Add further detail to PS assessments via thermal imaging, vibration analyses, and with an O&M expert - Add 50 manhole inspections for gravity mains (not initially included) - Since no flow meters at all PS, conduct and record flow measurements in lieu of flow meters where needed - Added effort to conduct flow monitoring over 3 months in gravity system (not initially included) - Added effort to review CCTV files on truck due to limited accessability - Redefined and increased effort for detailed condition assessments based on enhanced desktop analysis under Phase 1.
B	Collection System Capacity Analysis	$16,000	$34,000	$18,000	- Advance results of capacity analysis from 5 trunk lines and 3 force mains. - Define options and opportunities to address facilities with insufficient capacity.	- **15 PS and 4 force mains** - Due to limited information in Phase 1, add performance field testing to establish pump station capacity and validate existing system curves. - Due to Phase 1 desktop findings and limited flow data, evaluate cost and benefit of installation of up to 10 smart covers to monitor and reduce SSOs (not initially included) - Increase effort for enhanced capacity analysis using results from 2.2A (flow monitoring, MH inspections, CCTV data, and PS/force main field performance testing)
C	WWTP Condition / Performance Assessment	$30,000	$90,000	$60,000	- Advance results of visual assessments of up to **5 process areas** (out of 10 total process areas) - Assume detailed assessment for up to **10 unit processes** and visual assessment of remaining unit process areas	- Based on BRVA and desktop analysis under Phase 1, conduct detailed assessments of up to **25 unit processes within 7 process areas** (essentially all areas at the WWTP except biofilers, fixed film reactor and deep bed filters will be reviewed in detail) - Added comprehensive electrical assessment, including, but not limited to arc flash testing, switchgear and load centers, MCC and panel assessment, and generator review (not initially included) - Redefined and increased effort for detailed condition assessments based on enhanced desktop analysis under Phase 1.
D	WWTP Basis of Planning and Secondary Process Assess.	$60,000	$68,000	$8,000	- Anticipated use of the BioWin process model/simulations generated in Phase 1 to optimize operations of the Biowheel. - Use the process simulator to identify secondary process limitations relative to regulatory outlook, capacity, and redundancy. - Review and comment on relevent future regulatory outlook risks.	- Added effort to advance the BioWin model developed by KJ in Phase 1 to support startup of the Biowheel. - Added effort to update and calibrate model once operational data is provided by the District, anitipated by early 2021.
E	Biosolids Disposal System Assessment	$20,000	~ moved to Phase 3 ~			
F	Recycled Water System Assessment	$15,000	~ moved to Phase 3 ~			
G	Climate Change Assessment	$35,000	$45,000	$10,000	- Analysis to be advanced on **7 key areas from Phase 1** based on GIS information provided by the District.	- Additional effort to collect and analyze information from external sources (in CAD rather than GIS) to facilitate sea level rise analysis and flooding vulnerabilities of critical collection system and WWTP assets. - Add an **8th key area** (administration building) and coordination on the McInnis Marsh project to complete Miller Creek management recommendations.
H	Physical and Digital Security Assessment	$25,000	$47,000	$22,000	- Utilize available Information from CMMS to support preliminary digital security assessments of **10 Pump Stations**	- Additional effort to retrieve data from the District's CMMS - Added detailed digital and physical security assessments for **15 Pump Stations and the WWTP** per the District's request following BRVA results
I	Asset Management Program Assessment	$25,000	$25,000	$0		
2.3	**Risk Mitigation Solutions - Urgent CIP**	$50,000	$53,000	$3,000		- Some additional effort based on increase in number of highly critical assets (42%)
2.4	**Miller Creek Management**	$22,000	$33,000	$11,000	- Management analysis based on review of existing SOPs, existing recording/reporting methodologies, and historic inspections	- Added effort to address specific Board Member concerns (e.g. the outfall and levee protecting the reclamation area) - Based on BRVA findings, added more detailed evaluation of the existing CIPP pipe outfall and scope inspection, if needed. - Conduct preliminary seismic evaluation for levees (not initially included) - Identify additional maintenance needs to address challenges identified in the BRVA (e.g. rodent control, flood prevention, seismic improvements)
2.5	**Disaster Resilience Assessment**	$23,000	$17,000	($6,000)		Preliminary disaster risks identified during the BRVA will make this task more efficient.
2.6	**Land Management and Optimization**	$20,000	$20,000	$0		
	subtotal (2.1 - 2.6)	***$491,800***	***$717,000***	***$225,200***		
PHASE 2 Additional Tasks						
2.7	**Staff Augmentation**	-	$50,000			Additional tasks as requested by the District to support the IWMP goals and mission
	subtotal (2.7)	***-***	***$50,000***	***$50,000***		
	PHASE 2 (FY 20/21) TOTAL	**$491,800**	**$767,000**	**$275,200**		
PHASE 3 IWMP Recommendations						
	PHASE 3 (FY21/22) TOTAL	**$305,000**	**$305,000**	**$0**		
	IWMP TOTAL (Phases 1-3)	**$1,096,800**	**$1,372,000**	**$275,200**		

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Closing

We look forward to working with you to develop your Integrated Wastewater Master Plan. Please do not hesitate to contact me with any questions on this letter scope.

Very truly yours,

Kennedy/Jenks Consultants, Inc.

Dawn Taffler, PE, LEED®
Project Manager

Adam Butler, PE
Deputy Project Manager

Enclosure: 2020 Schedule of Charges
Detailed Budget Estimate

Kennedy Jenks

Client/Address: Las Gallinas Valley Sanitary District
300 Smith Ranch Road
San Rafael, CA 94903

Contract/Proposal Date: October 2020

Schedule of Charges

January 1, 2020

PERSONNEL COMPENSATION

Classification	Hourly Rate
Engineer-Scientist-Specialist 1	$130
Engineer-Scientist-Specialist 2	$165
Engineer-Scientist-Specialist 3	$185
Engineer-Scientist-Specialist 4	$200
Engineer-Scientist-Specialist 5	$220
Engineer-Scientist-Specialist 6	$245
Engineer-Scientist-Specialist 7	$270
Engineer-Scientist-Specialist 8	$290
Engineer-Scientist-Specialist 9	$305
CAD-Technician	$120
Senior CAD-Technician	$140
CAD-Designer	$155
Senior CAD-Designer	$175
Project Administrator	$130
Administrative Assistant	$110
Aide	$85

In addition to the above Hourly Rates, a four percent Communications Surcharge will be added to Personnel Compensation for normal and incidental copies, communications and postage.

Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work, will be at cost plus ten percent for items such as:

a. Maps, photographs, 3rd party reproductions, 3rd party printing, equipment rental, and special supplies related to the work.
b. Consultants, soils engineers, surveyors, contractors, and other outside services.
c. Rented vehicles, local public transportation and taxis, travel and subsistence.
d. Project specific telecommunications and delivery charges.
e. Special fees, insurance, permits, and licenses applicable to the work.
f. Outside computer processing, computation, and proprietary programs purchased for the work.

Reimbursement for vehicles used in connection with the work will be at the federally approved mileage rates or at a negotiated monthly rate.

If prevailing wage rates apply, the above billing rates will be adjusted as appropriate.

Overtime for non-exempt employees will be billed at one and a half times the Hourly Rates specified above.

Rates for professional staff for legal proceedings or as expert witnesses will be at rates one and one-half times the Hourly Rates specified above.

Excise and gross receipts taxes, if any, will be added as a direct expense.

The foregoing Schedule of Charges is incorporated into the agreement for the services provided, effective January 1, 2020 through December 31, 2020. After December 31, 2020, invoices will reflect the Schedule of Charges currently in effect.

CLIENT Name: Las Gallinas Valley Sanitary District
PROJECT Description: Integrated Wastewater Master Plan (IWMP) - Phase 2
Proposal/Job Number: 2068001.00 Date: October 23, 2020

Kennedy Jenks

January 1, 2020 Rates Classification:	Eng-Sci-9 Fejarang	Eng-Sci-9 Faller	Eng-Sci-8 R. Houser	Eng-Sci-8 M. Cullington	Eng-Sci-7 D. Taffler	Eng-Sci-7 B. Drews	Eng-Sci-7 D. Seymour	Eng-Sci-6 S. Dutschke	Eng-Sci-6 A. Philips (+Struc.	Eng-Sci-6 C. Wright	Eng-Sci-5 Eun /Mahoney	Eng-Sci-5 A. Butler	Eng-Sci-5 J. Hoffman	Eng-Sci-4 D. Devin-Clarck	Eng-Sci-3 M. Hagan	Eng-Sci-2 M. McElroy	Eng-Sci-2 L. Hudson	Eng-Sci-2 K. Yap	Project Administrator	Total	KJ Labor	KJ Escalation	KJ Comm. Charges	Sub Cinquini & Passarino	ESA	Flow Monitoring Sub	Sub ArcSine	KJ Sub-Markup	KJ ODCs	KJ ODCs Markup	Total Labor	Total Subs	Total Expenses	Total Labor + Subs + Expenses
Hourly Rate:	$305	$305	$290	$290	$270	$270	$270	$245	$245	$245	$220	$220	$220	$200	$185	$165	$165	$165	$130	Hours	Fees	3%	4%	Fees	Fees	Fees	Fees	10%	Fees	10%				Fees
2 - Phase 2 Scope																																		
2.1 - Project Management																																		
2.1A Project Management					15							100							40	155	$31,250	$938	$1,288					$0		$0	$32,188	$0	$1,288	$33,475
2.1B Meeting and Coordination	20	10			30							100			40					200	$46,650	$1,400	$1,922					$0	$2,000	$200	$48,050	$0	$4,122	$52,171
2.1C Health and Safety						15														15	$4,050	$122	$167					$0		$0	$4,172	$0	$167	$4,338
2.1D QA/QC	60	30			20															110	$32,850	$986	$1,353					$0		$0	$33,836	$0	$1,353	$35,189
Subtotal Task 2.1	80	40	0	0	65	15	0	0	0	0	0	200	0	0	40	0	0	0	40	480	$114,800	$3,444	$4,730	$0	$0	$0	$0	$0	$2,000	$200	$118,244	$0	$6,930	$125,000
2.2 Detailed Assessments																																		
Task 2.2A Collection System Condition/Performance Assess																																		
PS Assessments; 2 PS/day (x15 PS) + 4 hrs planning			69						35		32	4				70				210	$48,112	$1,443	$1,982					$0	$2,000	$200	$49,555	$0	$4,182	$53,738
FM Assessments; 2 FM/day (x4 FM) + 4 hrs planning			17						9		8	4				18				56	$12,688	$381	$523					$0	$2,000	$200	$13,069	$0	$2,723	$15,791
50 MH inspections (assume 15/d = 3.5 days) + 1.5 plan/report												40				40				80	$15,400	$462	$634					$0	$500	$50	$15,862	$0	$1,184	$17,046
Flow monitoring			8									18				26				52	$10,570	$317	$435			$35,000		$3,150	$480	$48	$10,887	$38,150	$963	$50,000
CCTV review												4				16				20	$3,520	$106	$145					$0	$100	$10	$3,626	$0	$255	$3,881
TM - A's portion of the joint A-B TM			8						2		2	20			12	40	10			94	$18,120	$544	$747					$0		$0	$18,664	$0	$747	$19,410
Task 2.2B Collection System Capacity Analysis																																		
Review of plans and reports			4													12		8		24	$4,460	$134	$184					$0		$0	$4,594	$0	$184	$4,778
5 trunk line capacity analysis and hot spots			14													12		4		30	$6,700	$201	$276					$0		$0	$6,901	$0	$276	$7,177
5 FM capacity analysis and bottenecks			10													6		4		20	$4,550	$137	$187					$0		$0	$4,687	$0	$187	$4,874
Evaluate 10 smart covers and cost estimate			2													4		4		10	$1,900	$57	$78					$0		$0	$1,957	$0	$78	$2,035
Evaluate upsizing of 3 trunk sewers			2										2			6		4		14	$2,670	$80	$110					$0		$0	$2,750	$0	$110	$2,860
TM - B's portion of the joint A-B TM												14			12	20	16			62	$11,240	$337	$463					$0		$0	$11,577	$0	$463	$12,040
Task 2.2C WWTP Condition/Performance Assess.																																		
Workplan									10	4	2				20		4			40	$8,230	$247	$339					$0		$0	$8,477	$0	$339	$8,816
25 process assessments = 4 process/day = 6 days									136	32	18				60					246	$56,220	$1,687	$2,316					$0	$7,500	$750	$57,907	$0	$10,566	$68,473
TM (use Collector during field collection)									4	4	4				40		12			64	$12,220	$367	$503					$0		$0	$12,587	$0	$503	$13,090
Task 2.2D WWTP Basis of Planning and Second. Process Assess.							80				160				20		16			276	$63,140	$1,894	$2,601					$0		$0	$65,034	$0	$2,601	$67,636
Task 2.2E Biosolids Disposal System Assess.	~ moved to Phase 3 ~																																	
Task 2.2F Recycled Water System Assessment	~ moved to Phase 3 ~																																	
Task 2.2G Climate Change Assessment												16			8	8				32	$6,320	$190	$260		$35,000			$3,500		$0	$6,510	$38,500	$260	$45,270
Task 2.2H Physical and Digital Security Assessment												16				16	16			48	$8,800	$264	$363					$3,400		$0	$9,064	$37,400	$363	$46,827
Task 2.2I Asset Management Program Assessment	8							40				40					14			102	$23,338	$700	$962					$0		$0	$24,039	$0	$962	$25,000
2.3 Urgent CIP Phase 2			8	8	8		8	8				80			80		40			240	$49,920	$1,498	$2,057					$0		$0	$51,418	$0	$2,057	$53,474
2.4 Miller Creek Mgmt												12				16				28	$5,280	$158	$218		$25,000			$2,500		$0	$5,438	$27,500	$218	$33,156
2.5 Disaster Resilience Assess	8											20				24	30			82	$15,750	$473	$649					$0		$0	$16,223	$0	$649	$16,871
2.6 Lang Mgmt Optimization				3											10		3			16	$3,215	$96	$132	$15,000				$1,500	$51	$5	$3,311	$16,500	$189	$20,000
Subtotoal Tasks 2.2 to 2.6	16	0	142	11	8	0	88	48	196	40	226	288	2	0	262	334	161	24	0	1846	$392,363	$11,771	$16,165	$15,000	$60,000	$35,000	$34,000	$14,050	$12,631	$1,263	$404,134	$158,050	$30,059	$592,000
Phase 2 Additional Tasks																																		
2.7 Staff Augmentation																		280		280	$46,200	$1,386	$1,903					$0	$464	$46	$47,586	$0	$2,414	$50,000
Phase 2 Additional Tasks Subtotal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	280	0	280	$46,200	$1,386	$1,903	$0	$0	$0	$0	$0	$464	$46	$47,586	$0	$2,414	$50,000
Phase 2 Total	96	40	142	11	73	15	88	48	196	40	226	488	2	0	302	334	161	304	40	2606	$553,363	$16,601	$18,069	$15,000	$60,000	$35,000	$34,000	$14,050	$15,095	$1,509	$569,964	$158,050	$39,403	$767,000

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Las Gallinas VALLEY SANITARY DISTRICT

Item Number 5

Agenda Summary Report

To: Mike Prinz, General Manager

From: Irene Huang, Associate Engineer
(415) 526-1529, ihuang@lgvsd.org

Mtg. Date: November 19, 2020

Re: Approve Contract Amendment 2 to MWA Architects

Item Type: **Consent**_____ **Action** X **Information**_____ **Other**_____

Standard Contract: **Yes** X **No**_____**(See attached)** **Not Applicable**_____

STAFF RECOMMENDATION

Board to approve Contract Amendment 2 to MWA Architects in the amount of $32,360.

BACKGROUND

MWA Architects has completed the evaluation of eight alternative locations for the future Administration Building and recommended four sites for final consideration. The evaluation criteria consisted of office space and parking needs, odor, sea level rise mitigation, environmental impacts, building layout for ease of operations, constructability, probable cost of construction, and synergies with on-going District projects such as Flow Equalization, Secondary Clarifier #1 Relocation, and a potential future corporation yard. The four recommended sites are prioritized as follows:

1. Smith Ranch Rd (portion of privately owned property opposite the existing Administration Building)
2. Existing Administration Building
3. Reclamation Parking Lot
4. DHA Proposed Site

The Smith Ranch Rd site is no longer an option because of the adjacent landowner's lack of interest in selling a portion of their property to the District.

Follow-up discussions with MWA indicated that the Existing Administration Building site as evaluated could be further enhanced by expanding the building footprint towards the hillside similar to DHA's conceptual design, and/or towards Smith Ranch Rd by relocating the main gate. Doing so will provide better use of the patio area at the back of the existing building in addition to providing a better location with respect to aesthetics and functionality.

In order for the Board to have sufficient information to select a site, it is necessary to develop conceptual building exterior plan elevations for the Existing Administration Building site. Exterior plan elevations will provide a clear visual of the aesthetics and appearance of a proposed building at the existing administration building site as compared to conceptual elevations previously developed by DHA for the DHA proposed site. Given concerns regarding odor potential and

proximity to Miller Creek, additional work related to the Reclamation Parking Lot Site is not warranted at this time.

In response to a staff request, MWA submitted a proposal in the amount of $32,360 to provide a preliminary conceptual design for the new Administration Building at the existing site. The scope of work consists of:

1. Prepare preliminary site layout to identify the footprint of the building.
2. Prepare preliminary building layout showing walls, windows, and door locations.
3. Prepare exterior elevations showing key building features, landscaped areas, parking areas, and how the building blends with the surrounding area.

PREVIOUS BOARD ACTION
Board awarded a contract to MWA Architects for the Administration Building Site Evaluation project on December 5, 2019 and Contract Amendment 1 to MWA Architects on May 21, 2020.

ENVIRONMENTAL REVIEW
N/A

FISCAL IMPACT
$32,360. The total cost of the site evaluation effort including this amendment will be $154,193.

October 22, 2020

mwa architects

SAN FRANCISCO OAKLAND PORTLAND

Scope of Services

LGVSD Administration Building
Conceptual Design

To: Irene Huang, LGVSD
From: Greg Robley, MWA

Architectural Scope of Services

The following presents MWA Architects' (MWA) scope of work for providing architectural planning and conceptual design services for a new two-story administration building at the Las Gallinas WWTP. A Fee Matrix indicating fees associated with each subtask is also provided.

Task 1 –Administration Building Conceptual Design

1.1 Kick Off/Data Collection (1 week)

MWA will attend a virtual kickoff meeting with the District. The meeting will serve to confirm project components and identify design opportunities and challenges. MWA will request and review scaled WWTP site plans, existing as-builts, and the Site Evaluation Report. MWA will review prevailing state and local codes, regulations, ordinances, and guidelines.

1.2 Conceptual Site Layout (2 weeks)

MWA will develop a preliminary site layout identifying footprints for the new administration building, relocated maintenance facilities, and temporary trailers. Space for landscaping, parking, and a new plant entry gate will also be identified. MWA will meet with the District weekly to review the layout and receive feedback. A final conceptual level site layout will be developed for presentation.

1.3 Conceptual Building Layout (2 weeks)

MWA will develop a preliminary building layout. Spaces will be organized based on the established space program, industry best practices, and life safety code compliance. The plans will identify walls, doors, and window locations. MWA will meet with the District weekly to review the layout and receive feedback. A final set of conceptual level floor plans will be developed for presentation.

1.4 Conceptual Exercise Design Alternatives (4 weeks)

MWA will develop 2-3 preliminary exterior building concepts based on the preferred building layout. The alternatives will indicate exterior materials, doors, windows, cladding, and other key building features. The site model will include landscaped areas, roadways, parking areas,

[redacted]

sidewalks, fencing, and existing structures immediately surrounding the building. MWA will meet with the District weekly to review the alternatives and select a preferred exterior building concept. The preferred alternative will be refined based on District feedback and two rendered perspective views will be developed for presentation.

Las Gallinas Valley Sanitary District
Admin Building Conceptual Design

mwa architects

	MWA Architects – Prime Consultant					
	PIC	Project Manager	Senior Designer	Job Captain	Design Staff	Subtotals
Hourly Rates	$245.00	$190.00	$170.00	$130.00	$105.00	
PROJECT TASKS						
1.1 Kick-Off Meeting/Data Collection		2		4		$900.00
1.2 Conceptual Site Layout		2		40	16	$7,260.00
1.3 Conceptual Building/Massing Layout		2	2	40	16	$7,600.00
1.4 Conceptual Exterior Design Alternatives		4	32	80		$16,600.00
TOTALS						
Total Estimated Hours	**0**	**10**	**34**	**164**	**32**	
TOTAL CONTRACT NOT TO EXCEED						
						$32,360.00

11/19/2020

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.

11/19/20

BOARD MEMBER REPORTS

CLARK

NBWA Board Committee, Other Reports

ELIAS

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

MURRAY

Marin LAFCO, CASA Energy Committee, 2020 GM Evaluation Ad Hoc Subcommittee, Other Reports – Asset Management Planning Workshop

SCHRIEBMAN

JPA Local Task Force, NBWA Tech Advisory Committee, Other Reports

YEZMAN

Gallinas Watershed Council/Miller Creek Watershed Council, Flood Zone 7, CSRMA, Ad Hoc Engineering Sub-Committee re: STPURWE, 2020 GM Evaluation Ad Hoc Subcommittee, Other Reports

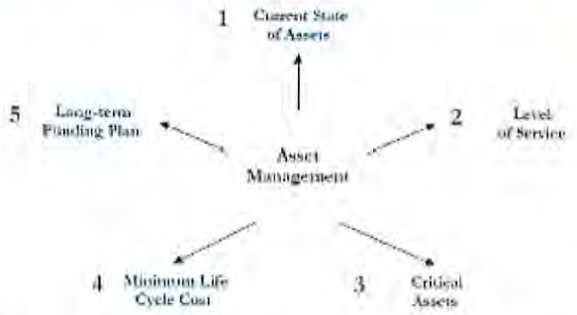
Agenda Item 7.3
Date November 19, 2020

RCAC : Asset Management Planning and Resources, Confidence to Completion
Instructor: Heather Cannon, hcannon@rcac.org, 509-844-1980
October 8, 2020
Craig K. Murray

Asset Management: A long-term program to attain and sustain the chosen level of service for the life of the asset in the most cost effective manner. A method to incorporate system renewal into the CIP and include risk management in system budgeting.
Assets: All your stuff: Pipes, pumps, computer programs, furniture, rolling stock, valves, motors, buildings, tools, equipment, operator, pipes, machinery, buildings.
Asset Truths: All assets are not created equal; all assets eventually fail; failures directly affect system performance.
Asset Management: includes Public Relations; Maintenance; Personnel and Training; Planning; Finance and Rates. Risk Based Planning Process: Risk = f (Criticality x Condition). Risk = f (Consequence of Failure x Likelihood of Failure).
Asset Management (AM). Better Decisions = Real Savings. US EPA assessment of Australia's advanced asset managements practices: 20-30% life cycle cost savings for US water and wastewater utilities.
Good Management – Comes With a Price. Two Questions you must always be able to answer: 1. Why are we doing this?; 2. What is it going to cost?. Customers don't need to "like" the answers.
AM relations: CIP: AM is basis of existing Asset replacement part of CIP. Emergency Response Planning: AM helps systems address & prepare for both anticipated & unexpected problems.

What is Asset Management

Flow Chart: The Five Core Questions of Asset Management Framework



1. Current State of Assets:
   What do I own? Prepare an asset inventory. ID What type of asset: short lived – generally replaced by cash. Long lived (Capital Asset) generally financed but can be cash replaced. ID number/fleet/type of all important components in your utilities include year installed, useful life, condition, replacement cost.
   Where is it? Prepare a system facility map, show where assets are located. Are they located in the "best" place, computer back ups, extra vehicle keys. Categorize your assets: source, pumping facility, treatment, storage, distribution. Biggest Challenge: Collecting the Data. Use your experience and observation. Walk the line, wheel or pace yardage, count valves, hydrants, use facility maps and plans, bid/construction documents "as builts". ID condition and

importance of assets. Use value system 1-10, determine number for immediate replacement, how important is the asset, is it critical or for redundancy.
What is its condition? What's probability of failure: past history/age& condition/trends. List Assets by failure type.
What is its useful life? ID total useful life of asset, calculate remaining useful life. Probability of failure/consequence (cost) of failure. Showed a picture of a check valve and hand written dates on the asset of when it was replaced. Reactive to Predictive Repair.
What is its value? Min. Lifecycle cost ref. 2014 WEF Water Infrastructure Asset Mgt. Primer. Key concepts: Scheduled maintenance (predictive); record keeping (track trnds); Planning (financial contingency

2. Level of Service (LOS):
A Policy decision to provide and amount of service to meet (local standards). Higher the LOS, higher the cost: well trained personnel, backup power, modern billing programs. Some LOS costs can be partially recovered: Good people = good service + good maintenance.
Policy decision to provide an "amount" of service to meet (local standards): 1. Reliability & Safety; 2. Financial Viability; 3. Customer Needs; 4. Future Needs.
Financial Viability: Sufficient funds to operate, maintain and manage a public water system, on a continuing basis, in full compliance of federal and state laws
ID Your Level of Service: Metrics such as: No violations, planning requirement, backup generator, emergency plans, well trained personnel, nice truck w/emblem, clean facilities, your own backhoe, phone answered in 3 rings, good water pressure, system optimization, repair parts on-hand, proactive maintenance, public relations, adequate rates. LOS: there must be communication exchange: management/operations utility/customers. Planning exercise, written and adopted policies, track achievement (set criteria, based on adopted standards, meeting set standards shows customers you take this responsibility seriously).

3. Critical Assets
Conduct a Vulnerability Analysis to ID vulnerability from intrusion, terrorism, storms, flooding, earthquakes..Analyze failure consequences: Develop an Emergency Response Plan to show you are going to do about failure, who does what, phone numbers.. Utility should have these plans: Vulnerability Assessment; Emergency Response Plan; Cybersecurity Plan; Water shortage Response Plan; Hazard Mitigation Plan. ID probability of failure: List assets by failure type – past history; age and condition; trends.
Risk = Criticality x likelihood of failure

Prioritize Projects: Critical Assets

Multiplied		Consequence (Cost) of Failure				
		1	2	3	4	5
Probability of Failure	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

1	Very Low	4	High
2	Low	5	Very High
3	Moderate		

O&M Tasks: Scheduled maintenance. Est. schedule to ID daily/weekly/monthly/Annual tasks
Long Term funding: Inventory; service policies; replacement. Good idea to go through What If. Assets fail unperiodically. Short Term Assets: Generally ID time frame & cash.
Critical Assets: Conduct a "Vulnerability Analysis" to ID Vulnerability
Water Rights = Not an Asset

4. Minimum Life Cycle Cost
Key Concepts: Scheduled Maintenance – Reactive v. Proactive v. Predictive; Recordkeeping – track trends; Planning – Financial, Contingency. 1. Move from reactive maintenance to predictive; 2. Know costs & benefits of rehabilitation v. replacement; 3. Deploy resources based on asset conditions; 4. Analyze possible asset failures & develop specific response plans. Scheduled Maintenance: Four different schedules for O& M Tasks: Daily, Weekly, Monthly, Annually.

5. Long-term Funding Plan
Inventory your assets, service policies, replacement schedule, determine needed service accounts, determine funding sources, translate the above into rates. ID reserve account to be used during a time of reduced operating cash flow: Emergency Reserves; Debt Reserves; Operational Reserves; Capital Improvement Plan Reserves. ID accounts that utility maintains: emergency reserve, debt service reserve, operational reserve, CIP reserve, short lived asset reserve. Determine funding sources: Cash reserves, loan sources. Learn prioritization of funding: likelihood of grants – USDA Rural Development; SRF foregiveness; CDBG. Funding Analysis: CFCC. Website: www.cfcc.ca.gov. AM should be 6 year budget. Support the AM Plan: begin with 3-year review of past actuals, factual budget 1 year, 6year; budget projections include annual expenses, new loans & inflation; base budget on true expenses & reserve needs including asset management. How to on development of 6 year budget to support AM Plan: begin with 3-year review of past actuals; factual budget – 1 year, 6 year; budget projections include annual expenses, new loans & inflation; base budget on true expenses & reserve needs including asset management. Show budget assumptions: General; Revenue; Operating Expenses. Operating Reserve – Target Value; Emergency Reserve – Target Value; Short-lived Asset Reserve; Long-lived Asset Reserve; Long-lived Asset Replacement Funding.

6 Year Budget

Budget Assumptions

General:
- An inflation factor of 3% has been added to all annual expense figures.
- Number of connections is 131 throughout six-year budget time period and does not include the addition of X System customers.
- All data is from Profit and Loss statement provided by the system.
- Current Year is August 2017 – July 2018, CY+1 is August 2018 – July 2019, CY+2 is August 2019 – July 2020 CY+3 is August 2020 - July 2021.

Revenue:
- Revenue listed in the Rates line includes Assessment Fees and Sales of Product Income.
- Water rates increase effective January 1, 2020.
- Miscellaneous revenue includes: Discounts/Refunds, Finance Charges, Services, Unapplied Cash Payment Income, and Uncategorized Income. Miscellaneous Revenue amount is an average of CY and CY+1.
- Water rates appear to be adequate to maintain a balance between Revenue and Expenses.
- When the water administrative rules are adopted, estimated fees and fines should be added to Miscellaneous Revenue or additional budget lines added for each type of fee or fine.

Operating Expenses:
- Contract operator – includes System Management and charges include cross-connection control specialist duties.
- Project specific engineering services will be included debt payments for total project cost.
- Legal services 2020 (+2 year) 2000 for review of Water Administrative Rules and for review of project construction documents.
- DOH fees 2020 (+2 year) includes 1,000 construction document review.
- For X System, debt payments principal and interest based on 175,000 project cost and WA DOH SRF loan for 20 years, 2.26% interest rate and 27 connections. Annual payment is estimated at 10,962 beginning in 2021 (+3 year).
- Operational reserve fund total of 12,219 (2 months of expense) funded over 10 years at 1,221 per year beginning in 2020 (+2 year).
- Emergency reserve fund total of 100,000, based on critical asset transmission main funded over 20 years at 5000.00per year beginning in 2021 (+3 year).
- Short-lived asset reserve fund 2,700 per year beginning in 2020 (+2 year).

Inflation: The erosion of spending power caused by an increase the price of commodities and consumer goods.
6 year budget: Written assumptions; data driven decisions; needed rate increases will be clearly shown; creates public information.
Ellen Miller "The Water Board Bible": Board Members have a fiduciary duty to assure that system revenues cover the "true" cost of water delivered.
AM Take Aways: First Steps to Success: Get key people together – build your team; outreach to the community; choose a model or template; begin asset inventory; write and adopt LOS policies. AM Plan: produces a visual picture of condition, location and replacement; supports budget and rates; there are tools and assistance to help you get started; first step – get everyone on board.

Resources:
https://www.cfcc.ca.gov/
Free guides from RCAP – The Basics of Financial Management for Small-community Utilities; Small Water System Management Program Guide;

http://www.ohiowea.org/docs/Asset%20Management%20Plan%20-%20Cannon.pdf

https://www.epa.gov/sustainable-water-infrastructure/asset-management

http://www.iwr.usace.army.mil/Portals/70/docs/iwrreports/2013-R-08_Best_Practices_in_Asset_Management.pdf

EPA Asset Management Resources:

https://www.epa.gov/sustainable-water-infrastructure/asset-management-water-and-wastewater-utilities#resources

Asset Management: A Handbook for Small Water Systems, One of the Simple Tools for Effective Performance (STEP) Guide Series
Mapping: EFC Region 10/EWU small water system asset mapping project; Google Earth Pro; QGIS. Google Earth Pro: https://www.google.com/earth/versions/#earth-pro
QGIS: Free, open-source Geographic Information System. Free software: https://qgis.org/en/site

Free EPA tutorial on how to use QGIS for water utility management:
https://www.youtube.com/watch?v=pnwdvFug9Kc
Use your GIS model/map for: Asset Management; Cross Connection Control; Line Flushing Program; Source Water Protection; Legacy.

US EPA White Paper on Condition Assessment of Wastewater Collection Systems, 2009, Office of Research and Development, National Service Center for Environmental Publications

https://nepis.epa.gov/Exe/ZyNET.exe/P1003ZQY.TXT?ZyActionD=ZyDocument&Client=EPA&Index=2006+Thru+2010&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C06thru10%5CTxt%5C00000008%5CP1003ZQY.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL

AGENDA ITEM 8A
DATE 11/19/2020

Las Gallinas
VALLEY SANITARY DISTRICT

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.

11/19/2020

BOARD AGENDA ITEM REQUESTS

Agenda Item 8B

☐ Separate Item to be distributed at Board Meeting

☐ Separate Item to be distributed prior to Board Meeting

☑ Verbal Report

☐ Presentation

Agenda Item 9
Date November 19, 2020

SCOTT EQUIPMENT COMPANY RECYCLING PRODUCTS DIVISION
FOOD WASTE DEPACKAGING SYSTEMS

BIOCYCLE
THE ORGANICS RECYCLING AUTHORITY
SINCE 1960

OCTOBER 27, 2020 | COMPOSTING, POLICIES + REGULATIONS

Can Composting Reduce THC Levels In Discarded Marijuana Products?

Replicated trials evaluated composting as management tool to degrade and/or deactivate Tetrahydrocannabinol levels in marijuana to <0.3% — the level below which the material is not regulated as a controlled substance.

Mark A. King and Carla J. Hopkins

On June 27, 2019, Janet Mills, Governor of the State of Maine, signed into law, LD 719, "An Act Regarding Adult Use of Marijuana." This law directed Maine's newly developed Office of Marijuana Policy (OMP) to formally adopt rules regarding adult recreational use of marijuana (Villeneuve, 2019). Coupled with Maine's existing Medical Use Marijuana Program, LD 719 resulted in great interest in the cultivation and sale of marijuana statewide.

To avert potential environmental impacts, Maine Department of Environmental Protection (MEDEP) solid waste staff met with staff from OMP to discuss waste management concerns that might be associated with this developing industry. During the meeting, it became apparent that there was not clear guidance regarding disposal of non-saleable marijuana products (stems, root balls, damaged/diseased leaves, buds and other marijuana-derived products). The only two approved disposal practices identified were landfilling and incineration, both of which are expensive options and require off-site transport to secure locations. Additionally, under OMP's proposed rule, any product containing more than 0.3% Tetrahydrocannabinol (THC) would need to be transported by an authorized entity (i.e., licensed individuals, Drug Enforcement Agents, or other law enforcement personnel) or "rendered unusable" prior to leaving a marijuana facility (Maine Office of Marijuana Policy, 2019).

To meet the standard for being considered unusable, marijuana materials need to be ground and mixed at a 50:50 ratio with an authorized waste material, which includes: animal manures, food waste, and yard trimmings. Since all of the approved materials were currently authorized to be composted in Maine, it was decided to conduct a series of trials to determine if composting could manage marijuana residue so that THC levels could be reduced to less than 0.3% following 8 weeks of active composting.

Besides reducing THC levels, the ultimate goal of the project was to develop a marijuana waste management best practice guidance that would be cost-effective, environmentally sound and, ultimately, protective of public health. Composting, if successful, would offer that solution. During composting, organic ingredients, including soluble nutrients, are consumed through microbial activity and transformed into complex organic compounds that are resistant to breakdown, contain very low levels of biological activity and are resistant to leaching (Rynk et al., 1992).

Materials And Methods

Study Site

Between September 20, 2019 and November 13, 2019, a series of composting trials were held at the Rainbow Valley Farm located in Sidney, Maine. The site on the farm for the composting trials contains a small section of gravel pad, measuring 75-feet wide by 150-feet long (Figure 1). This area was chosen as it provided a durable work surface and somewhat remote location to help keep the operation private. All surface water draining from offsite enters a grassy swale located to the lower left of study area (Figure 1).

Figure 1. Rainbow Valley Farm. Study site is located in the lower right-hand section of photo adjacent to the Farm's existing composting site (see orange circle). Image source: Google Earth

Pre-Composting Assessment and Preparation

Prior to initiating composting activities, an inventory of on-farm composting feedstocks was conducted to help determine the most appropriate materials to blend together for the compost mix. A proper mix requires an appropriate balance of carbon, nitrogen, water and unrestricted airflow to help initiate and sustain the composting process (Rynk et al., 1992). One advantage of using the Rainbow Valley Farm site was that it already had numerous available feedstocks in abundance, including: bedded horse manure, dairy manure and two

types of waste animal feed (corn and hay silage). Additionally, since the farm was already successfully composting, we decided to use its farm blend— an equal mixture of the 2 manures and the silage mix — as it proved to be biologically active at the outset (achieving temperatures of approximately 135°F-140°F on the same day the pile is built). Sobel (1983) found similar temperature results while working on heat energy recovery using a wide range of animal manures. All of the marijuana provided for this study came from a stockpile that had been previously confiscated by our project partners at the Maine Drug Enforcement Agency (MDEA). It was transported to the study site the first day of pile construction by MDEA agents (Figure 2).

To measure actual biodegradation activity, we collected a one-gallon sized composite sample of the unmixed marijuana material to determine initial (pre-composting) THC levels. A Maine certified lab, Tested Labs, a Division of Nelson Analytical Labs, located in Kennebunk, Maine, was chosen to do the analysis. This lab agreed to run a standard cannabinoid panel for all samples. For purposes of this study, we focused on the following three analytes: THCA-A, Delta-8-THC and Delta-9-THC, which when summed together equaled "Total THC" levels.

Figure 2. Marijuana as delivered by MDEA agents
Photo by Mark King

Compost Pile Construction

On September 20, 2019, three replicate piles were constructed using a farm tractor equipped with a front-end loader and a separate tractor-mounted manure spreader. Initially, three pile bases were formed using the farm blend compost mix; each base measured approximately 8-feet diameter by 12-inches in thickness. Next, one cubic yard of marijuana (approximately 700 pounds) was mixed with two cubic yards of the farm blend using the

manure spreader; the discharge was directed so that equal portions of this mix were applied to each of the pile bases. Mixing augmented materials blending while rendering the marijuana unusable.

We soon found, however, that the blending was complicated because we were unable to control the manure spreader's discharge pattern. Initial mixing, even at the spreader's slowest speed, resulted in broadcasting of the material beyond the borders of the pile bases, requiring manual recovery of the contents. However, even with the discharge issues, each base eventually received approximately one cubic yard of an equal mixture of farm blend and marijuana. Figure 3 shows the pile building process from initial compost mixing to manure spreader off-loading onto the bases.

Figure 3. Marijuana pre-mixing with farm blend and subsequent addition to compost piles: Marijuana being added to manure spreader (A); Farm blend being added on top of marijuana in manure spreader (B); Difficulty in managing manure spreader discharge (C); Resultant mixture laying on pile base (D)
Photos by Mark King

In addition to the pre-composting marijuana sample, composite samples of each of the pile mixtures were also taken. Finally, each pile was then covered with an additional two cubic yards of the farm blend to help retain heat, minimize odors, and serve as a barrier to wildlife. The final piles measured approximately 4-feet high by 8-feet in diameter or approximately 4 cubic yards in volume (Figure 4). It was important to build representative sized piles to insure enough mass to facilitate active composting. Additionally, piles needed

to be large enough to minimize the potential for heat loss due to the increased surface to volume ratio that a smaller pile would experience (Themelis, 2005).

Throughout the 8-week study period, piles were turned on a weekly basis to ensure adequate mixing and optimal composting conditions.

Figure 4. Final pile construction (piles numbered from left to right — #3, #2, and #1, respectively). Farm owner/operator Harland Bragg stands next to Pile #2.
Photo by Mark King

Pile Monitoring and Composting Activity

Throughout the 8-week study period, pile temperatures were monitored daily (at both 12-inch and 36-inch depths) using a pair of Reotemp® analog thermometer probes (300 Series). One set was placed within each pile. In addition to temperature, daily observations were also recorded for odors, leachate, and scavenging animal activity.

Composite samples were collected on October 11, 2019 and again on November 13, 2019 to determine THC levels. A leachate sample was also obtained from Pile #3 on October 11, 2019. All samples were analyzed at Tested Labs.

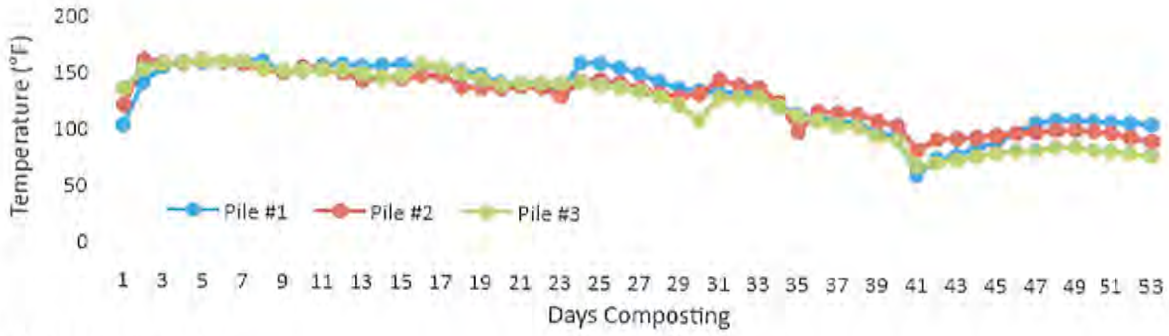
Results And Discussion

Temperature Performance

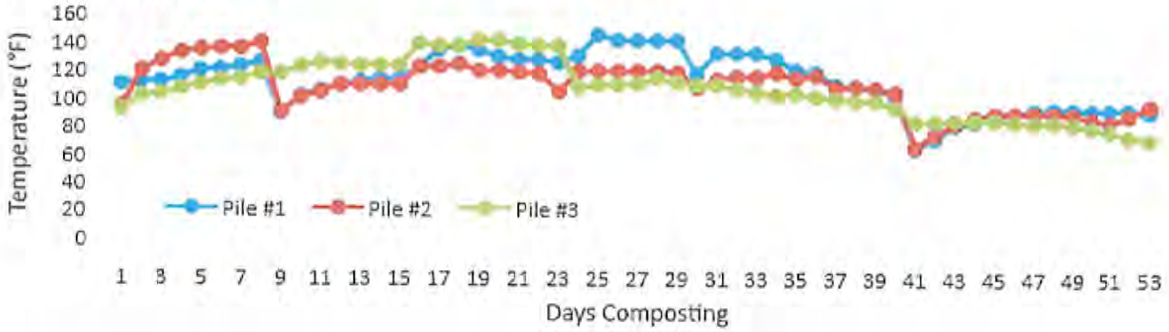
Figure 5 shows a comparison of the temperature performances of all three piles during the 8-week composting study. Temperature data collected for both the 1-foot and 3-foot depths showed a strong correlation between the individual performances of each pile. More importantly, temperatures at both depths for all three piles consistently stayed within optimal ranges (131°F to 150°F) for a significant portion of the 8-week study.

Figure 5. Marijuana composting daily temperatures: One foot Reotemp probe vs. three foot probe

One foot probe



Three foot probe



This temperature response validated the appropriateness of the original recipe as sustained temperatures at these levels ensures inactivation of weed seeds and destruction of any pathogenic organisms. Another great indicator of optimal pile conditions was demonstrated by how quickly each pile recovered following weekly turnings and significant rain events (Figure 5). In all cases, pile temperatures were able to recover within 24 hours of turning events.

Physical Pile Changes Noted Throughout Study

Over the 8-week study period, the piles changed dramatically in size and shape. By the end of the study, each pile had noticeably reduced in volume to approximately half of its original size. This phenomenon has been noted in numerous previous studies (Tiquia and Tam (2000), Paredes et al. (2000) and Breitenbeck and Schellinger (2013)). In fact, Themelis and Kim (2002) quantified the relationship between decomposition and sustained temperatures in compost piles and found that at 50°C (122°F), it takes about 4 weeks for 50% of the original organic matter to be degraded.

Pile Sampling Events

Piles were excavated on October 11, 2019 (approximately halfway through the study) and November 13, 2019 (completion of the study) to inspect for any visible remnants of marijuana and to take composite samples to analyze for THC levels (Figure 6).

During each sampling event, a series of 25 composite subsamples (approximately 8 ounces each) were collected from each pile and homogenized in a 30-gallon trash bag. A single one-gallon sample was then collected to represent each pile. All collected samples were taken to Tested Labs for THC level determination. At the start of the study, approximately 700 pounds of marijuana were equally distributed over the three test piles. The lab analysis of the starting marijuana sample was recorded at 5.21% THC. Results of the pile samplings are summarized in Table 1.

Figure 6. November 13, 2019 (completion of study) — excavated compost piles prior to composite sampling for THC levels Photo by Mark King

Table 1. Total THC[1] sampling results for 2019 marijuana composting trials

		Percent THC			
Date	Marijuana Sample	Pile #1	Pile #2	Pile #3	Leachate
9/20/19	5.21%	0.14%	0.19%	0.47%	
10/11/19		ND[2]	ND[2]	ND[2]	ND[2]
11/13/19		ND[2]	ND[2]	ND[2]	

[1]Total THC is sum THCA-A, Delta-8-THC and Delta-9-THC [2]Not Detected = Detection limit of 0.1% or lower

Following the September 20th sampling, all subsequent sampling events failed to detect any remnant THC levels (lab detection limit was set at 0.1%). This positive finding demonstrated that composting had effectively degraded the THC levels in the tested marijuana to well below the regulatory target level of 0.3% THC.

Odors, Vectors and Leachate

No significant occurrences of odors were observed during the study. Throughout, only the distinctly "skunky" odor of the marijuana could be detected in the immediate vicinity of the compost piles. There were several leachate outbreaks due to significant rain events during the study. A test of leachate on October 11, 2019 failed to detect any THC in the leachate (reporting level was 0.1%).

Regarding vectors, there was a slight issue with resident turkeys actively foraging on composting study piles, presumably to scavenge the remaining corn fragments in the corn silage. Once the piles had been flipped several times, turkey activity diminished and no other vector activity was noted during the study period.

Conclusions

Although the scope and size of this series of trials were limited, the results nonetheless support use of composting as a tool to manage marijuana products and processing waste. Sampling events on both October 11, 2019 and November 13, 2019 confirmed this by failing to detect any remaining THC (0.1% detection level). This indicated that the microbial activity within the compost pile is likely adequate to successfully degrade the THC in marijuana.

Given the success of this study, it is highly likely that marijuana processing waste could be added to community-based composting operations with the expectation that any remaining THC could be adequately degraded to allow widespread, unregulated use of the final compost produced. The MEDEA rule requires that the marijuana waste cannot leave the site of generation until it has been rendered unusable by the approved methods. Thus, the feedstocks necessary to blend with the marijuana waste (50:50 ratio) prior to composting would have to be on-site, whether the facility chooses to compost on-site or deliver the materials to an off-site facility.

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References

Breitenbeck, G.A. and D. Schellinger. 2013. Calculating the reduction in material mass and volume during composting. *Compost Science and Utilization* 12 (4): 365-371.

Maine Office of Marijuana Policy. 2019. Preliminary Draft of the rules governing Maine's adult use marijuana program. Office of Marijuana Policy, Division of Administrative and Financial Services, State of Maine. Title 28-B, Section 104.

Paredes, C., Roig, A., Bernal, M., M.A. Sanchez-Monedero and J. Cegarra. Evolution of organic matter and nitrogen during co-composting of olive mill wastewater with solid organic wastes. *Biol. Fertil. Soils* 32, 222–227 (2000).

Rynk, R., M. van de Kamp, G.B. Wilson, M.E. Singley, T.L. Richard, J.J. Kolega, F.R. Gouin, L. Laliberty, Jr., D. Kay, D.W. Murphy, H.A.J. Hoitink, and W.F. Brinton. 1992. *On farm composting*. Northeast Regional Agric. Eng. Service, Ithaca, NY.

Sobel, A. T., and R. E. Muck. 1983. Energy in animal manures. *Energy in Agriculture* 2 (C):161–76.

Themelis, N. J. 2005. Control of heat generation during composting. *BioCycle* 46 (1):28–30.

Themelis, N.J. , and Y.H. Kim 2002. Materials and Energy balances in a Large-Scale Aerobic Bioconversion Cell. *Journal of Waste Management and Research*, 20(3) 234-242.

Tiquia, SM and Tam, NF. Fate of nitrogen during composting of chicken litter. *Environ. Pollut.* 2000 Dec;110(3) 535-541.

Teresa Lerch

From: Mark Millan <millan@datainstincts.com>
Sent: Friday, October 30, 2020 12:52 PM
To: Undisclosed Recipients
Subject: UC Berkeley launches pop-up lab to monitor Bay Area sewage for COVID-19 - Berkeley News & other coverage 10/29/20

Great coverage of Covid sewer surveillance currently underway. Worth checking out – Mark Millan

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Poop sleuths: Tracking COVID-19 in the Bay Area's wastewater
Sewers and treatment plants could provide easy, early and localized data about community outbreaks
https://www.mercurynews.com/2020/10/29/poop-sleuths-tracking-covid-19-in-the-bay-areas-wastewater/

UC Berkeley launches pop-up lab to monitor Bay Area sewage for COVID-19

Link: https://news.berkeley.edu/2020/10/29/uc-berkeley-launches-pop-up-lab-to-monitor-bay-area-sewage-for-covid-19/ (Includes video by Clare Major and Roxanne Makasdjian)

Kara Manke, Berkeley News, 10/29/20

UC Berkeley researchers have rapidly assembled a new lab that, in conjunction with public health agencies and utilities throughout the Bay Area, will test the region's wastewater for signs of the SARS-CoV-2 virus.

Since the discovery that people infected with COVID-19 often shed the virus in their feces, scientists around the world have scrambled to spot signs of the virus in the stuff that we flush.

However, detecting tiny virus particles amid the wastewater that flows through our sewage pipes — which includes not only toilet water, but sink water, shower water and everything else that goes down a drain — is no easy feat.

A team of scientists at the University of California, Berkeley, has spent months refining and optimizing a rapid and low-cost new technique to test wastewater for SARS-CoV-2, the virus that causes COVID-19. This month, the team has launched a new high-throughput pop-up lab — a temporary 1200-square-foot lab, rapidly set up in an empty research space in Hildebrand Hall — that, in conjunction with UC Berkeley and wastewater utilities and public health agencies from throughout the Bay Area, will monitor the region's wastewater for the virus.

"From the very beginning of the pandemic, it was clear that there were major limitations to the ability to test every individual in a population frequently enough to find out whether they were infected or not," said Kara Nelson, professor of civil and environmental engineering at UC Berkeley, who leads the team. "Wastewater naturally pools the waste from hundreds to even millions of people in a single sample, so if you can collect a representative sample of wastewater and analyze it, you can gain a tremendous amount of information that you likely couldn't gain through testing people individually."

Monitoring wastewater from a city, neighborhood or building is an efficient way to keep track of whether COVID-19 is spreading there. It also has the potential to provide an early warning for a potential outbreak, as evidence suggests that the virus can start to shed in an infected individual's feces even before the person starts to experience symptoms.

Working with municipalities around the Bay Area, the team has identified sewersheds to monitor, each an area of land where all the sewers flow to a single pipe or station where samples can be collected. The sewersheds they are currently monitoring represent the waste of a few thousand to several hundred thousand people, Nelson said.

Through its COVID-WEB (COVID wastewater epidemiology for the Bay Area) project, the lab can currently process approximately 30 samples a week for 11 agencies, and the team plans to scale up to as many as 200 samples a week by the end of the year to meet the growing demand from regional public health agencies.

"One of the huge bottlenecks in wastewater testing has just been testing capacity," Nelson said. "This pop-up lab is the first high-throughput lab in the Bay Area that has the capacity to bring in a large number of samples and provide results quickly to public health officials."

The COVID-WEB team includes (from left to right) Matthew Metzger, Melissa Thornton, Lauren Kennedy, Kara Nelson, Hannah Greenwald, Rose Kantor and Adrian Hinkle. (Photo courtesy the Nelson lab)

Like finding a virus in a haystack

In theory, the SARS-CoV-2 virus can be spotted in wastewater using the same types of PCR-based assays that doctors currently use to diagnose COVID-19 in humans. These tests work by first transcribing viral RNA into DNA and then using the polymerase chain reaction, or PCR, technique to make billions of copies of the viral DNA so that they can be quantified using fluorescent molecular markers.

However, detecting the virus in wastewater samples is decidedly more troublesome than finding in it a nasal swab, Nelson points out.

For one, wastewater contains chemicals, such as bleach, that can break down the SARS-CoV-2 virus as it travels through the sewer system. Wastewater also contains a plethora of other viruses that each have their own RNA molecules, making it harder to isolate the SARS-CoV-2 RNA in a sample. Finally, each individual infected person can excrete different amounts of SARS-CoV-2 virus particles in their feces, and the wastewater itself is also variable in composition.

Luckily, Nelson and her team have ample experience analyzing and understanding the contents of wastewater. Before the COVID-19 pandemic, the team was primarily concerned with detecting and removing pathogens from water sources, including wastewater, in order to make it safe to drink. Many of the techniques and processes that the group uses in that work also apply to COVID-19 wastewater testing.

"Nelson's lab is the primary research group on campus that studies treatment processes for pathogens in wastewater and drinking water, and so we already had a lot of preexisting relationships with the wastewater utilities," said Rose Kantor, a postdoctoral scholar in Nelson's lab and a member of the COVID-WEB team. "So, when the pandemic hit, we were able to pretty quickly start getting samples from them and testing out different methods for detecting SARS-CoV-2."

Most methods start by concentrating the particles of the virus, then extracting the RNA for detection. Working with Oscar Whitney, a graduate student in Robert Tjian's lab in UC Berkeley's Department of Molecular and Cell Biology, the team created a new technique that takes the opposite approach: Their technique first uses table salt to lyse, or slice open, the outer envelope of the virus, causing it to spill all of its RNA into the sample. The salt stabilizes the RNA, which is then concentrated in the lab.

By taking this approach, the technique is also able to catch bits of RNA from virus particles that may have already partially disintegrated in the wastewater, making it more sensitive to detecting the original number of virus particles that entered the sewer system. It also uses very simple materials, like table salt and ethanol, which helps keep the costs low and helps bypass the supply chain issues that plagued many labs during the first few months of the pandemic.

"Back in early May, when people were just starting to explore wastewater surveillance, some of the materials were hard to obtain," said Adrian Hinkle, a graduate student in Nelson's lab and a member of the COVID-WEB team. "So, we tried to develop a method that required as few materials as possible and was fast, because we wanted to get the results as fast as possible, to inform public health authorities."

Tim Pine and Al Sanchez, employees in UC Berkeley's Office of Environment, Health & Safety, remove a wastewater autosampler from a sewer drain, where it had been collecting samples of sewage over a 24-hour period. (UC Berkeley photo by Irene Yi)

The technique has an exceptionally high sensitivity, compared to other techniques that have been developed. Hinkle estimates that it is sensitive enough to detect the virus from just a handful of infected individuals in wastewater produced by a few thousand people.

It is also fast. Hinkle says the whole testing technique now takes about eight hours to complete, and the pop-up lab turns around the results for any given sample to public health officials within three days or less. They have taken extra steps to further streamline the process, like including salt in the sampling kits that they send to utilities, so that the lysis step can start before a wastewater sample even reaches the lab.

"Our technique has a high sensitivity, I think, in part, because of the salt lysis early on and because of the simplicity of the process and how we have fine-tuned the filtration and rinsing steps to maximize the percent recovery [of the virus]," Hinkle said.

'A bit of a crapshoot'

On a smoky morning in early October, Tim Pine and Al Sanchez haul a large, grey, cylindrical plastic barrel out of a sewer hole located in UC Berkeley's University Village.

The cylinder, which the researchers call an autosampler, had been hanging in the sewer hole for the past 24 hours. Several times an hour, a hose attached to the sampler draws up a small sample of wastewater from the sewer pipe below, depositing it into a two-liter bucket tucked safely inside the barrel.

Pine and Sanchez unhook the lid of the sampler and remove it, revealing the storage bucket and its contents. The wastewater inside looks like slightly dirty water — not quite the sludge you might imagine when you think of the word sewage.

"Every time we do this, it's a little bit of a crapshoot, pun intended," Pine says, pointing at a piece of toilet paper, stuck on a ladder rail in the drain — a common hazard that could easily have plugged the sampling hose and ruined that day's collection. "Today, it looks kind of clean. We don't usually see it this clean."

This 2-liter wastewater sample, collected from a sewer in University Village in early October, was returned to the pop-up lab for COVID-19 screening. (UC Berkeley photo by Irene Yi)

Pine, an environmental protection specialist, and Sanchez, a senior hazardous materials technician, both work in UC Berkeley's Office of Environment, Health and Safety. Pine has been collecting weekly samples of wastewater from University Village since mid-July and also samples from sewers that drain from UC Berkeley's undergraduate dormitories and surrounding neighborhoods.

While Sanchez loads the day's sample into a truck for transport back to the pop-up lab on campus, Pine describes the autosampler in more detail. Before COVID-19, he says, these devices were often used for environmental regulation. For instance, an autosampler, like this one, could be used to sample the water downstream of a factory suspected of illegally dumping pollutants into the sewer system. But the COVID-19 pandemic has given autosamplers a new use.

The COVID-WEB team has partnered with a number of Bay Area utilities, including the San Francisco Public Utilities Commission (SFPUC), to form a regional working group that helps coordinate when, where and how to gather wastewater samples for COVID-19 testing.

"We have a great field monitoring team who usually sample wastewater to ensure permit compliance for industrial users, and they've pivoted quite deftly to using their equipment to pull composite samples from different locations in the city for COVID-19 surveillance," said SFPUC General Manager Harlan L. Kelly Jr. "Depending on where they sample, they can get a comprehensive picture of the virus on a large scale, or we can use their skills to zoom in down to the building level."

The regional working group also includes local public health agencies, which advise the team on how wastewater testing can best help the overall effort to slow the spread of COVID-19.

"One goal of this regional working group is to hear from public health officials how they think this wastewater data might help inform decision-making," said Sasha Harris-Lovett, a postdoctoral fellow at the Berkeley Water Center and a

member of the COVID-WEB team. "What are the gaps that this data could fill, and how could the data allow them to make more informed decisions?"

Harris-Lovett has learned that many in public health are interested in using wastewater testing to keep tabs on the SARS-CoV-2 virus in residential facilities and other dense living arrangements, where a few cases could quickly escalate to a major outbreak. This includes not just dorms and student apartments like University Village, but also places like nursing homes or prisons.

"Public health officials have also told us that there are some neighborhoods that haven't registered very many cases, not necessarily because people aren't sick, but because people aren't getting tested," Harris-Lovett said. "So, there is an interest in using wastewater monitoring to keep track of trends in neighborhoods where perhaps people aren't able to access health care."

Guy Nicolette, executive director and assistant vice chancellor of UC Berkeley's University Health Services, said the wastewater testing being done near campus and at University Village will augment the school's COVID-19 testing strategy.

"While we need to understand more, wastewater testing has great potential to be an early warning system, especially for sites where people aren't being tested frequently, for whatever the reason," Nicolette said. "I can also imagine that when we see significantly reduced general transmission, (wastewater testing) could serve as large pooled testing for populations, so we can direct testing capacity to highest exposure risks and be even more adaptive and responsive, rather than try to directly test every single person."

With COVID-19 case counts in California finally reaching a plateau, wastewater testing in the Bay Area could now play a role in helping public health officials keep an eye out for a possible resurgence of the virus, said Maya Petersen, chair of the Division of Biostatistics at UC Berkeley's School of Public Health.

"I think there's really exciting potential for wastewater testing for the purpose of maintaining surveillance activity in a very efficient way that allows us to keep an eye on the bigger picture, and where an early surge might be happening, while at the same time really focusing our resources on persons and communities that are still bearing the brunt of the epidemic," Petersen said.

The research team uses autosamplers to collect wastewater samples. These devices are hung inside sewer drains, and are programmed to collect samples of wastewater over a 24-hour period. (UC Berkeley Photo by Irene Yi)

A model for other wastewater surveillance projects

The potential of wastewater testing for COVID-19 goes beyond early detection and pooled surveillance of COVID-19. Working with Alexander Crits-Christoph, a graduate student in professor Jill Banfield's lab in UC Berkeley's Innovative Genomics Institute, the team has also developed a way to sequence the RNA of the individual strains of the SARS-CoV-2 virus.

Sequencing the RNA of SARS-CoV-2 helps scientists and epidemiologists monitor the virus as it changes over time and helps them track the different strains of the virus as they travel around the world. For example, by studying the genomes of SARS-CoV-2 virus samples collected on nasal swabs, epidemiologists have been able to deduce that the virus was brought to California via multiple introduction events.

"It's harder to sequence viral genomes in wastewater because, with a nasal swab from a patient, you expect them to just have one strain of the virus. But in wastewater, a lot of different infected people are excreting virus into that single sample," Kantor said. "To be able to look at the individual single nucleotide variants that are present in wastewater, you need to use more sophisticated bioinformatics tools that have been developed in Jill Banfield's lab."

In a preprint recently posted to MedRxiv, the team compares the strains of the virus found in the Bay Area's wastewater with those found through nasal swabs of patients. In the wastewater, they found the same strains that had been identified through nasal testing, but also found additional strains that had not yet been observed in California.

Regularly sequencing the virus is also important, Kantor pointed out, because the virus is always mutating, but COVID-19 tests only work when they are programmed to detect the correct RNA sequences in the virus.

The researchers stressed that the rapid success of the new project has hinged on the close collaboration among the team members, both those from Berkeley and those who have joined the regional wastewater monitoring group. The team also shares information, via a massive Slack channel, with hundreds of researchers around the world who are also developing wastewater testing techniques, and such efficiency helps everyone progress faster.

Now that the high throughput pop-up lab is up and running, Nelson says that she and the team are eager to keep learning and sharing how to make this tool as useful as possible, by working collaboratively with their regional partners to put it into practice.

"One of our project goals is to help other regions replicate what we're doing," Nelson said. "We want to share information as soon as we possibly can, so that we can speed up the process for other regions that are trying to create something similar."

The COVID-WEB project is supported by UC Berkeley's Innovative Genomics Institute, UC's CITRIS and the Banatao Institute and the Catena Foundation.

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Teresa Lerch

From: Mark Millan <millan@datainstincts.com>
Sent: Friday, November 6, 2020 10:21 AM
To: Undisclosed Recipients
Subject: What California can learn from Cape Town about water policy - SF Chronicle 11/2/20

What California can learn from Cape Town about water policy

By Robert Hertzberg, 11/2/20

Two years ago, Cape Town, South Africa, a city of 4 million people, informed its shocked citizens that the city was just a few months away from running out of water due to drought. It was a wake-up call for all of us to become much better stewards of our own water. Luckily, for Cape Towners, innovative water conservation and efficiency measures, smarter data use, expanded water storage, and help from Mother Nature all combined to help them avoid a major water shutoff.

California of course continues to have its own foreboding water challenges. As Mark Twain allegedly said, in the West "whiskey is for drinking, water is for fighting over." With the increasing effects of climate change, California's water shortages will likely get much worse unless we take bold and ambitious actions now.

Not only is this purified water safe, it is also very cost-effective. Even without subsidies, which are available for these forward-thinking projects, the cost for the system to produce water is now even less than the cost of imported water that other facilities in the state pay.

This promising approach to water reuse is just one of the helpful tools available to us. The lessons of Cape Town also showed a host of other possibilities for us to continue doing now, or jump-start immediately.

These lessons include that unprecedented droughts can and likely will continue to occur in the future, and standard approaches to water conservation and water supply diversification are simply not enough.

Two years ago, Assemblywoman Laura Friedman and I jointly authored groundbreaking legislation designed to make conservation a California "Way of Life." It was a critical first step toward making California's water management more resilient to climate change. However, benefiting from the lessons of Cape Town and those in our own backyard, we need to be innovative on the water supply diversification front as well.

We need to consider:

(1) Working collaboratively with agricultural users to determine new ways they can help their urban neighbors by even more effectively using and reusing ag waters.

(2) Incentivizing more intense conservation efforts by all of us through effective advertising and public education campaigns.

(3) Even further discouraging the overuse of nonessential uses like lawns and other intensive landscapes.

(4) Encouraging our local water agencies to work cooperatively to develop new regional water solutions such as storm water capture and reuse.

(5) And most importantly, tasking our water policy leaders, just like the city of Cape Town did, with developing an ambitious new game plan scaled to the enormity of the challenge that better uses and reuses our dwindling water resources.

To spur these efforts, I have been working in the Legislature to require our treatment facilities to develop just such an ambitious new water-efficiency blueprint — one that will lead to dramatic reductions in ocean dumping, closing in on 100% water savings within 20 years. So far, the wastewater facilities have claimed that many of the state's aging facilities will need to implement new large-scale water reuse projects that will be too costly. Yet despite them having many other options in their water reuse tool kits to avoid dumping, they have been able to stall this legislative effort. I will nevertheless redouble my efforts for bold action.

And this call for action is not only coming from policymakers like me. It is also being echoed by our courts as well. Recently, the Los Angeles Superior Court prudently ordered the State Water Resources Control Board to engage in this same critically important work to harness our precious resource rather than continue to dump it into the ocean.

Water policy is the ultimate test of "balancing interests" among farmers and urban consumers, and Northern and Southern California. The solutions would appear to be a mix of conservation, new technology and new water sources. Getting enough water for a growing California will require a maximum of skill, wisdom and cooperation. It will almost certainly also require a lot of time and patience.

Fortunately, as costly as the changes may be, they can appropriately be paid over a long horizon when the cost of borrowing is at historic lows.

And these bold new recycling infrastructure efforts would also be huge economic drivers to aid our currently ailing state economy. Either way, we owe it to all Californians to do all we can in this challenging moment to ensure that the world's fifth largest economy has a secure and sustainable water future for many years to come.

Robert Hertzberg, D-Van Nuys, is the majority leader of the California Senate.

Link: https://www.sfchronicle.com/opinion/openforum/article/What-California-can-learn-from-Cape-Town-about-15692916.php

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News Update

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707.836.0300

You received this email because your address has been entered into a distribution list of individuals who are interested in updates regarding recycled water.

a.Beginning on March 1, 2015, pursuant to Labor Code Sections 1772 and 1771.1(b) - all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations.
b.No bid will be accepted, nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations.
c.Beginning on April 1, 2015, pursuant to Labor Code Section 1725.5 - no Contractor or subcontractor may work on a public works project unless registered with the Department of Industrial Relations.
d.Pursuant to Labor Code Section1771.4(a)(1) – all contractors and subcontractors must furnish Certified Payroll Records (CPRs) weekly to the Agency they are contracted with and file electronic 5 certified payroll records weekly directly to the Labor Commissioner, Division of Labor Standards Enforcement (DLSE).
e.Pursuant to Labor Code Section 1776(c) – the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or forms that contain the same information as the forms provided by the division.
f.Pursuant to Labor Code 1771.5 - the awarding agency shall withhold contract payments when payroll records are delinquent or inadequate.
g.Pursuant to Title 8 California Code of Regulations Section 16451(d)/Labor Code Section 1771.4(a) (2) - the contractor must post Job Posters and Notices as required by Department of Industrial Relations and as required by other State agencies.
h.Pursuant to Labor Code Section 1773.3 - the Public Agency must file a PWC 100 Form with the DIR within 5 days of the award of a public works project. PWC Form 100 will be amended to reflect changes in contract time. The DIR will also be notified within 5 days of the completion of project. In bidding on this Project, it shall be the Bidders sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law(s) in the Project bid.

12.Pursuant to Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of contractors who are ineligible to perform work either as a contractor or subcontractor on a public works project. This list of debarred contractors is available from the Department of Industrial Relations at www.dir.ca.gov/DLSE/Debar.html

13.Prior to starting work, the Contractor must furnish the following:

a.Faithful Performance Bond in an amount not less than 100% of the amount of the contract.
b.Labor and Material Bond in the sum of not less than 100% of the amount of the contract.
c.A certificate of Worker's Compensation Insurance with waiver of subrogation in favor of the District.
d.Commercial general liability insurance coverage is $2 million each occurrence Bodily Injury and $10 million each occurrence Property Damage, with defense costs payable in addition to policy limits.
e.Automobile liability insurance is $2 million each person Bodily Injury, $2 million each occurrence Bodily Injury and $2 million each occurrence Property Damage.
f.Insurance policies shall contain an endorsement naming the District, their employees, representatives, and agents as additional insureds, but only with respect to liability arising out of the activities of the named insured.
g.The policies shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the company's liability.
h.Written notice of cancellation or of any limits reduction or change in said policy shall be mailed to the District and the Project Manager thirty (30) days in advance of the effective date thereof. Insurance policies shall contain a Notice of Cancellation endorsement.
i.Contractor's insurance shall be primary insurance and no other insurance or self-insured retention carried or held by City shall be called upon to contribute to a loss covered by insurance for the named insured.

14.All bids will remain valid for sixty (60) calendar days after the bid opening. Except as permitted by law and subject to all applicable remedies, including forfeiture of bidder's security, bidders may not withdraw their bid during the sixty (60) day period after the bid opening.

Las Gallinas Valley Sanitary District

By: /s/ Michael P. Cortez
Michael P. Cortez, P.E., District Engineer

Date: November 9, 2020 No. 1306

October 19, 26, Nov 2, 9th, 2020

Legal Notice | Legal Notice | Legal Notice

LAS GALLINAS VALLEY SANITARY DISTRICT
300 Smith Ranch Road
San Rafael, California 94903
NOTICE INVITING INFORMAL BIDS

1.The Las Gallinas Valley Sanitary District (District) hereby invites informal bids for the **MISCELLANEOUS PAVING 2020** Project pursuant to the Uniform Public Construction Cost Accounting Act (UPCCAA) Alternative Bidding Procedures established under Public Contract Code §§22000 et seq. and other applicable law, and the following:

2.Interested bidders must be prequalified by the District prior to submitting an informal bid. Failure to do so will disqualify the bidder. If you would like your company prequalified, please review, complete, and sign a Contractor's Pre-Qualification Application available at http://www.lgvsd.org/document-library/current-construction-projects/ and submit to the District before the bid opening shown below.

3.All bids must be delivered to the **Las Gallinas Valley Sanitary District temporary office located at 101 Lucas Valley Rd, Suite 300, San Rafael, California 94903 on or before 11:00 AM, November 27, 2020.** Bids will be announced and read publicly at that time. Bids must be made on the bid forms included in the bid package. Bids that are submitted late according to the official time kept by the District Engineer or a designee will be rejected. Bids that are incomplete or that otherwise do not conform to the requirements specified in the bid package may be deemed non-responsive. Electronic copies are acceptable if **followed by a phone call** to the District at 415-472-1734 confirming receipt prior to the bid opening time. Email to: Michael P. Cortez at mcortez@lgvsd.org and cc: Irene Huang at lhuang@lgvsd.org no later than the date and time shown above for consideration.

4.An optional pre-bid meeting and site visit will be held on **November 13, 2020 at 9:00 a.m.** at **300 Smith Ranch Rd, San Rafael, CA 94903.** The meeting will observe all COVID-19 best management practices. Protective personal equipment (e.g., face masks) and social distancing will be required. **Please call or email to RSVP.** Alternatively, a second virtual meeting using Zoom software will be available on **November 13, 2020 at 1:00 p.m.** for Bidders who cannot or do not wish to attend in person due to COVID-19. Bidders who wish to attend the virtual meeting must email Irene Huang at lhuang@lgvsd.org for the meeting information and RSVP. Special site visits to the job site may be scheduled 24 hours in advance a minimum of five (5) working days before bid opening.

5. **SCOPE OF WORK.** The scope of work is generally described as: Installation of AC paving and gravel pad the District's Biogas Energy Recovery System Facility, Venetia Harbor Pump Station, and Reclamation Maintenance Shop.

6. Questions regarding the bid package should be directed in writing as soon as possible (but no later than five (5) working days prior to the opening of bids to: Irene Huang, PE at lhuang@lgvsd.org or 415-472-1734. Where appropriate, the District may respond to such questions by addenda transmitted to all bid package recipients.

7. The Project Contractor shall furnish all tools, equipment, apparatus, facilities, labor and material necessary to perform and complete in a good and workmanlike manner the construction of the **MISCELLANEOUS PAVING 2020** Project as shown in the Project Technical Specifications and Drawings and in accordance with the Contract Documents within **30 calendar days** of the Project commencement date specified in the Notice to Proceed for the Project. The Engineer's estimate is $100,000.

8.In accordance with California Business and Professions Code Section 7028.15, all Project work must be performed by properly licensed contractors and subcontractors with active licenses in good standing as of the date and time specified for bid opening. A **Class A General Contractors license would be preferred, or a combination of the Class C-12 for the earthwork and paving in addition to a C-8 for the concrete work would also be considered.**

9.In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the project is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code shall be paid to all workers engaged in performing the project. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for work in the locality in which the project is to be performed.

10.In accordance with California Labor Code Section 1773, the District has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the project is to be performed for each craft, classification or type of worker needed to perform the project. A copy of wage rates is available online at www.dir.ca.gov/DLSR/PWD. In accordance with California Labor Code Section 1777.1, contractors and subcontractors that are found guilty of willfully violating Chapter 1 of Part 7 of Division 2 of the Labor Code (except for Section 1777.5), or that are found guilty of such violations with intent to defraud, and entities in which such contractors or subcontractors have any interest, may be ineligible to bid on, be awarded, or perform Project work as a subcontractor.

11.Department of Industrial Relations Registration of Contractors & Subcontractors:

Teresa Lerch

From: Mark Millan <millan@datainstincts.com>
Sent: Wednesday, November 11, 2020 12:03 PM
To: Undisclosed Recipients
Subject: Metropolitan Board Advances Major Recycled Water Project - BW 11/10/20

Metropolitan Board Advances Major Recycled Water Project

Recycled water plant would be one of the largest in nation, provide sustainable supply
11/10/2020

LOS ANGELES--(BUSINESS WIRE)--Southern California took a major step forward today on the path to developing a new sustainable water source from purified wastewater as Metropolitan Water District's Board of Directors voted to begin environmental planning work on what would be one of the largest advanced water treatment plants in the world.

"Metropolitan has never before directly developed a local supply like this. It is a huge opportunity for Southern California, and an opportunity that can only succeed through a partnership between two large regional agencies like Metropolitan and the Sanitation Districts."

The approval marks a significant milestone for the Regional Recycled Water Program, a partnership between Metropolitan and the Los Angeles County Sanitation Districts to reuse water currently sent to the ocean.

"Our board has shown over the past five years that we are committed to creating a drought-proof, local water supply for the region by investing in this project," Metropolitan board Chairwoman Gloria D. Gray said. "We all recognize our growing duty to ensure Southern California has reliable water in the face of threats from climate change and earthquakes. This project builds that resilience."

If fully realized, the project would take cleaned wastewater from the Sanitation Districts' Joint Water Pollution Control Plant in Carson and purify it using innovative treatment processes, producing up to 150 million gallons of water daily – the amount used by more than 500,000 homes.

The purified water would initially be used for groundwater replenishment and storage, and by industrial facilities. After additional treatment, it may later be delivered directly to Metropolitan's existing water treatment plants and used for drinking water, after the state develops regulations for direct potable reuse.

The board's vote today allows Metropolitan to initiate the necessary environmental planning work, including a Program Environmental Impact Report, engineering and technical studies, and to continue public outreach. This work will cost about $30 million and take approximately three years.

"The information produced will be critical to provide our board with the necessary information to make a fully informed decision in 2024 whether to build this project," Metropolitan General Manager Jeffrey Kightlinger said. "When combined with our investments to ensure the reliability of our imported supplies from the Colorado River and the northern Sierras, we can build water security for the region for generations to come."

"Metropolitan has never before directly developed a local supply like this. It is a huge opportunity for Southern California, and an opportunity that can only succeed through a partnership between two large regional agencies like Metropolitan and the Sanitation Districts."

At their upcoming meeting, the Sanitation Districts board will consider contributing approximately $5 million toward the environmental planning costs, along with undertaking additional studies to support the project, through an agreement also approved today by Metropolitan's board.

Today's vote marks Metropolitan's latest investment in the Regional Recycled Water Program. Last year, Metropolitan launched a $17 million demonstration plant to test an innovative purification process that could be used in a full-scale plant. Though that process is based on proven technologies, it uses a new combination of treatment processes – starting with membrane bioreactors and followed by reverse osmosis, ultraviolet light and advanced oxidation – that could significantly increase efficiencies in treatment.

The Metropolitan Water District of Southern California is a state-established cooperative that, along with its 26 cities and retail suppliers, provide water for 19 million people in six counties. The district imports water from the Colorado River and Northern California to supplement local supplies, and helps its members to develop increased water conservation, recycling, storage and other resource-management programs.

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