



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
Russ Greenfield
Craig K. Murray
Judy Schriebman

DISTRICT ADMINISTRATION
Chris DeGabriele,
Interim General Manager
Michael Cortez,
District Engineer
Mel Liebmann,
Plant Manager
Susan McGuire,
Administrative Services Manager
Greg Pease,
Collection System/Safety Manager

BOARD MEETING AGENDA

September 27, 2018 3:30 PM

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

Estimated
Time

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

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

CLOSED SESSION:

- 2. PUBLIC EMPLOYMENT - GENERAL MANAGER:** pursuant to subdivision (b)(1) of Government Code Section 54957.

4:30 PM

OPEN SESSION:

1. PUBLIC COMMENT

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

4:35 PM

2. CONSENT CALENDAR:

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

- A. Approve the Board Minutes for September 13 and September 14, 2018.
- B. Approve the Warrant List for September 27, 2018.
- C. Approve Resolution 2018-2140 A Resolution Accepting the Bid and Authorizing Construction Contract with Lamassu Utility Services, Inc. for Quail Hill CIPP Sewer Rehabilitation.
- D. Approve Support for Proposition 3, Water Supply Quality Bond Act of 2018.
- E. Approve BERS Press Release.

Possible expenditure of funds: Yes, Items B and C.

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

4:50 PM

3. INFORMATION ITEMS:**A. STAFF/CONSULTANT REPORTS:**

1. Interim General Manager Report – Verbal
2. Amendment 5 to Nute Engineering Contract for Additional Design Services for Plant Improvements 2018 – Written
3. Construction Management and Inspection Services for Miscellaneous Sewer Rehabilitation Projects – Written
4. 2018 District Holiday Luncheon – Written

B. BOARD REPORTS:

1. Human Resources Subcommittee – Verbal
2. LAFCO - Verbal
3. Gallinas Watershed Council / Miller Creek Watershed Council – Verbal
4. JPA Local Task Force on Solid and Hazardous Waste – Verbal
5. NBWA – Verbal
6. NBWRA/North Bay Water – Written
7. Engineering Subcommittee – Verbal
8. Other Reports – Written – Murray – Biosolids NW Conference and CASA Asset Management Workshop

CLOSED SESSION:

5:30 PM

- 4. CONFERENCE WITH LEGAL COUNSEL – EXISTING LITIGATION** – Pursuant to Paragraph (1) of subdivision (d) of Government Code Section 54956.9 Name of case: SMART v. Silveira, CIV 1402433, Marin County Superior Court.

6:00 PM **OPEN SESSION:**

6:05 PM **5. BOARD REQUESTS:**

- A. Board Meeting Attendance Requests – Verbal
- B. Board Agenda Item Requests – Verbal

6:10 PM **6. VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE**

6:20 PM **7. ADJOURNMENT**

AGENDA APPROVED:	Megan Clark, Board President	David Byers, Legal Counsel
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CERTIFICATION: I, Teresa Lerch, District Secretary of the Las Gallinas Valley Sanitary District, hereby declare under penalty of perjury that on or before September 24, 2018, at 3:30 p.m., I posted the Agenda for the Board Meeting of said Board to be held September 27, 2018, at the District Office, located at 300 Smith Ranch Road, San Rafael, CA.

DATED September 24, 2018



Teresa L. Lerch
District Secretary

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

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.

MINUTES OF SEPTEMBER 13, 2018

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THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT MET IN OPEN SESSION ON SEPTEMBER 13 2018, AT 3:00 PM, AT THE DISTRICT OFFICE, 300 SMITH RANCH ROAD, SAN RAFAEL, CALIFORNIA.

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

BOARD MEMBERS ABSENT: None.

STAFF PRESENT: Chris DeGabriele, Interim General Manager; Teresa Lerch, District Secretary;

OTHERS PRESENT: Patrick Richardson, District Counsel; Josh Jones, CPS;

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

PUBLIC COMMENT: None.

ADJOURNMENT:

ACTION:

THE BOARD OF DIRECTORS OF THE LAS GALLINAS VALLEY SANITARY DISTRICT ADJOURNED TO CLOSED SESSION ON SEPTEMBER 13, 2018, AT 3:01 P.M., AT THE DISTRICT OFFICE, 300 SMITH RANCH ROAD, SAN RAFAEL, CALIFORNIA.

Lerch left at 3:02 p.m.

CLOSED SESSION:

PUBLIC EMPLOYMENT – GENERAL MANAGER: pursuant to subdivision (b)(1) of Government Code Section 54957.

ADJOURNMENT:

ACTION:

The Board of Directors of the Las Gallinas Valley Sanitary District reconvened the Regular Session on September 13, 2018 at 4:35 pm.

STAFF PRESENT: Mike Cortez, District Engineer; Teresa Lerch, District Secretary; Susan McGuire, District Treasurer.

OTHERS PRESENT: None

PUBLIC COMMENT: None

REPORT ON CLOSED SESSION:
President Clark reported that there were no reportable actions in Closed Session.

- 57 **CONSENT CALENDAR:**
58 These items are considered routine and will be enacted, approved or adopted by one motion unless a request for
59 removal for discussion or explanation is received from the staff or the Board.
60 A. Approve the Board Minutes for August 23 and August 24, 2018.
61 B. Approve the Warrant List for September 13, 2018.
62 C. Approve Board Compensation for August 2018.
63 D. Approve meeting request Craig Murray - CASA Asset Management Meeting on
64 September 18, 2018 in Martinez.
65 E. Approve 2017-2018 Fourth Quarter Financial Statements as of June 30, 2018.
66 F. Approve Amendment to Lease Agreement with County of Marin.
67 G. Approve Application of Allocation of Capacity for APN 179-172-28 18 Jefferson Ave.
68 H. Approve Resolution 2018-2139 – A Resolution Accepting the Biogas Energy Recovery System
69 for the Las Gallinas Valley Sanitary District.
70

71 Items F and H were discussed.
72

- 73 **ACTION:**
74 Board approved (M/S Greenfield/Murray 4-1-0-0) the Consent Calendar Items A through H.
75 AYES: Clark, Elias, Greenfield, and Murray.
76 NOES: Schriebman.
77 ABSENT: None.
78 ABSTAIN: None.
79

80 DeGabriele informed the Board that there will be a Dedication Event for the Biogas Energy Recovery
81 System (BERS) on October 17, 2018 at 11:00 am.
82

- 83 **INFORMATION ITEMS:**
84 **STAFF / CONSULTANT REPORTS:**
85 3. HR Structural Assessment and Recommendation
86

87 DeGabriele requested Staff Report item number 3 – HR Structural Assessment and Recommendation
88 be considered an action item by the Board.
89

- 90 **ACTION:**
91 Board approved (M/S Murray/Greenfield 5-0-0-0) making Staff Report Item number 3 – HR Structural
92 Assessment and Recommendation an action item.
93 AYES: Clark, Elias, Greenfield, Murray and Schriebman.
94 NOES: None.
95 ABSENT: None.
96 ABSTAIN: None.
97

98 Staff Report Item 3 was discussed.
99

- 100 **ACTION:**
101 Board approved (M/S Schriebman/Murray 4-1-0-0) the HR Structural Assessment and Recommendation
102 report.
103 AYES: Elias, Greenfield, Murray and Schriebman.
104 NOES: Clark.
105 ABSENT: None.
106 ABSTAIN: None.
107

- 108 **INFORMATION ITEMS CONTINUED:**
109 **STAFF / CONSULTANT REPORTS:**
110 1. Interim General Manager Report – Verbal – DeGabriele reported.
111 2. Monthly Treasurer Report – Written – McGuire reported.
112 4. 2018 Employee Climate Assessment – Written – DeGabriele reported. Discussion ensued.

- 113 5. Recruitment for Administrative Services Manager – Written – DeGabriele reported. Discussion
- 114 ensued.
- 115 6. Public Relations for Secondary Treatment Plant Upgrade and Recycled Water Expansion
- 116 Project - Written – DeGabriele reported.
- 117 7. Award of Contract for Miscellaneous Roofing Replacement – Written – Discussion ensued.
- 118 8. Award of Contract for HVAC System Replacement – Written – Discussion ensued.
- 119

120 Cortez left at 6:02 pm.

121
122 **BOARD REPORTS:**

- 123 1. Human Resources Subcommittee – Verbal – no report.
- 124 2. LAFCO – Verbal – Murray reported.
- 125 3. Gallinas Watershed Council / Miller Creek Watershed Council – Verbal – Greenfield and
- 126 Schriebman reported.
- 127

128 Richardson left at 6:09 pm.

- 129
- 130 4. JPA Local Task Force on Solid and Hazardous Waste – Verbal – no report.
- 131 5. NBWA – Verbal – DeGabriele and Schriebman reported.
- 132 6. NBWRA/North Bay Water – Verbal – no report.
- 133 7. Engineering Subcommittee – Verbal – no report.
- 134 8. Other Reports – Written – Greenfield reported on the Annual CASA Conference in Monterey.
- 135 Clark and Schriebman reported on the 33rd Annual WateReuse Conference in Austin, Texas.
- 136

137 **BOARD REQUESTS:**

- 138 A. Board Meeting Attendance Requests – none.
- 139 B. Board Agenda Item Requests – Murray asked about the status of the District's draft lateral
- 140 ordinance.
- 141

142 **VARIOUS ARTICLES AND MISCELLANEOUS DISTRICT CORRESPONDENCE:**

143 Discussion ensued.

144
145 **ADJOURNMENT:**

146
147 **ACTION:**

148 Board approved (M/S Schriebman/Clark 5-0-0-0) the adjournment of the meeting at 6:25 p.m.

- 149 AYES: Clark, Elias, Greenfield, Murray and Schriebman.
- 150 NOES: None.
- 151 ABSENT: None.
- 152 ABSTAIN: None.
- 153

154 The next Board Meeting is scheduled for September 14, 2018 at the District Office.

155
156 ATTEST:

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159 _____
160 Teresa Lerch, District Secretary

161
162 APPROVED:

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165 _____
166 Megan Clark, Board President

52 **ADJOURNMENT:**

53

54 **ACTION:**

55 Board approved (M/S Schriebman/Murray 5-0-0-0) the adjournment of the meeting at 11:28 a.m.

56

57 AYES: Clark, Elias, Greenfield, Murray and Schriebman.

58 NOES: None

59 ABSENT: None

60 ABSTAIN: None

61

62 The next Board Meeting is scheduled for September 27, 2018 at 4:30 p.m. at the District's office.

63

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ATTEST:

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Susan M. McGuire, District Treasurer

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APPROVED:

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SEAL

75

Megan Clark, Board President

9/27/2018

**Warrant List for September 27, 2018
Agenda Item 2B**

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



Consent 2C
Staff/Consultant Reports _____

Agenda Item _____
Date September 27, 2018

Agenda Summary Report

To: Chris DeGabriele, PE, Interim General Manager
From: Michael P. Cortez, PE, District Engineer
Mtg. Date: September 27, 2018
Re: Approve Resolution No. 2018-2140 A Resolution Accepting Bid and Authorizing Construction Contract with Lamassu Utility Services, Inc. for Quail Hill CIPP Sewer Rehabilitation

BACKGROUND:

On September 19, 2018, the District opened bids for the Quail Hill CIPP Sewer Rehabilitation project, and Lamassu Utility Services, Inc. of Benicia is the sole bidder at \$177,881. The project provides for the trenchless rehabilitation of approximately 2,348 lineal feet of existing 6" Asbestos Cement Pipe (ACP) sewer by cured-in-place-pipe (CIPP) lining in the vicinity of Quail Hill Townhomes and Northgate Mall.

The bid price is higher than the Uniform Public Construction Cost Accounting Act (UPCCAA) informal bidding cap of \$175,000. However, pursuant to Chapter 2, Section 2.05 of the UPCCA, the District may, by adoption of a resolution by a four-fifths vote, award the contract, at \$187,500 or less, to the lowest responsible bidder, if it determines the cost estimate was reasonable.

The engineer's estimate of construction cost is \$175,000. Staff has evaluated the bids and found that Lamassu Utility Services, Inc. is a responsive and responsible bidder.

The bid price is within the current budget allocation for Sewer Rehabilitation Project shown in the Las Gallinas Valley Sanitary District 2018-2019 Budget adopted on June 14, 2018.

STAFF RECOMMENDATION:

Board approve Resolution No. 2018-2140 A Resolution Accepting Bid and Authorizing Construction Contract with Lamassu Utility Services, Inc. for Quail Hill CIPP Sewer Rehabilitation.

FISCAL IMPACT:

\$177,881

PERSON(S) TO BE NOTIFIED:

Adhab Abdullah, Lamassu Utility Services, Inc.

RESOLUTION No 2018-2140

**A RESOLUTION ACCEPTING BID AND AUTHORIZING CONSTRUCTION
CONTRACT WITH LAMASSU UTILITY SERVICES, INC.
FOR QUAIL HILL CIPP SEWER REHABILITATION**

LAS GALLINAS VALLEY SANITARY DISTRICT

RESOLVED, by the Sanitary Board of the Las Gallinas Valley Sanitary District, Marin County, California, as follows:

WHEREAS, the District issued Notice Inviting Informal Bids for Quail Hill CIPP Sewer Rehabilitation on August 31, 2018 pursuant to Uniform Public Construction Cost Accounting Act (UPCCAA);

WHEREAS, District staff opened bids on September 19, 2018 and Lamassu Utility Services, Inc. of Benicia is the sole bidder at \$177,881.08;

WHEREAS, District staff evaluated the bid, as well as the qualifications and past experiences of Lamassu Utility Services, Inc., and found that it is responsive and responsible;

WHEREAS, District staff reviewed the bidding documents to determine if they were overly restrictive preventing other contractors from bidding; however, District staff found that the documents are typical for projects of this nature; and,

WHEREAS, UPCCAA requires that if all bids received are in excess of \$175,000, the governing body of the public agency may by adoption of a resolution by a four-fifths vote, award the contract, at \$187,500 or less, to the lowest responsible bidder, if it determines the cost estimate of the public agency was reasonable.

NOW THEREFORE IT IS HEREBY RESOLVED that the bid, as set forth and filed with the District in accordance with the general terms calling for the proposals for the furnishing of labor, tools, materials, and equipment required for said project, be and the same is hereby accepted.

BE IT FURTHER RESOLVED that by resolution, the Interim General Manager of the Las Gallinas Valley Sanitary District is authorized to execute any and all documents necessary to complete Quail Hill CIPP Sewer Rehabilitation.

* * * * *

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 meeting thereof held on the 27th day of September 2018, by the following vote of the members thereof:

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

Teresa Lerch, District Secretary
Las Gallinas Valley Sanitary District

APPROVED:

(seal)

Megan Clark, President Board of Directors



Consent 2D
Staff/Consultant Reports _____
Agenda Item _____
Date September 27, 2018

Agenda Summary Report

To: Board of Directors
From: Chris DeGabriele, PE, Interim General Manager
Mtg. Date: September 27, 2018
Re: Proposition 3, Water Supply and Water Quality Bond Act of 2018

BACKGROUND:

Attached is a short summary of major programs included in the subject Proposition 3, the Water Bond included on the November statewide ballot. The Water Bond is an \$8.877 billion general obligation measure that funds projects and programs to improve the State's watersheds, water quality and water supply. Of note is \$400M to be available for Recycled Water projects. A list of Water Agencies and Organizations supporting the Water Bond is also attached. California Association of Sanitation Agencies will be considering support at their Board meeting on September 25th.

More information can be found at the Water Bond website: www.waterbond.org .

I am requesting the Board of Directors authorize the Interim General Manager to list LGVSD as a supporter of Proposition 3. The Water Bond website enables the support to be transmitted electronically, thus no letter of support need be submitted.

STAFF RECOMMENDATION:

The Board of Directors authorize the Interim General Manager to list LGVSD as a supporter of Proposition 3.

FISCAL IMPACT:

N/A

PERSON TO BE NOTIFIED:

N/A

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Short Summary of Major Programs in Proposition 3, Water Supply and Water Quality Bond Act of 2018

Safe drinking water and wastewater treatment for disadvantaged communities.

\$750 million. Provides safe drinking water and wastewater treatment for disadvantaged

communities, especially in the Central Valley.

Wastewater recycling. \$400 million. Recycles wastewater mainly for landscaping and industrial uses

Groundwater desalination. \$400 million. Converts salty groundwater to usable water supply.

Urban water conservation. \$300 million. Leak detection, toilet replacement, landscape conversion.

Agricultural water conservation. \$50 million. Improves inefficient irrigation systems, increasing river flows

Central valley flood management, including flood plain restoration. \$100 million. Makes farms and communities more flood safe, and makes flood plains for habitat friendly. Additional \$50 million for retrofit of a reservoir (probably Bullard's Bar) for better flood management.

San Francisco Bay Wetlands and flood improvements. \$200 million. Improves wetlands in San Francisco Bay to provide flood protection and mitigate sea level rise.

Data management. \$60 million. Better data collection and management: streamflow, etc.

Stormwater management \$600 million for a variety of state agencies. Capture and treatment of stormwater flows improved river and ocean water quality and increasing water supplies

Watershed Improvement \$2355 million to a wide variety of state agencies. Pays for better management of watersheds throughout the state to improve water quality and water supply. Includes \$150 million for the Los Angeles River, as well as \$100 million for the Delta Conservancy, which helps fund the governor's Eco-Restore program. Includes \$80 million for the removal of Matilija Dam, a silted-in dam in Ventura County. \$200 million for ecological restoration and dust control at the Salton Sea.

Watershed restoration after fires in the Sierra Nevada and elsewhere receives \$100 million. Funds state conservancies and state parks to better manage watersheds.

Land Management for Water Yield. \$100 million. Removal of invasive weeds which use excessive amounts of surface and groundwater such as tamarisk, yellow starthistle, and Arundo. Estimates of water savings are in excess of one million acre feet per year.

Fisheries restoration. \$400 million. Restoring fish habitat. Supplements necessary streamflows.

Groundwater. \$675 million. Implements the Sustainable Groundwater Management Act., stabilizing groundwater levels in overdraft groundwater basins.

Water and specific habitat improvements for fisheries. \$500 million. Purchase of water for fish and waterfowl.

Completion of fish screens in Central Valley. \$100 million. Will prevent baby fish from being diverted into irrigation systems.

San Joaquin River fisheries Restoration. \$100 million. Restoration of Spring Run Chinook Salmon downstream of Friant dam.

Waterfowl habitat. \$280 million. Helps meet waterfowl obligations under the Central Valley Project Improvement Act, and other waterfowl habitat improvement programs.

Bay Area Regional Reliability. \$250 million. Improves interconnections between Bay Area water agencies, making it easier to survive droughts.

Improvement to Friant Kern Canal and other Friant water interconnections. \$750 million. Restores lost capacity to Friant Kern Canal, pays for groundwater recharge programs, water conservation and possibly new water conveyance in the Friant area.

Oroville Dam Spillway Repair. \$200 million. Makes Oroville Dam more flood safe.

The initiative also allows state and federal water contractors to recover the funds they pay in climate change charges due to implementation of AB 32, and use those funds in their own systems for water and energy conservation to reduce greenhouse gas emissions.

Contributions to the water bond can be made out to "Californians for Safe Drinking Water and a Clean and Reliable Water Supply", and can be mailed to River City Business Services, 5429 Madison Avenue, Sacramento California 95841. Thank you for your support!

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Water Agencies and Organizations

Alameda County Water District

Arvin Edison Water Storage District

Association of California Water Agencies

Bear Valley Basin Groundwater Sustainability Agency

Beaumont-Cherry Valley Water District

Big Bear City Community Services District

Big Bear Municipal Water District

Borrego Water District

Calaveras County Water District

CalDesal

California American Water Company

California Association of Mutual Water Companies

California Mutual Utilities Association

California Water Alliance

California Water Association

Calleguas Water District

California Water Efficiency Partnership

Casitas Municipal Water District

Central Basin Municipal water District

City of Big Bear Lake, Department of Power and Water

Coachella Valley Water District

Colusa Groundwater Authority

Contra Costa Water District

Delano-Earlimart Irrigation District

Dublin San Ramon Services District

Eastern Municipal Water District

El Toro Water District

Elsinore Valley Municipal Water District

Flood Control Water Conservation District

Fresno Irrigation District

Friant Water Authority

Glenn Groundwater Authority

Imperial Irrigation District

Irvine Ranch Water District

Kaweah Delta Water Conservation District

Kern County Water Agency

Kern-Tulare Water District

Kings Basin Water Authority Integrated Regional Water Management Group

Las Virgenes Municipal Water District

Lindmore Irrigation District

Lindsay-Strathmore Irrigation District

Long Beach Water Department

Madera Irrigation District

Marina Coast Water District

Metropolitan Water District of Southern California

Monte Vista Water District

Monterey Peninsula Water Management District

Mountain Counties Water Resources Association

Napa County Flood Control and Water Conservation District

Northern California Water Association

Orange Cove Irrigation District

Pajaro Valley Water Management Agency

Palmdale Water District

Petaluma Valley Groundwater Sustainability Agency

Porterville Irrigation District

Porterville Irrigation District

Port Hueneme Water Agency

Sacramento Area Flood Control Authority (SAFCA)

Salton Sea Authority

San Diego County Water Authority

San Gabriel Valley Municipal Water District

San Geronio Pass Water Agency

San Joaquin River Exchange Contractors Water Authority

San Joaquin Valley Water Infrastructure Authority

Santa Margarita Water District

Santa Rosa Plain Groundwater Sustainability Agency

Saucelito Irrigation District

Scotts Valley Water District

Shandon-San Juan Water District

Solano County Water Agency

Solano Irrigation District

Sonoma County Water Agency

Sonoma Valley Groundwater Sustainability Agency

Soquel Creek Water District

South Valley Water Association

Southern California Water Coalition

State Water Contractors

Tulare Irrigation District

Tuolumne Utilities District

United Water Conservation District

Upper San Gabriel Valley Municipal Water District

Upper Ventura River Groundwater Sustainability Agency

Valley of the Moon Water District

Water Association of Kern County

Water Replenishment District of Southern California

Water Reuse

West Basin Municipal Water District

West Stanislaus Irrigation District

West Valley Water District

Western Municipal Water District

Wheeler Ridge Maricopa Water Storage District

Yolo County Flood Control and Water Conservation District

Yuba County Water Agency



Consent 2E
Staff/Consultant Reports _____
Agenda Item _____
Date September 27, 2018

Agenda Summary Report

To: Board of Directors
From: Chris DeGabriele, PE, Interim General Manager
Mtg. Date: September 27, 2018
Re: BERS Press Release

BACKGROUND:

Attached is a draft Press Release to notify the Marin Independent Journal of the BERS Project dedication on October 17, 2018. A copy of the Dedication Invitation and invitation list is also enclosed.

I am requesting the Board of Directors review and comment on the Press Release and authorize submittal to the Marin IJ.

STAFF RECOMMENDATION:

The Board of Directors authorize the BERS Press Release be submitted to the Marin IJ.

FISCAL IMPACT:

N/A

PERSON TO BE NOTIFIED:

N/A

DRAFT

Press Release

Las Gallinas Valley Sanitary District Dedicates the Biogas Energy Recovery System (BERS)

On October 17, 2018, LGVSD will dedicate its recently completed BERS facility. The Dedication will begin at 11am with remarks from the California Energy Commission, a presentation on the project from the design engineer, refreshments and an informal tour of the facility.

The BERS facility refines methane gas produced during anaerobic digestion of sewage sludge at LGVSD's Waste Water Treatment Plant (WWTP), which is then used for three purposes:

1. Fuel a boiler to provide heat to the anaerobic digester;
2. Fuel microturbines to generate electricity and help power the WWTP process; and
3. Refined further to meet renewable natural gas (RNG) standards and used for vehicle fuel.

Cornerstone Environmental Group was the design engineer and Western Water Constructors from Santa Rosa the construction contractor on the \$3.2M project. Nute Engineering from San Rafael was the construction manager. Major equipment components included digester gas and renewable natural gas conditioning equipment, two 65 kW combined heat and power microturbines, a 500 MBTU hydronic boiler, a Time-fill RNG fueling station at the WWTP and a Fast-fill compressed natural gas fueling station using PGE pipeline natural gas at the LGVSD Smith Ranch Road Pump Station.

California Energy Commission Grants totaling \$1.25M helped fund the project from the *"Advancing Clean Energy from Biogas, Biomethane and Natural Gas Program"* and the *"Alternative and Renewable Fuel and Vehicle Technology Program."*

LGVSD is now eligible to apply for and market Federal Renewable Identification Number (RINs) and State Low Carbon Fuel Standard Program (LCFS) credits for use of the renewable fuels.

For more information see the LGVSD website: <http://www.lgvsd.org/wp-content/uploads/BERS-System-Process-Diagram.pdf> or contact Chris DeGabriele, LGVSD Interim General Manager, at (415)472-1734.



You Are Invited!

LGVSD'S Biogas Energy Recovery System Celebration (BERS Facility)

Please mark your calendar for
Wednesday, October 17, 2018 at 11:00 AM

Help us celebrate the dedication of the Las Gallinas Valley Sanitary District BERS facility.

The BERS facility refines methane gas produced during the anaerobic digestion of sewage sludge at LGVSD which is then used for three purposes:

1. Fuel a boiler to provide heat to the anaerobic digester;
2. Fuel microturbines to generate electricity and help power the wastewater treatment plant process; and
3. Refined further to meet renewable natural gas standards and used for vehicle fuel.

RSVP to District Secretary Teri Lerch: Tlerch@lgsd.org (415) 472-1734 by Oct 12th

Event Location:
Las Gallinas Valley Sanitary District
300 Smith Ranch Road
San Rafael, CA 94903

This project was cost-shared with local funds from LGVSD ratepayers and grant funds from the California Energy Commission.

BERS Dedication Guest List			
Event Date: October 17, 2018 at 11AM		Email invites send 9/21/18	
NAME	TITLE	COMPANY	EMAIL
Megan Clark	Board President	LGVSD	mclark@lgvsd.org
Craig Murray	Board Vice President	LGVSD	cmurray@lgvsd.org
Rabi Elias	Board Member	LGVSD	relias@lgvsd.org
Russ Greenfield	Board Member	LGVSD	rgreenfield@lgvsd.org
Judy Schriebman	Board Member	LGVSD	jschriebman@lgvsd.org
Eric VanWinkle	Project Manager	CEC	Eric.VanWinkle@energy.ca.gov
Phil Dyer	Agreement Officer	CEC	Phil.Dyer@energy.ca.gov
Kevin Uy	Project Manager	CEC	Kevin.Uy@energy.ca.gov
Rizaldo Aldas		CEC	Rizaldo.Aldas@energy.ca.gov
Jessica Ann Bernardini	Senior Project Manager	Cornerstone Environmental Group	Jessica.Bernardini@Cornerstoneeg.com
Paul Stout	Vice President	Cornerstone Environmental Group	Paul.Stout@Cornerstoneeg.com
Luke McGarva	Vice President	Western Water Constructors	luke.mcgarva@westernwater.com
David Park	Project Manager	Western Water Constructors	david.park@westernwater.com
Mark Wilson	Senior Engineer	Nute Engineering	m.wilson@nute-engr.com
Adrian Bartshire	Engineer	Nute Engineering	adrian.b@nute-engr.com
Damon Connolly	Board of Supervisors	County of Marin	dconnolly@marincounty.org
Marc Levine	Assembly Member	State of California	phyllis.chow@asm.ca.gov
Greg Kester	Director of Renewable Resource Programs	CASA	gkester@casaweb.org
Gary O. Phillips	Mayor	City of San Rafael	gary.phillips@cityofsanrafael.org
Jim Schutz	City Manager	City of San Rafael	Jim.Schutz@cityofsanrafael.org
Mike McGuire	Senator	State of California	senator.mcguire@senate.ca.gov
John M. Hake	Senior Engineer	EBMUD	john.hake@ebmud.com
Sara Deslauriers	Climate Change Manager	CASA	sdeslauriers@carollo.com
Bobbi Larson	Executive Director	CASA	blarson@casaweb.org
Kamal Ahuja	Industrial Strategies Division	ARB	Kamal.Ahuja@arb.ca.gov
Anil Prabhu	Supervisor	ARB	Anil.Prabhu@arb.ca.gov
Jason Dow	General Manager	CMSA	jdow@cmsa.us
Sandeep Karkal	General Manager	NSD	sandeepk@novatosan.com
ALL LGVSD STAFF (20)			

9/27/2018

Interim General Manager Report

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

Agenda Summary Report

To: Chris DeGabriele, PE, Interim General Manager CD
From: Michael P. Cortez, PE, District Engineer MC
Mtg. Date: September 27, 2018
Re: Amendment 5 to Nute Engineering Contract for Additional Design Services for Plant Improvements 2018

BACKGROUND:

Nute Engineering has submitted a request for additional budget in the amount of \$39,117 to cover the following previously-authorized increase in the scope of engineering services for the Plant Improvements 2018 project:

- The addition of a progressive cavity pump in the headworks pump room, including electrical modifications required for the new motor control center.
- The addition of two (2) new progressive cavity pumps in the intermediate clarifier sludge pump pit, including electrical and mechanical modifications.
- Compressed air piping modifications within the headworks sludge pump room.
- Primary sludge digester inlet box and piping modifications.
- Future project: Plans and specifications for the surface preparation and coating of the grit chambers and process bypass channel.

The Plant Improvements 2018 project has been awarded to Gregory Equipment, Inc. and scheduled to begin construction in the next few weeks.

This amendment is within the adjusted budget for Plant Improvements 2018 shown in current Las Gallinas Valley Sanitary District 2018-2019 Budget.

STAFF RECOMMENDATION:

Information only; Amendment No. 5 is within the authority of the Interim General Manager under Section F-90-90 (Consultants) of the LGVSD Purchasing Policy.

FISCAL IMPACT:

\$39,117

PERSON(S) TO BE NOTIFIED:

Nute Engineering



Consent _____
 Staff/Consultant Reports _____
 Agenda Item 3A3
 Date September 27, 2018

Agenda Summary Report

To: Chris DeGabriele, PE, Interim General Manager CD
From: Michael P. Cortez, PE, District Engineer MC
Mtg. Date: September 27, 2018
Re: Construction Management and Inspection Services for Miscellaneous Sewer Rehabilitation Projects

BACKGROUND:

District staff has issued Request for Proposals (RFPs) for Construction Management (CM) and Inspection Services for the three (3) sewer rehabilitation projects scheduled for completion this fiscal year. Scope of services consists of contract administration and oversight of contractors' activities, public relations, and coordination with County of Marin and City of San Rafael Department of Public Works and Caltrans.

Proposals are due on October 3, 2018. Based on previous projects with similar requirements, the fee estimate of CM and inspection services is expected to be as follows:

	<u>Construction Cost:</u>	<u>CM & Inspection (~10%)</u>
1. Sewer Main Rehabilitation 2018	\$1,188,002 (awarded)	\$118,800
2. Quail Hill CIPP Sewer Rehabilitation	\$ 177,881 (awarded)	\$ 17,788
3. Marinwood-Hwy 101 Trunk Sewer Repair	\$ 170,000 (bid estimate)	<u>\$ 17,000</u>
	Total Fee Estimate:	\$153,588

The fee estimate is within the current budget allocation for Sewer Rehabilitation and Capacity and Storage projects shown in the Las Gallinas Valley Sanitary District 2018-2019 Budget adopted on June 14, 2018.

STAFF RECOMMENDATION:

Information only; the fee estimate is within the authority of the Interim General Manager under Section F-90-90 (Consultants) of the LGVSD Purchasing Policy.

FISCAL IMPACT:

Not to exceed \$175,000.

PERSON(S) TO BE NOTIFIED:

N/A

Agenda Summary Report

To: Chris DeGabriele, Interim General Manager
From: Teri Lerch, District Secretary
Mtg. Date: September 27, 2018
Re: 2018 District Holiday Luncheon

BACKGROUND:

District staff and Board Members attend an annual holiday luncheon each December. Staff has reserved Le Chalet Basque as the food, location and setting worked well for the Board and staff last year.

STAFF RECOMMENDATION:

Staff recommendation is to hold the District's 2018 Holiday luncheon at the Le Chalet Basque Restaurant on Friday, December 7, 2018 from 12:00 p.m. to 1:30 p.m.

FISCAL IMPACT:

Not available at this time.

PERSON TO BE NOTIFIED:

Le Chalet Basque

9/27/2018 BOARD REPORTS

Agenda Item 3B1

Human Resources Subcommittee

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

Agenda Item 3B2

LAFCO

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

Agenda Item 3B3

Gallinas Watershed Council/Miller Creek Watershed Council

- Separate Item to be distributed at Board Meeting
- Separate Item to be distributed prior to Board Meeting
- Verbal Report
- Presentatio3

Agenda Item 3B4

JPA Local Task Force on Solid and Hazardous Waste

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

Agenda Item 3B5

NBWA

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

Agenda Item 3B6

NBWRA/North Bay Water

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

Agenda Item 3B7

Engineering Subcommittee

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

Agenda Item 3B8

Other Reports – Biosolids NW Conference and CASA Asset Management Workshop

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



NORTH BAY WATER REUSE PROGRAM

Water Supply Reliability through Regional Reuse

Agenda Item 336

Date September 27, 2018

Date: September 13, 2018

To: NBWRA Phase 2 Member Agencies

From: Mike Savage and Jim O'Toole, Engineering and Environmental Services
Ginger Bryant, Program Development Services

Re: Phase 2 NEPA/EIS Status and Proposed Budget Amendment for Consideration at October 22, 2018 Board Meeting

This Memorandum has two parts, first is an update on the activities the Program Development Team has been undertaking to support the Environmental consultant in finalizing the NEPA document, and second is a budget amendment request from the Environmental consultant to continue working and complete the EIS.

Part 1: NEPA/EIS Status Summary

At the July 23, 2018 Board Meeting, the consulting team members reported on delays with Reclamation on certifying the Phase 2 EIS. At that time, we believed issues had been resolved and, the final Record of Decision (ROD) would be noticed by the end of November.

For context, the new Department of Interior (DOI) EIS guidance states documents must be both under 150-pages (300-pages for complex projects), and imposes a time-limit stating the ROD be published within 60-days of the final EIS.

The NBWRA EIS was prepared to comply with the 300-page limit (with appendices), the final has been submitted, and the 60-day timeframe started with the Notice of Availability on August 3, 2018.

Reclamation Issues and EIS Delays

Since the July meeting, we have determined there are extenuating circumstances that will likely delay finalization of the EIS.

The DOI policy requires a Waiver be submitted for documents that exceed both the page and time requirements. The NBWRA EIS requires a Waiver for both of these requirements; our

document is 300-pages but includes appendices, and is behind schedule due to time delays involving the Solicitor's review and Waiver process.

It should also be noted that both the regional Solicitor's office and the Regional Director's office need to have read the EIS and be prepared to support the Waiver in a conference committee before the Commissioner and the Deputy Secretary for Water and Science in order to secure final approval.

The NBWRA Waiver was one of fourteen the Mid-Pacific Region submitted to Washington DC in July and all of them were returned to the region with instructions to review the need for each Waiver and establish a priority timeline for processing them.

The Mid-Pacific Region determined the NBWRA Waiver requirement still stands but there is currently no impetus for sending the Waiver request back to the Commissioner's office as a high priority. However, the one action that would provide impetus for the Waiver is the award of the Title XVI construction grant as this creates an obligation on Reclamations part to efficiently manage grant funds approved by Congress (we expect news of this decision anytime).

Readiness to Proceed with Phase 2 Construction Projects

NBWRA member agencies have been implementing CEQA project approval processes and will have made project approvals by the end of September/October, which will allow for construction of Phase 2 projects using upcoming SB 5, Prop 3 grants (if approved), and local funds.

Also, we believe the Title XVI grant proposal currently under consideration is well positioned and that there are adequate funds in the Title XVI account for awards to be made to qualified projects. As indicated above, a successful grant award to the NBWRA would likely provide the needed impetus for Reclamation to prioritize completion of the NEPA document and we would continue efforts to shepherd the Waiver through the process.

Potential Alternative for Completing NEPA

In discussions with Reclamation it was suggested that if a Title XVI grant were not awarded at this time, the NBWRA should consider editing the 300-page document down to 150-pages and restart 'the clock' on NEPA. Given the coverage provided by CEQA, it was also discussed we may not be putting the members at risk by going this route but were referred to council for a formal opinion.

If this is considered a viable option for 'Plan B', it would allow the EIS to move forward without the need for a Waiver and could provide a way around the regulatory bottleneck created by the new requirements. There is no 'Plan B' action needed at this time and this potential alternative will be discussed in greater detail at the October Board meeting.

Part 2: Proposed Budget Amendment to Engineering and Environmental Services Agreement for Consideration: October 22, 2018 Board Meeting

Request: Consider a \$75,000 budget increase to the Engineering and Environmental Services contract to address out of scope items and continue working to complete Reclamation's NEPA Process.

At the July 23, 2017 meeting it was reported that a budget amendment would be needed to complete work on the Phase 2 EIR/EIS. This increase in cost is due to the following issues:

- Scale of Program in Final Documents v Original Scope of Work
 - Project/Program Elements
 - Full EIR/EIS requirement (instead of Supplemental)
 - Secretary of Interior Order 3355: Page Restrictions
 - Reclamation Review and Tracking
 - Cultural Resources Project Specific Issues
 - Petaluma Field Work
 - American Canyon
 - Soscol Storage: Option B Development/Field Work
 - 508 Document Formatting
- Reclamation Coordination and Delay

Since the July meeting, the additional issues described above have affected the completion of the final documents. The Environmental Consultant needs additional funds beyond the current budget to continue working and complete the EIS supporting Phase 2 project implementation.

As this item will be scheduled consideration at the October 23, 2018 meeting, we are providing this information in time for you to discuss it with your respective Boards so action could be taken when the NBWRA Board meets in October.

Please let us know if you need any additional information to support your discussion and consideration of this upcoming action item.

Craig K. Murray, SR/WA
Biosolids NW Lake Chelan WA Sept 9-11 2018.

The New Science of Poop in Health and Disease: Why Fecal Matters, Mehrbod Estaki, University of British Columbia Okanagan, Kelowna, Canada. Discuss the current understandings of how stool samples can be used in screening and diagnosis of numerous diseases, predicting patients' response rate to pharmaceuticals, and even treatment of various illnesses ranging from IBD to Autism. PHD student studying Microbiology. The Centre for biome research. Coprophagy: Species consume own dung (beetle, fly, termites, rodents, camels). Intestinal tract not long enough so need to consume a second time to absorb vitamins. Ge Hong, 4th Century China Fecal solution for food poisoning and diarrhea. Panchakavya - (cow dung, urine) Indian ceremonial drink. Ttongsul - Korean rice wine, fermented yellow soup. Geman soldiers in Africa during WW II (cattle dung to combat diarrhea). 1/3 dry weight of stool is living (bacteria, viruses). Microorganism: Bacteria, viuses, fungi, archaea. Carrying around more microbial weight than own brain weight. Bacterial cells (40 T) dominated by colon bacteria v. Human cells (30T) dominated by red blood cells, therefore more microbes than human. Impt. to help absorb important vitamins such as B and K. Stimulate immune system. First to fight invaders. They are directly related to behaviour and propensity to exercise (what doing PhD on). Prostrate Cancer. Biproduct of microbial fermentation. Specific to group based on geography. Why Poo renaissance? Imagination and cost. Tests: tiny mobile sequencers. Cost is so low for people not even experts in genomes. eg China, cheaper to retest than to store (eg cheaper to remake movie than to plug in a bluray movie). Brain and gut constantly communicating with each other. Certain bacterial can lead to behaviour (Cal Tech) autism. Diabetes, Irritable Bowl Syndrome. Bacteriotherapy: Manipulaiton of microbes for heath benefits: Antibiotics, Prebiotics, Probiotics. Realm of bizzare: Poop capsules (C diff) cured. Banks, Facebook, politicians using machine learning algorithms. Take a look at stool sample if physical active or sedentary. Ulceritize colitis and Crohns Disease, confirm subtypes and ability to metabolize pharmacological drugs. Can actually tell who should take or not. Think in future may be smart toilets to analyze stool and what you should take. Look at glycemic response if sourdough bread is good. Machines 80-90% show which individuals actually receive benefit of sourdough. Idea of personalized medicine. Speaker so bad case physician said think about having colon removed. Moved from lot weight loss to control life because fecal does matter. Q: Dirt contact traveling get sick? Book: Let them eat dirt. Your exposure to dirt, esp. in early life, you are sampling the microbes.

Can Biosolids Improve Soil Quality/Soil Health Aspects? Jim Ippolito, CO State University. Elevated soil quality (ie soil health) is based on the premise that soils have the ability to optimally function with natural or managed (agro)ecosystems to sustain plant productivity and to create an environment conducive to system resiliency. Global evidence suggests that biosolids land applicaiton can positively affect some funtion(s) within the soil quality concept, yet to date no one has effectively tackled this concept within the context of biosolids land applicaiton. This presentation will draw upon a 22 year biosolids wheat research program, attempting to answer the question "Can biosolids really improve really improve soil quality/soil health aspects?" Soil health/human health interconnections. Do we have evidence does soil quality to improve health. Can biosolids land application alter soil quality? Depends on what you are doing. Agronomic rates, some up to 10x rate. Changes in pH, water content, N,P,K micronutrients, fate, transport mechanisms, crop productivity (yield), CO winter wheat measure protein content. forage quality (digestibility, palatability). Has anyone put all factors together to make sense. Soil better structure (tilth), darker color. One soil may have more clay (water holding not as good). Quality of soil. Characteristics/Indicators. 17 essential elements that plants need to grow. Nutrient (NPKC, micronutrients), Chemical (pH, EC, etc.)Electrical Conductivity, Biological, Physical. Two to Three ways to measure soil quality. Use SMAF: Excel Sheet: Soil Management Assessment Framework. Indicators: Ogranic C, Clay, Aggregate Stabiilty, Microbial biomass C, Potentially Mineralizable N, ph and EC, extractable P and K, Bd and clay content. Biosolids: Apply 20 pounds of N per Acre for farmer tillage. ? Bolt v. Thermal Biosolids. ? Weight of importance in spreadsheet program.

Liquid Biosolids: A Contradiction, Dan Thompson, City of Tacoma - TAGRO. How do liquid biosolids fit into a diverse biosolids management program? What advantages does a liquid program offer and under what conditions does it make sense to include this option in a diversified program? Tacoma has been applying liquid biosolids as part of its program for more than 30 years. This talk will explore lessons learned in working with customers and neighbors in liquid land application programs. It will also address critical product quality aspects of liquid materials and how to balance a suite of biosolids reuse options including land application under a variety of economic and ecological circumstances. Complaints drive tweaking system things like thickening lagoons didn't work. Bigger tankers to sites with biosolids. with raising land prices need to go further out. Found fewer Ag, hay pastures need to find more markers. Hauling 98% water, lose money fast. Difficult but expanded into Forest. Clientele entirely diff. (Large Timber Co.) than farmer. Need a lot of effort and conjuling to keep Timer Co. (Champion, St Regis, Weyerhouser), vertical companies, now John Hancock (prop mgt.). Looked at Class A program to use it locally. Grew a market for the home gardener. We had no control of the supply coming in so changing market risky. Get 12 tons in a day. Went from 12 customers to 5,000 customers. lost 30% business when new homes stopped being built and new lawns put in. What did wrong: never est. a value for liquid biosolids, started few years ago charging \$5./load but culture was there that this was supposed to be free (Farmers). Impt. to have pro biosolids and steward of land is valuable. More part of community, more accepted. What learned: always disputes w/neighbors triggered by smell then end up playing mediator with neighbors such as clogging up right of way, letting dog loose. 2017 wet spring lost almost all and made up sales with liquid. 2005 77% volume out as liquid. 2017 85% out at liquid biosolids distribution. ? Advocates: Big one is Master Gardeners.

Centrifuge Biosolids: Poop to Loop, Scott Drennen, King County. The South Plant story of how a pioneer in Forest application of Biosolids was nearly lost then recovered as we moved from Belt Filter Press operation to Centrifuge technology. Our story is how our competing goals of upgrading our facility to Centrifuge technology and producing a drier product for hauling purposes led us to utilizing a specialized dewatering team to reduce operating cost and create specialized Class B products for our Forestry and Agricultural application sites. The new centrifuge process produced a biosolids too dry for an agronomic application in the forest, leaving us unable to meet our commitment to our forestry projects. The mission was to produce a consistent product by the operations staff and to develop a new way of operating a Centrifuge to make a product similar to a Belt Filter Press. King County South plant (loop) process upgrades impact Forest products. Biosolids Program est. in 1987. 30T/year distributed. 1989: Filter Press Technology. Low Tech. 2005: upgrade to Centrifuge. 3 Anrritz 7LL centrifuges to replace 8 Andritz belt filter press. (dry polymer) to liquid emulsion polymer. Tech. diff, Forest spreading equip. designed to spread wetter Filter Press Product. Improve growth rate of forests 3-4X. (versus taking more land to grow trees). A lot. Goal to make something with centrifuge like belt filter process so not to lose forest sites bec. not able to produce a product. Now able to throw drier product in the forest.

Screw Press Biosolids: Pressing a Biosolids Product. J.R. Inman, Northwest Cascade, Inc./FloHawks, Plumbing & Septic. Learn how FloHawks is using a compact custom fit screw press process to treat their septic solids collected from across the Pacific Northwest. Take a journey through their septage treatment facility to learn what their drivers were to move towards the screw press process, what operations lessons they have learned along the way, and future plans for the facility and product. Pacific WA plant. Receiving for ourselves (portable toilet and septic). lime stabilize, air control (awful a lot of ammonia and amines), carbon filter, lime silo, blower to keep mix consistent prior to going into, batch operation, liquid scrubbers and air polishing unit, eliminated all odors in plant, two tanks prior to discharge to City, intake polymer tank, screwpress get 100 parts/m of ammonia (usually 25 will kill you), polymer tank mixing up (like Taco Bell meat), reuse water in rotary screen thickener/dewatering, drop box to press, screw press turns really slow enter to out 75 min. in 8 feet of screw press (really slow), don't have digester and holding time so have to process quickly, maint. on Sundays, FKC Screw Press, quiet and slow, about 900gal day amount and generate Class A Biosolid. Back end ozone. control everything with sulfuric acid in system and can control ph going out regularly 9.5 or below goal is 10 before discharge out. give biosolids away. 45-50% solids content. centrifuge violent and high energy use v. press but not high production. fling poop and toilet emojis stress balls to questions.

Trouble Shooting Aerobic Digestion. Andy O'Neill, Washington State Department of Ecology. The most commonly utilized solids stabilization process in the US for small and medium sized wastewater treatment plants is aerobic digestion. In theory, the aerobic digestion process is relatively simple. However, without understanding key operational procedures and monitoring digestion performance, achieving long-term solids handling goals is challenging. Andy will provide an overview of the importance of temperature control, oxygen transfer and mixing, nitrification and denitrification, solids retention time, pH control, sludge loading characteristics, and tank configuration. Acronym, aerobic digestion. volatilize suspended solids. need energy don't get back. Prior to 1993 not performance standards (EPA) all based on design, after 1993 went to performance standards (pathogen reduction and vector reduction). Activated Sludge= Growth (growing more bugs), aerobic digestion decay bugs. Autotrophs (inorganic, nBOD) Heterotrophs (Organic, cBOD) Mesophilic Bacteria (Thrive in temps. between 68 to 99 degrees). Aerobic digestion, careful of lysis and release of phosphorus (limit). KISS and TOP-NOTCH. Want piece of equipt. to run TOP NOTCH. Temperature (daily, if below 40 degrees no bio activity, every 10 degrees up/down double activity why have higher mix in winter). close covers and bring heat up in winter, if too hot see foaming in digesters, summer overloading also typical (foam up, respond by opening covers up to help cool down). Evaluate temp of plant. Oxygen. Min. 0.5 mg/L. Ph (daily) and Alk (weekly). Need to profile system esp. when running really well so have a comparison. If Ph above 7.5 add more air. Ph less air on/off (nitrogen gas releases) Alkalinity rarely tested (coffee filter). Nutrients decant clean upper water. product should be about 2%. Operator Best way to do it is to break it and not doing that again. What happened, past experience. Team (internal, ask buddy, pier eg don't want Ph going up), Challenge never forget, operate system, challenge biosolids report priority pollutants, vector attraction. Help. External. eg Foam what is temp., what going on in digester diff. than would see, white foam polymer in dewatering (can't get anything to settle), Temp, Oxygen, ph alk.

Soil Variability and the Use of Biosolids. Ryan Batjiaka, San Francisco Public Utilities Commission. Soils are a motley bunch and their variability can affect how biosolids are applied for agriculture and other uses. This presentation will first discuss the basics of how soils can be distinct from one another. Then we will look at how these traits should be taken into consideration for biosolids application. Levels of N and P will affect biosolids, potential for saturation and drainage: soil texture, OM, depth. Xeric climate regime of CA dept of groundwater 160'. High PH can increase volatilization of ammonia. Some counties in CA require low pH to be adjusted to 6.5+ before application. Texture: Clay soils have Cationic Exchange Capacity (CEC) than coarse, sandy soils and holds onto nutrients better. UC Davis soil web program. EG Douglas County WA glaciation CEC low, southern end of county w/o glaciation more clay, less sand CEC much higher. Farmers in the north are needier for Biosolids. Take more care because can get equipment stuck in clay soils. agronomic N. every region has its particular nuances in soil variation. Affect nutrient availability, run off.

Understanding Biosolids Data. Erika Schwender, Professional Training Association. Making sense of the valuable data points from a biosolids lab analysis. To break down the pieces of what goes into a biosolids lab analysis, proper measures, best practices in biosolids lab analysis and understanding what this biosolids data means in terms of regulatory compliance and building a successful biosolids program. What goes into a biosolids analysis: knowing what to analyze for, sample collection, sampling plan, preservation, holding time (impt to regulator). COC. Documentation that will help us demonstrate the integrity of the sample, no one tampered with the sample between collection and analysis, sample was stored properly during transport, sample was received by lab. Select an accredited laboratory: accurate, reliable and defensible. Interview the lab: all things necessary to be accredited (In WA by the Dept. of Ecology). SOPs ask to see, QA Manual, QC Charts and records, lab staff training program, how are they doing regarding staff retention. Can they handle the workload sustainably with enough staff. workload and meeting time lines, process of communicating observations, reporting process & time lines, talks to other operators and plants about who they are using for their biosolids lab work and how they like them & why. Analytical procedure for compliance: Dept of Ecology 40 cfr 136 or 40 cfr 503 must be used to analyze samples of biosolids or sewage sludge., calibration (by manuf. or analytical process), utilize appropriate instrumentation and chemicals. QC - precision and accuracy. Precision: measure to repeatedly come to same result, Accuracy: How close to target value do you come out. Initial Calibration Verification Standard (ICV) and Blank (ICB). Standards made from a second source. Verify the accuracy of the standards used in the calibration. Lab Control Sample (LCS) consist of analyte-free matrix (water, soil, etc.) plus a known concentrations of the analyte. LCS can serve for precision as well as accuracy. Batch measurement comparison LCS recovery. Precision of analytical run (instrument and analyst reliability) through replicates (duplicates, triplicates..). Method Blank (MB): are made of analyte-free matrix (water, soil..) and exactly the same way as the sample. It is a blank. MBs provide information on whether or not contamination is being introduced to the process. Spike determine matrix interference. Analytical run: calibration standards, ICV & ICB, LCS, Method Blank, Sample 1, Duplicate Sample 1, Sample 2, Spike Sample 2, Samples 3-5, CCV & CCB.

Making sense of Soil Analysis Data. Kyle Bair, Soiltest Farm Consultants, Inc. Moses Lake, WA. Soil tests can be very useful in diagnosing and treating soils for optimal crop growth. But what do all of the numbers mean? This talk will focus on taking good samples for laboratory analysis and how to correctly interpret the data once the analysis is complete. Past research on soil fertility (especially Phosphorus), use of legume cover crops in organic juice grape production. www.soiltestlab.com. Do plant tissue, compost, water, forage and recently analysis on cremated human remains. Sampling is crucial, use a reputable laboratory, standard methods by soil science of america: NAPT-PAP standard methods correlated and calibrated. Local is best - easy interaction and understanding of unique soil properties. Use clean equipment: Plastic buckets (not galvanized, huge source of Zinc contamination)

Zn, sample prior to fertilization. Representation, sufficient number of samples, paperwork, sampling depth should match plant, 1' non-mobile, 1-3' for mobile constituents. What do with soil tests? Building soil fertility or replacement. BCSR (Basic Cation Saturation Ratio): Maximum plant growth occurs at certain ratios (Ca, Mg, K), Actually does not address N,P and micro-nutrients. Stay away from it only deals with basic cations. Sufficiency Level: common, there is a measurable range of concentration for each nutrient which will afford maximum plant growth. Sufficiency Range: wide range of plant growth. Use baking soda to extract Phosphorus (not all of it). Nitrate (soluble - can get all out) and ammonia (positive cation, get all soluble nitrate out). Temp., moisture, microbial population hard to predict. Sufficiency Range: Varies with Method: Tests: Olsen, Morgan, Bay P1 (OSU) Fantastic extraction method. Phosphorus in Al or Ca form in Eastern or Western WA. pH management: Addition of NH₄ or So on alkaline soil enhances availability. Potassium K (polar opposite of Phosphorus). Use an Olsen method. W/Olsen method can extract P & K at same time. Very sandy soils may need to match crop removal. Micronutrients: DTPA extraction kelate (greek word for claw) to extract Zn, Manganese, Copper all at the same time. pH is a major factor. Foliar applications may be more effective than soil. Generic Sufficiency Ranges: Zn, Mn, Cu, Fe, B. Boron over with 3 parts / billion becomes toxic quick. Borax does great job of sterilizing. Smith McClean Pratt (SMP) method for soils. Tells how much lime to apply.

Biosolids Sampling & Analysis: Why Details Matter. Peter Severtson, Washington State of Ecology. Biosolids sampling is required under Washington rules but many folks don't understand the real-world connections. This talk will cover the basics of sampling and relate the results to the soils and crops for which they are land applied.

Douglas County, WA biosolid delivery requiring it too be sampled. Think about grower and is it clean. Nutrient analysis and percent solids directly affect the application rate. Canola seed produced with biosolids. In this region doing batch sampling, right off of belt press, dewatered cake. Sample: What type of Biosolids do you have, how to collect, when and how often, how to handle, what do you analyze for, is sample representative. Important to sample for Phosphorous, important for surface waters. nutrients (TKN, NH₃, NO₃), phosphorus, 503 metals (As, Cd, Cu, Pb, Hg, Mo, Ni, Se, Zn), pathogens (fecal coliform, 7 samples if it is a wetcake). Samples to rep. WWTP over time. 25 WWTPs (major and minors) in State and measure high/low TKN samples. Measured huge variation in each plant. Good portion to do is sample collection and how people handle samples. What come to is people come to averages so to knock peaks off and get good growth results for growers. Belt Press Cake, Centrifuge Cake, Air Dried. % biosolids with wet biosolids means a lot. Be careful when measures. So what do, land apply an over apply. Get to know your own biosolids, what your number is and what it should be.

Tuesday, Sept. 11 Research. University of Arizona Biosolids Update: New Concepts & Technologies. Dr. Ian Pepper, University of Arizona. Land Applied Class B Biosolids on Pecan Orchards. There are 20,000 acres of pecan orchards in Arizona, and pecans have a large requirement for the micronutrient Zn. New Technologies. We are evaluating a new sidestream treatment of high ammonia effluent derived from the dewatering of Class B biosolids. This involves anerobic oxidation of ammonia or anammox. If successful this technology will save Pima County Wastewater \$500,000. annually.

CASA Asset Management Workshop - CCSD 9 18 18

Craig K. Murray, SR/WA

CCSD Wifi. CCCSD - Guest (no password necessary).

Terms: AM: Asset Management; CMMS: Computerized Maintenance Management System; EAM: Enterprise Asset Management; APM: Asset Performance Management; LOS: Level of Service; SSO: Sanitary Sewer Overflow; PACP: Pipeline Assessment Certification Program; NASSCO: National Association of Sewer Service Companies; WAM: (Oracle) Work Asset Management; DMS: Document Management System.

1. Overview of Asset Management & its importance, Sam Paske, PE, AGM Metropolitan Council of the Twin Cities, Environmental Services Division. Mini county. Planning Div, busses. division w/water supply and waste water. 600 mile pipe, 8 plants, discharge to Mississippi. Round Robin Q: Why Asset Management Is Important. City owns pipes, Council owns interceptors and treat except SW. Market based approach because we are Partners. We exist why? We protect public health. outlook is looking for economic vitality. triple bottom line. Our role, our philosophy. expend tremendous energy in relationships(w/Cities) (we define our value externally in the eyes of our customer). Customer Level of Service dfn areas: Financial (AAA bond rating); Health, Safety & Environment; Customer Service (eg Odor Control in affluent community). What is an asset, Whose job is it, why is it important, how do they fail, Risk Mgt, how does it intersect, how do you use AM, how do you get started, why brand/rep on asset, what tools to you use, what is it going to do for us, what are the long term goals, who do you sell AM to electeds, market based operations. AM: Delivering the value our customers expect. Better and better. Continuous improvement. Never done. Change Mgt Framework: diagram. What is it: (not really the pieces involved, not outcomes ie level of service). levels of service met. Risks to value delivery: Costs (6-10% increase no good way to control)(knocked rate increase curve from 6-10% to less than 4%). Committed to 5 years of less than 4%, told customers and did it (never did it before and did bottom up what do you need and funded that way), regulations (phosphorous-dodged with overall saved \$300m), workforce (getting value of the workforce?, # of meetings, how effective, what are new workforce mindsets coming in). Asset Lifecycle (Reliability.web). Investing early: spend less on asset lifecycle. AM: invest early and expect a return (to speaker). Leveraging Regulation: adaptive management, ww reuse. connect to water reuse. Drexler Simblet (Master level class for leadership for change). To design something way better than you thought you could have. lowest cost of service w/highest level of performance. 1. activating awareness 2. engaging change leaders. 3. creating and testing possibilities. to 7. sustaining long-term. (not like Gantt chart one item to next). AM: Org Chart. How do you operate that is good, so groups are better together rather than one group dominating (AM in Environmental section). Get started with Benchmarking: Where to start. Aquamark framework, Benchmarking: just opportunitis, to see gains in scores. Line of sight: Goal: Optimized Financials and LOS. Shares a common understanding of what we are doing. Pyramid with Asset Register on base. Asset Mgt. Structure (Team Framework). 5 Year Budget Plan (Labor: Staffing Plan and Development Plan; Non-Labor: Energy, Chemicals, Contract Services. Debt Service (is capital). Job 1: Agree on what it should do within teams. Needs within each other (Capital program, operating strategies, maintainance program). Goals: Compliance, Finace, Safety, Energy, et. al. Permit compliance: zero exceedances or spills. AM: Delivering the Value our customers want. (key to agility). Land of 10k Lakes: Water is not in top level. economy of region benefit: incentiveise technology, guided by regional planning network & things prosperity, livability, equity and doing in way that accountable...Operations, Engineering, Maintenance, Support Services meet 2x/month. Agenda items. 10 teams. Use Empowering People chart: when in meeting and people are asking "what are we doing here". Here is why we need your help. give template: facility level of service. they defined what the facility do to support the facililty (ie grit) and what it

needs to do to support others. Need sponsoring level to get stronger level areas, alphas, to back off and see program and not take over meeting. 6 year look at Capital just under \$1B. By 2023 over the bubble and hope to have a little control over capital and doing pay as you go w/~\$10m year. Is it capital capital or maint. capital.

2. Getting Started, Tools & Resources, Tacoma Zach PE, CEO Uberlytics LLC

Author of Criticality made simple, Former Area Manager and Vice President Veolia. Univ. of Toronto, Canadian PE. How System Level Criticality provides focus. AM: The coordinated activity of an organization to realize value from assets. (ISO 55000, 2014 (3.3.1) Assets: An asset is an item, thing or entity that has potential or actual value to an Organization. (if you can touch definitely, but also logo..) ISO 55000, 2014 3.2.1 What you write a work order against (your area of focus). Asset is a concept. Its complexity or size is not relevant. Need to be making risk based decisions. Make sure level of service is not at risk. Looking for lowest spend for LOS. Need to have a corporate line of sight to the field level. Alignment (often misunderstood). 1. Need to understand when and where your Mission is at Risk. 2. Need Asset Mgt. Strategy. Min. spend to maintain LOS. How do we get our organization aligned (clearly understand indiv. and org. mission). Where to start with alignment. Corporate line of site. 1. Criticality review. - Why do you exist? Why Est. Mission & Objectives. 2. What Values do you hold (Safety, regulatory, env. stewardship, public health part of value eg LA County). How you scale - we only permit this as worst, much less chance at getting at worst. 3. Overall LOS: Asset portfolio, plant, network 4. System perspective (# of systems that protect overall)(Navy, Air Force measure and don't have time to measure by Asset. Oil bus. measure by Asset. .5. Select Appropriate Asset Strategies. Asset Mgt: 1. Complete Asset Registrar to AIM, Optimized Financials and Level of Service. **AM is the coordinated activity of an organization to realize the value from assets.** Criticality and how to do it SMART. Most people approach asset by asset (eg pile of potatoes, peel one at a time). v. San Jose Creek (Valencia, 6 Flags across street). Plant can't stink. If go too far done, too granular (ie looking at pipes, valves). See interrelationships of systems and what systems must do. eg LA County return activated sludge (LACSD RAS). Evaluate how system failed in past. eg sealed water system if fails will take out all three plant pumps. Part of measure is eliminate pet projects. Exxon Mobil: Liquidated Damages, Collateral Damages (engage your legal department). if service region with water and contractual issues to service. Look at 3 things: 1. How severe; 2. how rapid; 3. Can you mitigate. How to look at system level and tied back to overall approach - you get line of site to corporate approach and how to articulate to field level. Only critical systems have critical assets. which ones really do it, capital risk management. Helps you from having to do asset by asset. RCM on critical assets. RCM/Critical Systems. Where have risk (Pacific NW plant, including rolling stock) Impact v. Probability. 2006 All systems risk ranking to 2012. LOS more secure, manage asset most appropriate and spend. Underwriting opportunities: get better rate, lower reserve on financial bottom line. RCM2: John Moubrey (Reliability Centered Maintenance), Airline Industry. Aladon Network, MROZone (go with your eyes open), ISO 55000 training at Asset Leadership Network, Institute of Asset Mgt. AM Pillars: strive to make risk based decisions, extract max value from your assets (think about disposition of asset), get line of sight and alignment: everyone working on right things. Define your mission, values, los. Functional system CA first: bring focus, execute with focus.

3. Asset Management in Practice: Case Studies.

A. Lani Good West Yost Associates, Castro Valley San AMP 149 miles of sewers, 8 pump stations, ~30k connections. Over 50% made before 1955. clay pipes and rubberized gaskets at that time. lowest rates in Alameda Co. always pressure to do more with less. AM is journey not destination. Risk assessment is heart of AM. SIMPLE: Sustainable Infrastructure Management Learning Env. 1. Start set Program Goals & Objectives LOS: Reduce

Complaint Calls, system reliability. Use Lucity for CMMS (work orders records asset registry, preventative maintenance, SSO records.). Update Hydraulic Model (flow rates, capacity defects). Whole point: Prioritization system for rehab. CCTV records consolidate. Always require contractors to deliver a single, PACP-compliant database. Dataset: Wincan V5, V6, Granite XP, H&R. GIS Analysis: How far is pipe from school, waterway. Lucity historic data: use GIS to validate "sewers in easements", plot & validate "difficult access" pipes with maintainance staff, process maintainance data link blockages to SSOs. Almost 90% go back to field notes. problems. collective data maintenance. Hydraulic model: limited to large diameter pipes, used GIS oto count upstream parcels of small diameter sewers and pump stations. (District concerned about pipes to serve only 2-3 homes). See flaws to improve data collection in future. Now Gravity Sewer Asset Mgt. Plan Castro Valley Sanitary District. Gravity Sewer Condition Assessment. Repair/Remove Invalid Inspection Records. PACP NASCO data protocols. Failure Modes 3: Structural, Maintenance, Capacity Related SSO (Inadequate Hydraulic Capacity). Consequence of Failures (Environmental Impact, Public Health Impact, Community Disruptions, Emergency Response Time (poor access, easement w/poor access. if difficult to get to, difficult to stop). Software Info. Master, Sewer Assessment and put in Board Reports for requests. Prioritized CCTV Inspection Program. Pump Station Asset Management Plan. (Condition, Risk Assessment, R/R plan). Condition and Performance Scoring. Condition Assessment Results (need from consultant a tabular report, asset inventory that could be input). Optimizations. ONLY if critical facility pipeline. How to decide when to act. Force Main inspections are expensive. Rule of Thumb: for critical pipelines, only inspect if cost of inspection is less than 30% of the cost of replacing the pipeline. Otherwise, just replace it near the end of life. Improved Gravity Sewer AMP w/InfoMaster Sewer. Just by importing data to GIS. Use a data change log to maintain integrity. *When working with consultants: require data collection efforts to be submitted in tabular format for import into your CMMS system and make sure you import it. flow monitoring, cctv data...jwells@westyost.com 949-517-9067. Yost & Assoc.: Documents for CVSD: 1. Gravity Sewer Asset Mgt. Plan; Wastewater Collection System Master Plan; Pump Station Asset Management Plan.

B. Rick Mykitta, Inland Empire Utilities Agency - Sewer Lift Station Criticality. Risk: Likelihood v. Consequence. Air v. Auto. incidence of death. #1: Heart failure. Lift Station: 1/2,000 chance of failure in a year. Improve w/second pump: 1/4m (2,000 x 2,000). RP-4 (regional plant 4): between Fontana & RC. Redundant: Pumps,Power.. built w/Risk in mind. Passive Overflow (line to transmit to RP1 facility: cost is \$14M. so measured consequence of failure categories: health safety, treatment perfro, economic..). Criticality Analysis. Because of redundancy, good maintainace practices: low risk. Breakers do fail so IR switch gear and breaker testing. Question: Maintenance execution v. \$14M project investment. Drive it down to Maintenance Strategy. Next Steps: Criticality/Risk, Failure Modes Analysis, Prevention/,Develop, Maintain

4. Asset Management in Practice: Case Studies

A. Mary Lee, Los Angeles Co. San. Districts, CapX to OpX. New business practice. Using Oracle Work Asset Management (WAM) PMs, WOs, Timekeeping, POs, Inventory. use besides just process level. Oracle Unifier: Construction Project. Document Mgt. System. (DMS), Iron Mountain for all other records. Didn't have process to update inventory or maintainance schedule. Need better way to track and manage asset informaiton so CAPX Capital expenditure constructing/replacing and OpX (Operation expenditure operating and maintenance cost of an asset to end of life. Need: O&m manuals, field/shop tests, specification template, warranty info., BOM/space part "asset information" to bridge Cap X to OpX. Goal: To capture during design. EG Oracle WAM: Asset Information on Vertical Pump. Invest early in design phase, shift to design. design staff input o&m manual. operations then can focus on start up. Goals: Capture Assets during design phase, modify

contract document, populate spec templates onto WAM, consolidate. Challenges: Data entry into WAM platform, used import data from Excel into WAM. Timely submission of O&M Manuals: include O&M manuals in the contractor's cost loaded baseline schedule, withhold substantial completion issuance. Warranty info. omitted: Warranty certificate requirement, equipment acceptance date from field engineering. Internal PM and inventory review: discussion/meeting prior to project commissioning. CapX OpX only for new Assets.

B. Julian Sabri, Orange Co San District, Predictive Electrical PdM (predictive maintenance) Process started in 2017. Antifriction bearing devices, belt defects & misalignment, shaft misalignment mechanical looseness, lubrication problem. Hired a consultant on lubrication problem. Maint. Program support: Lubrication program, Electrical PdM, Mechanical PdM. Gadget: Use IRIS Motion Amplification Technology. Sometimes solve a major issue by buying some washers. Took tasks that took days to hours. eg High Rate Mix Pump #12A Motor Base. (IRIS shows motion picture of vibration areas and where problem is located. jsabri@ocsd.com 714-593-7316.

5. All Aboard: Integrating AM into the Culture

A. Vicki Conway LA Co San Districts (2nd largest WW District west of rockies. Budget \$2m+/year.) 11 wwtps, 5.5M pop., 1400 miles, 850 sq miles. Started AM in 2001. 2003 Assessment RFP. Synergen (since bought by Oracle.) couldn't get data out for years. Once data out, good data visibility. \$5m for software and assistance, added 5 more staff. Not tangible to show where savings, just get more organized. Info. ahead and get all pointed in same direction. Culture and change management. New staff are becoming champions of this AM. eg categorize work orders into regular and emergency (want to know disruptions). Some plants no emergencies and other plants have 50% emergency work orders. eg Input as emergency only if have to call staff back. Have 3 AM technicians for 800 staff. Survival Guide: ID AM Champion/s; ID realistic/meaningful goals, clearly and frequently communicate am goals/plans to staff, re-examine progress and ID success and failures, make adjustments when needed, and stay focused and committed.

B. Dawn Guendert, Hazen & Sawyer Take a phased approach, AM very collaborative process, take time to do it right, staff has to be engaged and implemented as soon as possible. Get buy in with quick wins. Staff disillusioned fast with lot of time spent on data mgt. Do small pieces or pilot project. People, process, tools: important to get these right first. Get a system that supports what you do and not you format to the system. AM Key (4) organizational perspectives: Eng., O&M, Business, Financial. AM support the way to do your business, do it gradual. AM, select right team. Cross functional. AM: Continuous Improvement. How to judge if you are successful? if come back two-three years from now and AM still being used.

C. Dana Lawson, PE, MCSE, CCCSD. Special District 1946. 290 employees, \$40M budget, 1500 miles gravity, 21 miles force mains, 18 pump stations. 2002 started CCTV assessment program. Do about 200 miles/year. Doing all over again. 2009: condition assessment in treatment plant, 2011 gravity collection system, 2013 force main systems. 2014 Board adopted an AM policy, created an AM Steering Committee, began updating asset inventories, condition assessment of pump station and plant equipment for comprehensive masterplan. Eng doing so feel steering committee wasn't as needed. Admin, Op, Eng (Plg. & Dev.- Asset Mgt. Group, CIP, Reg & Env. Compliance. Two page Board AM Policy.

6. What's next? Identify needs/interest for further training ? Saying: Culture eats Strategy for breakfast. Goleta SD 3 year AM started with top GM Steve Wagoner. Extremely engaged. Did pilot project with Lift Station with little over 100 assets so staff could see and do the condition assessment. Show how turn data into valuable info. Did interactive

dashboards. eg look at bar graph, 2020 to spend \$1.2M, touch the bar and start drilling down. Goleta looking at systems and went with Lucity as CMMS system. LA: Through AM, created more team approach. Op, Eng and Maint need to get together every 2 weeks. Was it really emergency or bad actors. Started bad actors list. Seeing changes in way people look at work and more collective. CCSD One of things frustrated is not able to get info. quickly. eg get as built and how to shut off lights. Younger folks have more exp. to get data more quickly, frustrating. Capital Projects v. AM. Need support from the top to invest in software, tools and train staff. LA SSMPs really for AM, don't want to do same thing for Treatment Plants. AM give transparency. Hazen & Sawyer: For buy in, AM: very transparent and very data driven process. Tell a story backed up by data, thru agency in tight times show minimize business risks, make decisions to delay other investments with some level of confidence that not exposing yourself to risks. 75% work not AM. Problem brought to us and eg used risk based approach for CCTV. Central Basin: Thought pumps at end of life, we looked how performing, how used but did see other issues in electrical. Helped Board see benefit of AM program. CCSD: Get consultant: to do CMMS, to update GIS. Hazen & Sawyer: AM: Key to move Reactive to Proactive. Person to take ownership. LA: Want to make sure work was done properly. Procedures. Started Root Cause Failure, Equipment, done a lot of corrective action. Gained a lot in quality of work process.

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9/27/2018
CONFERENCE WITH LEGAL COUNSEL
CLOSED SESSION
Agenda Item 4

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



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. and
returning on _____ day of _____ from _____ a.m. / p.m.

Actual meeting date(s): _____

Purpose of Meeting: _____

Frequency of Meeting: _____

Estimated Costs of Travel (if applicable): _____

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

For Office Use Only

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

9/27/2018

BOARD AGENDA ITEM REQUESTS

Agenda Item 5B

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



DISTRICT BOARD
Megan Clark
Rabi Elias
Russ Greenfield
Craig K. Murray
Judy Schriebman

DISTRICT ADMINISTRATION
Chris DeGabriele,
Interim General Manager
Michael Cortez,
District Engineer
Mel Liebmann,
Plant Manager
Susan McGuire,
Administrative Services Manager
Greg Pease,
Collection System/Safety Manager

Agenda Item 6
Date September 27, 2018

September 13, 2018

Mr. Joe Garbarino
Marin Sanitary Service
1050 Anderson Drive
San Rafael, 94901

RE: Las Gallinas Valley Sanitary District "Boneyard" Clean Up

Dear Mr. Garbarino,

On behalf of the LGVSD staff, customers and ratepayers, please accept our heartfelt gratitude to you and your employees for cleaning up debris, used material and scrap from the LGVSD "boneyard" during the last two weeks of August. Your work makes the area ready for contractors to occupy the area during construction of the Secondary Treatment Plant Upgrade and Recycled Water Expansion Project. This project will be the largest ever undertaken by LGVSD and the advance clean up conveys to prospective contractors that the LGVSD is prepared to make this a successful project.


Thank you once again.


Sincerely,

LGVSD Board of Directors


Megan Clark


Rabi Elias


Russell Greenfield


Craig K. Murray


Judy Schriebman

Our Mission

Kaiser Permanente exists to provide affordable, high quality health care services to improve the health of our members and the communities we serve.



Dear John, Teresa
Neil & Susan,
We wanted to extend
our gratitude to everyone
involved that made
our 5K more fun than
ever possible. Kaiser
Permanent Maintenance
Employees and their
families consider this
event such a highlight

each year.
I wanted to make
sure you all know
how much we
appreciate all your
efforts.

With gratitude
Laura France
and the Employee
Wellness Team

Solar project proposed at Silveira Ranch

NOVATO AREA

By Will Houston

whouston@marinij.com @Will_S_Houston on Twitter

A Novato-area ranch may become home to a small-scale solar energy farm that would generate enough energy to power roughly 1,000 homes, according to the project applicant.

The San Francisco-based Renewable Properties' proposal is in early planning stages, according to company President Aaron Halimi.

Halimi said this will be their first solar project in the county, but said the company has completed several projects throughout the country.

"This is an opportunity for members of the community to get behind local solar," Halimi said. "Climate change is a global problem that requires local solutions and we're proposing this project in Marin County because we believe Marin County is a community that prioritizes the adoption of renewable clean energy. This has been properly sited to take that into account."

Should the project ultimately be approved, the local community choice aggregation Marin Clean Energy would purchase the power through its "feed-in tariff program."

"MCE supports local renewable energy and jobs in our community," said David Potovsky, Marin Clean Power's power supply contracts manager. "Our Feed-In Tariff program provides the opportunity for local developers — once they have secured county and community approvals for their project—to sell their energy to MCE under a longterm contract."

Renewable Properties plans to install about 11,310 solar modules and 66 string inverters — which convert direct current, or DC, energy produced by the solar panels into usable alternating current, or AC, energy — on the Silveira Ranch nestled on the eastern side of U.S. Highway 101 north of Novato near the Marin-Sonoma county border. The property is owned by the trust of Lorraine and the late Anthony Silveira, according to county records. Halimi said Renewable Properties will be leasing the property.

The Silveiras' attorney, Richard Bowles, said the proposed solar array is in no way affiliated with the Silveiras' other ranch property near San Rafael, which is off limits to commercial development under a 10-year agreement with the county made last year.

The array as proposed would produce 3 megawatts of AC power and 4 megawatts DC power, Halimi said. The array would interconnect to an existing onsite Pacific Gas and Electric Co. distribution system, according to the county's summary of the project. Renewable Properties also proposes to build energy storage infrastructure.

In addition to providing more renewable energy to the local and state energy portfolios, the project will also create local construction jobs and be an investment into the community, Halimi said.

Halimi said the proposed construction site has traditionally been used for cattle grazing and that some constraints on the site make it unsuitable for other types of development. There are several wetland areas and streams near the site, according to Halimi and a preliminary layout of the project, but Halimi said their design includes the necessary setbacks that will avoid disturbing this habitat.

Building permit applications have not been submitted to the county yet, with the project in its preapplication phase in which county agencies are providing feedback on the proposal, Halimi said.

Because of this, Halimi said they do not have a set timeline on when construction is expected to start.

Meanwhile, Halimi said they are eyeing Marin County for other local projects, which he said are also in the very early planning stages.

LAS GALLINAS VALLEY SANITARY DISTRICT
300 Smith Ranch Road
San Rafael, California 94903

NOTICE INVITING INFORMAL BIDS

1. The Las Gallinas Valley Sanitary District hereby invites informal bids for the MARINWOOD-HWY 101 TRUNK SEWER UNDERCROSSING EMERGENCY REPAIR Project, in accordance with the Uniform Public Construction Cost Accounting Act (UPCCA) Procedures and other applicable law, and the following:

2. All bids must be delivered to the Las Gallinas Valley Sanitary District, 300 Smith Ranch Road, San Rafael, California 94903 on or before **11:00 AM, October 4, 2018**. 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. Email to: Michael P. Cortez at mcortez@lgvsd.org and cc: Irene Huang at ihuang@lgvsd.org no later than the date and time shown above for consideration.

3. Pursuant to UPCCA procedures, interested bidders must be prequalified by the District prior to submitting an informal bid for projects under \$175,000 such as this Project. Failure to do so will disqualify the bidder. If you would like your company prequalified, please complete and sign a Contractor's Pre-Qualification Application available at <http://www.lgvsd.org> and submit to the District before the bid opening shown above. The Engineer's estimate is \$170,000.

4. A non-mandatory pre-bid meeting is scheduled for September 26, 2018 at 9:00AM, 300 Smith Ranch Rd., San Rafael, CA 94903. Special jobsite visits may be scheduled 24 hours in advance a minimum of five (5) working days before bid opening. In addition, this Project requires bidders to submit a notarized copy of a Site Visit Affidavit to be submitted with the Bid.

5. 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, Phone: 415-472-1033, extension 29. Where appropriate, the District may respond to such questions by addenda transmitted to all bid package recipients.

6. 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 MARINWOOD-HWY 101 TRUNK SEWER UNDERCROSSING EMERGENCY REPAIR 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.

7. SCOPE OF WORK. The Project work is generally described as:

- a. Trenchless rehabilitation of 420 LF of 18" diameter ABC (Asbestos Bonded Corrugated) underground sewer crossing at Highway 101 near Postmile 15.6-Miller Creek Rd overcrossing using cured-in-place-pipe (CIPP) lining.
- b. Surface restoration
- c. Bypass pumping
- d. Miscellaneous permit conditions set by Caltrans

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.

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. 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. In accordance with California Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are on file at the District Engineer's Office and will be made available on request. A copy of said 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.

10. 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/ Chris DeGabriele
Chris DeGabriele, Interim General Manager

Date: September 17, 2018

NO. 1233 SEPT 19, 2018

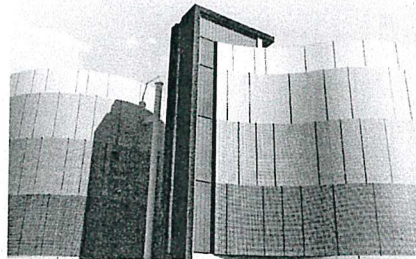
BTD Misc

At Last, EPA WIFIA Program Picks Up the Pace

After a long, slow warm-up lasting more than three years, the Environmental Protection Agency's water infrastructure loan program finally is rolling. Since April, EPA has cleared its first four Water Infrastructure Finance and Innovation Act, or WIFIA, loans, totaling just over \$1 billion, to help build major water projects.

EPA's WIFIA activity is likely to pick up steam. The agency still has fiscal 2017 funds available for other loans, and more are on the horizon. EPA on Aug. 16 said that for the fiscal 2018 WIFIA round, it received 62 letters of interest from applicants in 24 states and two territories. They requested a total of \$9.1 billion, which far exceeds EPA's \$5.5-billion loan capacity for 2018. The agency says it plans to announce the winners in the fall.

Allen S. Gray, director of the Associated General Contractors of America's utility infrastructure division, says the number of requests "shows that there is a larger demand out there that is not met and people are trying their hardest to find funding in any way they can." Gray says WIFIA loans are "another tool in the tool box to fund these badly needed projects."



TOP DOLLAR San Francisco PUC project received a \$699-million WIFIA loan, largest so far.

Congress authorized WIFIA in June 2014 for EPA and Army Corps of Engineers projects, basing it on the Transportation Dept. TIFIA program, created in 1998 for transportation projects. But due partly to an appropriations lag, EPA didn't approve its first loan until this April: \$134.5 million to King County, Wash., for a wastewater-stormwater treatment facility. So far, three other loans have been approved: \$69.7 million to the city of Omaha; \$699 million to the San Francisco Public Utilities Commission and, most recently, \$135 million on Aug. 1 to California's Orange County Water District. The Corps has yet to get fully underway on WIFIA.

WIFIA loans offer attractive terms. Besides low, federally subsidized interest

rates, borrowers can take as many as 35 years to pay them off and don't have to start repayments until five years after projects' "substantial completion."

"We're really excited about it," says Kristina Surfus, National Association of Clean Water Agencies director of legislative affairs. "I think it was initially thought that [WIFIA] would be a really strong program on the drinking-water side." She adds, "But the clean water side has had at least as much interest and success in getting some of the applications approved."

Three of the four loans cleared to date are for wastewater or stormwater projects. Of the 62 requests for fiscal 2018, 27 are for wastewater-treatment projects and 23 for drinking-water projects.

Congress has stepped up WIFIA funding, appropriating \$63 million in direct funds for the program in fiscal 2018, up from 2017's \$30 million. A further hike is likely. A House-passed 2019 spending bill has \$75 million for WIFIA; the Senate version has \$63 million. More than 85% of those sums may go for loan subsidies and support an estimated loan volume of up to \$8 billion. ■

By Tom Ichniowski

FRA Sees PTC Gains, but Some Railroads May Miss Target

U.S. railroads are making headway toward meeting the year-end deadline for having automatic train control systems in place, but nine commuter-rail lines remain "at risk" of failing to hit that target, the Federal Railroad Administration says.

To help railroads with their positive train control (PTC) push, FRA has awarded \$203.7 million in grants for such items as wayside signals and fiber-optic communications systems.

FRA's latest quarterly PTC update, released on Aug. 23, says that as of June 30, 15 railroads

had installed 100% of the equipment to operate the system. Another 12 carriers have 85% to 99% of the hardware in place. In all, the PTC mandate covers 41 railroads.

Freight railroads reported PTC in operation on 66% of their total route-miles, up from 37% as of June 30, 2017.

Commuter lines had operational PTC on 24% of their mileage, up just one percentage point from the year-earlier level.

Moreover, nine commuter railroads are still at risk of missing the year-end target, FRA reported.

That's down from about a dozen as of March 31.

The at-risk group includes the New Jersey Transit network, which had operating PTC on none of its 317 route-miles and only 26% of locomotives equipped with PTC devices as of June 30.

Nancy J. Snyder, an NJ Transit spokeswoman, said that "PTC installation remains our highest priority" and that the agency has "made substantial progress in the last six months. But she adds that "we have our work cut out for us over the next four months."

If railroads cannot comply with FRA requirements by Dec. 31, they may be able to qualify for an extension, or "alternative schedule," if they meet six conditions, including having all PTC hardware installed. An extension cannot carry beyond Dec. 31, 2020.

PTC is a combination of wayside and in-locomotive equipment that aims to prevent derailments and excessive train speed.

FRA's \$203.7 million in PTC grants, also announced on Aug. 23, went to 28 projects in 15 states. ■

By Tom Ichniowski

RENDERING BY MWA ARCHITECTS

North Bay leaders focus on warming

NOVATO SUMMIT

Gathering seeks regional plan for climate change

By Will Houston

whouston@marinij.com @Will_S_Houston on Twitter

Leaders from Marin, Napa and Sonoma counties assembled in Novato on Thursday to begin setting the stage for a regional approach to climate change — one that Edward Quevedo of the California-based Foresight+Innovation Lab said he thought has the potential to resonate throughout the world.

“From this place today we have a chance to create resonance,” Quevedo said to the crowd of nearly 100 officials gathered in the Buck Institute on Aging. “A reverberating sound and set of actions that people around the world will study 25 to 30 years hence and say, ‘What did they do in Novato on the 20th of September 2018 that led to this remarkable regional partnership that led the way for the world?’ “ Novato Mayor Joshua Fryday said while the North Bay would not solve every issue in that single day, he said the summit is an opportunity to learn what works in other communities, to ask hard questions and develop relationships to build off of.

“We have no option: our communities are counting on us to succeed and succeed together,” Fryday said to the attendees.

Following the initial speeches, attendees were able to break off to attend two of three workshops focusing on different aspects of climate change.

One workshop focused on transportation and mobility to discuss changes to city vehicle fleets, public transit systems and working conditions. Another workshop tackled carbon sequestration and regenerative agriculture. Discussions on

carbon-free cities, renewable energy, zero-energy buildings and other topics were discussed at a ‘Built Environment & Energy’ workshop.

The workshops were facilitated by Quevedo, Robert Gould of the Marin Climate Action Network and Aleka Seville of the Sonoma County Regional Climate Protection Authority.

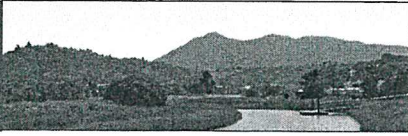
Quevedo said from these discussions, a common line is drawn that can act as a starting point for future efforts.

The summit was both a follow-up to the Global Climate Summit held in San Francisco last week and also a reaction to what many see as a rollback of environmental protections by the federal government.

Rep. Jared Huffman, D-San Rafael, was the keynote speaker at Thursday's summit, but said most of what he had to talk about was bleak. From pulling the U.S. out of the 2016 Paris Climate Accord to as recently as rolling back methane emission rules on industries this week, the Trump administration's efforts to undermine and censor discussion and policies on climate change underscores the need for local action, Huffman said.

"The biggest problem I have to report from Washington is that all these fights mean we're losing time," Huffman said to the crowd. "And to bring it back to what you're doing here and what I hope to be a call to action and not despair, it underscores the importance of all of you doing as much as you can right now, right here in our community. We are absolutely counting on you."

Watershed Works!



Bike The Watershed VIII Bicycle Ride & Picnic

• Alex Kahl, GWC Member

The Gallinas Watershed Council (GWC) in collaboration with the Marin County Bicycle Coalition (MCBC) held our eighth annual bike ride and picnic on August 25, 2018.

A group of 10 riders biked from the Marin Civic Center through the Gallinas Watershed in North San Rafael. We stopped along the way to point out watershed issues such as the Civic Center Lagoon, the cemented channel on Manuel Freitas, the LGVSD ponds, the levies through wetlands, and the SMART train stations. At the end of our scenic bike ride we hopped on a SMART train from Hamilton back to the Civic Center lagoon for a picnic.

"Bike The Watershed" bicycle rides are easy, fun, and educational for young and old. GWC has a mission to connect the people who live and work in Las Gallinas Valley with their creek and watershed, to advance local conservation action and promote watershed restoration, protection and education.

GWC membership is FREE. Sign up and learn more at www.gallinaswatershed.org.

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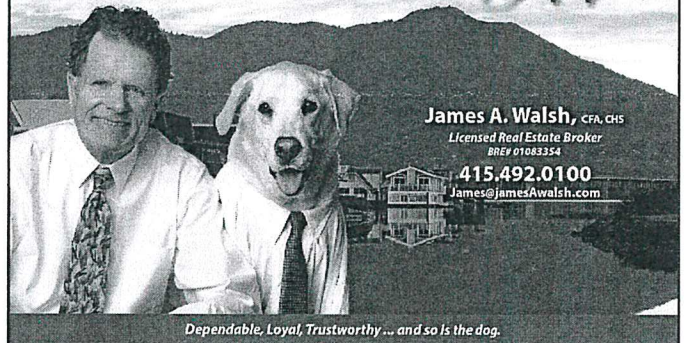
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2 COMMUNITY MEETINGS 7PM

Tuesday, 9/25/18 and 10/16/18

Korean Church, 635 Adrian Way at Rosal Way

6.10

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San Rafael Building Bridges - Spotlight on Helen Morales

• Sherri Patterson

During these polarized times, do you ever wish you could join others in bridging the divide? That is the dream of San Rafael Building Bridges (SRBB), a Santa Venetia-based group taking positive action. It's also the dream of new member Helen Morales, a dynamic, big hearted SV neighbor who has dedicated her life to others. Helen is from Guatemala and feels fortunate today to be the mother of four children who are outstanding students at top universities and high schools.



During her years in Guatemala, Helen became active in fighting for social justice. Eighty percent of Guatemala's people are indigenous, and they were being exploited because they didn't know their rights. Helen was an integral part of helping the indigenous community and also very active in promoting teacher's rights for greater pay and equity.

After Helen came to the US, she continued at College of Marin, AA in Early Childhood Ed. She is currently a pre-school teacher in the laboratory school at the Child Study Center. Like many teachers, Helen is "part social worker" and loves helping families deal with difficult problems.

San Rafael Building Bridges was lucky, just a few months ago, when Helen joined our group to help the Latino community and other immigrants. As a Latina, Helen partnered as a team with Janet Shirley, long-time Caucasian activist in our group, to knock on doors in Santa Venetia and invite neighbors to a "Families Belong Together" event. Although families were at first cautious, soon they were opening their doors wide. Many families also expressed fears about rent increases and ICE.

The experience was rewarding for everyone, and several families attended our "Families Belong Together" picnic Sunday, August 5th. While San Rafael Building Bridges raised over \$300 for immigrants at Canal Alliance, what was most invaluable was forging friendships. As Helen says, "the community is there waiting for someone to reach out to them."

Join us on this and other projects (environment, health care, etc.). Please feel free to come to one of our meetings, usually held on the fourth Thursday of the month at Parnow Friendship House, 164 N. San Pedro Road, next to the JCC. For further info, call Sherri at 415-686-9331. Helen would also like anyone in the Latino community who needs help to call her at 415-717-6199, or contact Canal Alliance, or leave a comment on the San Rafael Building Bridges Facebook page.

Discover the JCC Lifestyle - Something for All Ages in Your Neighborhood!

• Iris Lax, Osher Marin JCC

Go to www.marinjcc.org for more info on all of our programs!

9/30/18 at 4pm – The House Jacks + 'Til Dawn – A Capella

10/18/18 at 6pm – Osher Marin JCC 70th Anniversary Celebration honoring Barbro Osher & Rabbi Brian Lurie. Proceeds support the JCC Fund for the Future.

10/27/18 at 8pm – 4th Annual Costume Dance Party

11/17/18 at 7:30pm – Sing the Beatles II – The Quarry Persons

Join the Hall of Fame winner for best Fitness & Aquatics Center with indoor and outdoor pools (coupon for special offer & free day pass in this issue). Limited spots available in our Preschool for the 2018-19 School Year & Clubhouse J Afterschool Program for K-5th grade.

Also check out our Adult Classes & Excursions; Parent & Toddler Classes; and Swim Lessons for all ages. Plaza J Café featuring Peet's Coffee, Mighty Leaf Tea, Smoothies, Three Twins Ice Cream, House of Bagels, Sandwiches, Salads, Soups, Pastries, and Snacks (coupon for free coffee in this issue).

Las Gallinas Valley Sanitary District Wastewater Treatment Plant Upgrade

• Chris DeGabriele, Interim General Manager, Las Gallinas Valley Sanitary District (LGVSD), 415-472-1734

Las Gallinas Valley Sanitary District (District) was formed in 1954 by the voters in Santa Venetia to address public health problems due to failing septic systems. Sewerage collection mains and a treatment plant were then constructed. The 1950s/60s development boom in North San Rafael resulted in the annexation of Terra Linda followed by San Rafael Meadows, Marinwood, Lucas Valley and adjacent unincorporated county areas. The District now has over 11,000 connections along its 105 miles of sewer collection lines and serves over 30,000 people. The District's 28 sewage pump stations discharge to 35 miles of pressurized sewer mains all feeding the wastewater treatment and recycling facilities.

The existing treatment plant treats up to 8 million gallons of wastewater per day (MGD) to secondary treatment standards, which, in summer months, is suitable for pasture irrigation. The District and Marin Municipal Water District further treat 3.4 MGD of this flow to tertiary, Recycled Water use standards for outdoor irrigation at large landscapes, playing fields, golf courses, commercial car washes and indoor toilet flushing.

6 SVNA COMMUNICATOR SEPTEMBER/OCTOBER 2018

In winter during large storm events, flows to the treatment plant can exceed 8 MGD, and flows above this amount are only treated to primary levels and then blended with the secondary treated water prior to discharge to Miller Creek and San Pablo Bay. While this practice meets current regulatory requirements, the State Regional Water Quality Control Board is now pushing wastewater agencies to end blending. The District's Secondary Treatment Plant Upgrade and Recycled Water Expansion Project (Project) will increase the secondary treatment capacity to 18 MGD and increase the Recycled Water capacity to 5.4 MGD. Bids are now being solicited for the Project which has a construction cost estimate of \$49M. The Project is intended to reduce blending and provide future Recycled Water needs for the District, Marin Municipal and North Marin Water District. The District has sold bonds to pay for the project and Marin Municipal and a Federal WaterSmart grant are helping with funding.

Construction will start this fall with tree removal and relocation of PG&E overhead power lines. Construction on the treatment plant will start in earnest in January 2019 and continue for 3 years. Visitors to the District Reclamation Area ponds and hiking trails are urged to car pool whenever possible. The public will be impacted with one-way traffic, detours and limited parking along Smith Ranch Road adjacent to the treatment plant. Visit www.LGVSD.org to keep abreast of Project progress.

