



**BOARD MEETING AGENDA**  
**Monday, January 25, 2016**  
**Regular Meeting - 7:00 P.M.**

**Union Sanitary District**  
**Administration Building**  
**5072 Benson Road**  
**Union City, CA 94587**

**Directors**  
Manny Fernandez  
Tom Handley  
Pat Kite  
Anjali Lathi  
Jennifer Toy

**Officers**  
Paul R. Eldredge  
*General Manager/  
District Engineer*

Karen W. Murphy  
*Attorney*

1. Call to Order.

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2. Pledge of Allegiance.

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3. Roll Call.

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- Motion 4. Approve Minutes of the Meeting of January 11, 2015.

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5. Written Communications.

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6. Oral Communications.  
*The public may provide oral comments at regular and special Board meetings; however, whenever possible, written statements are preferred (to be received at the Union Sanitary District office at least one working day prior to the meeting). This portion of the agenda is where a member of the public may address and ask questions of the Board relating to any matter within the Board's jurisdiction that is not on the agenda. If the subject relates to an agenda item, the speaker should address the Board at the time the item is considered. Oral comments are limited to three minutes per individuals, with a maximum of 30 minutes per subject. Speaker's cards will be available in the Boardroom and are to be completed prior to discussion.*

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- Public Hearing 7. Consideration of Sewer Service Charge Rates for Fiscal Years 2017 to 2021
  - (a) Hold Public Hearing on Sewer Service Charges for Fiscal Years 2017 to 2021, Consider Protests and Cost of Service Study on Sewer Service Charge Rates for Fiscal Years 2017 through 2021; and
  - (b) Consider Adopting Ordinance No. 31.39, Amending Ordinance No. 31.38, Setting the Sewer Service Charges Specified Therein for Fiscal Years 2017 through 2021. *(to be reviewed by the Budget & Finance Committee).*

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- Motion 8. Consider Confirming and Declaring the Need to Continue the Emergency Action to Repair the 33 Inch Sewer on Alvarado Boulevard and Update on the Repairs *(to be reviewed by the Construction Committee).*

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- Information 9. Information Items:
  - a. Check Register.
  - b. Solar and Cogeneration Facilities Operational Update *(to be reviewed by the Budget & Finance Committee)*.

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- Information 10. Committee Meeting Reports. *(No Board action is taken at Committee meetings):*
  - a. Construction Committee – scheduled for Wednesday January 20, 2016, at 10:30 a.m.
  - b. Budget & Finance Committee – scheduled for Thursday, January 21, 2016, at 8:30 a.m.
  - c. Legal/Community Affairs Committee – will not meet.
  - d. Personnel Committee – will not meet.

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- Information 11. General Manager’s Report. *(Information on recent issues of interest to the Board)*.
 

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- 12. Other Business:
  - a. Comments and questions. *Directors can share information relating to District business and are welcome to request information from staff.*
  - b. Scheduling matters for future consideration.

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- 13. Adjournment – The Board will adjourn to the next scheduled Regular Meeting to be held in the Boardroom on Monday, February 8, 2016, at 7:00 p.m.

The Public may provide oral comments at regular and special Board meetings; however, whenever possible, written statements are preferred (to be received at the Union Sanitary District at least one working day prior to the meeting).

If the subject relates to an agenda item, the speaker should address the Board at the time the item is considered. If the subject is within the Board’s jurisdiction but not on the agenda, the speaker will be heard at the time “Oral Communications” is calendared. Oral comments are limited to three minutes per individual, with a maximum of 30 minutes per subject. Speaker’s cards will be available in the Boardroom and are to be completed prior to discussion of the agenda item.

The facilities at the District Offices are wheelchair accessible. Any attendee requiring special accommodations at the meeting should contact the General Manager’s office at (510) 477-7503 at least 24 hours in advance of the meeting.

THE PUBLIC IS INVITED TO ATTEND

**NOTICE OF  
COMMITTEE MEETING**

All meetings will be held in  
the General Manager's Office  
5072 Benson Road, Union City, CA 94587



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**BOARD MEETING OF JANUARY 25, 2016**

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**Committee Membership:**

|                         |  |
|-------------------------|--|
| Budget and Finance      | Directors Manny Fernandez and Pat Kite (Alt. – Jennifer Toy)     |
| Construction Committee  | Directors Tom Handley and Jennifer Toy (Alt. – Pat Kite)         |
| Legal/Community Affairs | Directors Pat Kite and Anjali Lathi (Alt. – Tom Handley)         |
| Legislative Committee   | Directors Manny Fernandez and Tom Handley (Alt–Pat Kite)         |
| Personnel Committee     | Directors Manny Fernandez and Jennifer Toy (Alt. – Anjali Lathi) |
| Audit Committee         | Directors Anjali Lathi and Jennifer Toy (Alt. Manny Fernandez)   |

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**Construction Committee, Wednesday, January 20, 2016, at 10:30 a.m.**

8. Consider Confirming and Declaring the Need to Continue the Emergency Action to Repair the 33 Inch Sewer on Alvarado Boulevard and Update on the Repairs.
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**Budget & Finance Committee, Thursday, January 21, 2016, at 8:30 a.m.**

7. Public Hearing: Consideration of Sewer Service Charge Rates for Fiscal Years 2017 to 2021
    - a) Hold Public Hearing on Sewer Service Charges for Fiscal Years 2017 to 2021, Consider Protests and Cost of Service Study on Sewer Service Charge Rates for Fiscal Years 2017 through 2021; and
    - b) Consider Adopting Ordinance No. 31.39, Amending Ordinance No. 31.38, Setting the Sewer Service Charges Specified Therein for Fiscal Years 2017 through 2021.
  - 9b. Solar and Cogeneration Facilities Operational Update.
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Committee meetings may include teleconference participation by one or more Directors.  
(Gov. Code Section 11123)

Committee Meetings are open to the public. Only written comments will be considered. No action will be taken.

**MINUTES OF THE MEETING OF THE  
BOARD OF DIRECTORS OF  
UNION SANITARY DISTRICT  
January 11, 2016**

**CALL TO ORDER**

President Toy called the meeting to order at 7:00 p.m.

**PLEDGE OF ALLEGIANCE**

**ROLL CALL**

PRESENT: Jennifer Toy, President  
Tom Handley, Vice President  
Pat Kite, Secretary  
Manny Fernandez, Director  
Anjali Lathi, Director

STAFF: Paul Eldredge, General Manager  
Karen Murphy, District Counsel  
James Schofield, Collection Services Manager  
Armando Lopez, Treatment & Disposal Services Manager  
Robert Simonich, Fabrication, Maintenance, and Construction (FMC) Manager  
Raymond Chau, Capital Improvements Projects (CIP) Coach  
Michelle Powell, Communications and Intergovernmental Relations Coordinator  
Mariela Espinosa, Customer Service Fee Analyst  
Regina McEvoy, Assistant to the General Manager/Board Secretary

**APPROVAL OF THE MINUTES OF THE MEETING OF DECEMBER 14, 2015**

It was moved by Secretary Kite, seconded by Director Fernandez, to Approve the Minutes of the Meeting of December 14, 2015. Motion carried unanimously.

**WRITTEN COMMUNICATIONS**

There were no written communications.

**ORAL COMMUNICATIONS**

There were no oral communications.

**AUTHORIZE THE GENERAL MANAGER TO EXECUTE TASK ORDER NO. 2 WITH BEECHER ENGINEERING TO PROVIDE ENGINEERING SERVICES DURING CONSTRUCTION OF THE MCC AND PLC REPLACEMENT PROJECT**

This item was reviewed by the Construction Committee. Capital Improvements Projects (CIP) Coach Chau stated the purpose of the Project will be to replace or modify aging

and unreliable electrical and controls equipment located at the Plant. Beecher Engineering completed design in October 2015, and the construction contract was awarded to D.W. Nicholson Corporation in November 2015. Staff recommended the Board authorize the General Manager to execute Task Order No. 2 with Beecher Engineering in the amount of \$56,520 to provide engineering services for construction of the MCC and PLC Replacement Project – Phase 3.

It was moved by Vice President Handley, seconded by Director Fernandez, to Authorize the General Manager to Execute Task Order No. 2 with Beecher Engineering to Provide Engineering Services During Construction of the MCC and PLC Replacement Project. Motion carried unanimously.

**AUTHORIZE THE GENERAL MANAGER TO EXECUTE TASK ORDER NO. 2 WITH CAROLLO ENGINEERS TO PROVIDE ENGINEERING SERVICES DURING CONSTRUCTION OF THE HIGH SPEED AERATION BLOWER PROJECT**

This item was reviewed by the Construction Committee. CIP Coach Chau stated staff executed an Agreement and Task Order No. 1 with Carollo Engineers for design of the High Speed Aeration Blower Project in January 2015. The purpose of the Project will be to install and pilot one 600-horsepower high speed aeration blower at the east aeration blower room. Carollo Engineers completed final design in October 2015. Staff opened bids on November 12, 2015, and the Board awarded the construction contract in the amount of \$1,065,500 to D.W. Nicholson Corporation on November 23, 2015. Staff recommended the Board authorize the General Manager to execute Task Order No. 2 with Carollo Engineers in the amount of \$42,752 to provide engineering services during construction of the High Speed Aeration Blower Project.

It was moved by Secretary Kite, seconded by Director Lathi, to Authorize the General Manager to Execute Task Order No. 2 with Carollo Engineers to Provide Engineering Services During Construction of the High Speed Aeration Blower Project. Motion carried unanimously.

**AUTHORIZE THE GENERAL MANAGER TO EXECUTE TASK ORDER NO. 3 WITH WEST YOST ASSOCIATES TO PROVIDE ENGINEERING SERVICES DURING CONSTRUCTION OF THE PLANT FACILITIES IMPROVEMENTS PROJECT**

This item was reviewed by the Construction Committee. CIP Coach Chau stated various equipment and facilities at the Plant and the Newark Pump Station are in need of rehabilitation, replacement, or modification. These improvements were combined into the larger Plant Facilities Improvements Project. The General Manager executed the Agreement and Task Order No. 1 with West Yost Associates (WYA) for Project preliminary design on November 13, 2014, and Task Order No. 2 was executed on April 27, 2015. The construction contract in the amount of \$1,570,346 was awarded to D.W. Nicholson Corporation on December 14, 2015. Staff recommended the Board authorize the General Manager to Execute Task Order No. 3 with West Yost Associates in the amount of \$62,965 to provide engineering services for construction of the Plant Facilities Improvements Project.

It was moved by Vice President Handley, seconded by Director Fernandez, to Authorize the General Manager to Execute Task Order No. 3 with West Yost Associates to Provide Engineering Services During Construction of the Plant Facilities Improvements Project. Motion carried unanimously.

**CONSIDER CONFIRMING AND DECLARING THE NEED TO CONTINUE THE EMERGENCY ACTION TO REPAIR THE 33-INCH SEWER ON ALVARADO BOULEVARD AND UPDATE ON THE REPAIRS**

This item was reviewed by the Construction Committee. CIP Coach Chau provided an update on the status of the repair of the 33-inch sewer on Alvarado Boulevard in Union City. Efforts to control the high groundwater level and unstable soils were unsuccessful and a trenchless repair was not feasible. Repairs will be accomplished using the open-cut method. Interlocking steel sheet piles have been installed to construct a shaft around the manhole and pipeline which will allow excavation of the soil down to the pipe. Westbound lanes on Alvarado Boulevard between Fredi Street and Fair Ranch Road have been closed since December 28, 2015, and the closure will continue through the duration of the project. At least one eastbound lane on Alvarado Boulevard will remain open throughout the repairs. The damaged 33-inch sewer will continue to be plugged with its flows bypassed through a permanent overflow pipe to the unaffected 39-inch trunk sewer. In addition, over 700 feet of the existing pipeline upstream and downstream of the damaged manhole will be rehabilitated. Following completion of the repairs, the interlocking sheet piles will be left in place to ensure stability. Pursuant to Public Contract Code section 22050, the Board is required to review the status of the emergency action at each subsequent meeting until the emergency action is terminated. Authorization to continue the emergency action must be approved by a four-fifths vote of the Board. Staff recommended the Board approve a motion to confirm and declare the need to continue the emergency action to repair the 33-inch sewer on Alvarado Boulevard.

It was moved by Director Fernandez, seconded by Secretary Kite, to Confirm and Declare the Need to Continue the Emergency Action to Repair the 33 Inch Sewer on Alvarado Boulevard. Motion carried unanimously.

**GENERAL DISTRICT ELECTION**

- a) **CONSIDER A RESOLUTION ORDERING, CALLING, PROVIDING FOR, AND GIVING NOTICE OF A GENERAL ELECTION TO BE HELD IN UNION SANITARY DISTRICT, ALAMEDA COUNTY, CALIFORNIA, ON JUNE 7, 2016, FOR THE PURPOSE OF ELECTING THREE DIRECTORS.**
- b) **CONSIDER A RESOLUTION ORDERING THE CONSOLIDATION OF THE UNION SANITARY DISTRICT GENERAL ELECTION ON JUNE 7, 2016 WITH THE DIRECT PRIMARY ELECTION TO BE HELD ON JUNE 7, 2016 AND REQUESTING THE BOARD OF SUPERVISORS OF THE COUNTY OF ALAMEDA TO CONSOLIDATE SAID GENERAL DISTRICT ELECTION WITH SAID DIRECT PRIMARY ELECTION TO BE HELD ON SAID DATE.**

This item was reviewed by the Legal/Community Affairs Committee. District Counsel Murphy stated Alameda County will conduct its statewide direct primary election on June 7, 2016, and it is customary to consolidate the District's general election with the primary election. The term of the following three seats will expire this year: Ward 1

(Union City), Ward 2 (Newark), and Ward 3 (Fremont). Following adoption of the proposed resolutions, a notice of consolidation must be filed with the Registrar of Voters. Staff recommended the Board adopt the proposed resolutions.

It was moved by Secretary Kite, seconded by Director Lathi, to Adopt Resolution No. 2771 Ordering, Calling, Providing for, and Giving Notice of a General Election to be Held in Union Sanitary District, Alameda County, California, on June 7, 2016 for the Purpose of Electing Three Directors. Motion carried unanimously.

It was moved by Director Lathi, seconded by Secretary Kite, to Adopt Resolution No. 2772 Ordering the Consolidation of the Union Sanitary District General Election on June 7, 2016 with the Direct Primary Election to be Held on June 7, 2016 and Requesting the Board of Supervisors of the County of Alameda to Consolidate Said General District Election with Said Direct Primary Election to be Held on Said Date. Motion carried unanimously.

### **INFORMATION ITEMS:**

#### **Check Register**

All questions were answered to the Board's satisfaction.

#### **Presentation for the Public Informational Meeting to be held January 12, 2016**

This item was reviewed by the Legal/Community Affairs Committee. General Manager Eldredge stated the District is proposing rate increases over the next five years to cover rising costs associated with providing service and maintaining aging infrastructure. The District recently mailed notices of a January 25, 2016, public hearing on the proposed rate changes to all property owners in Fremont, Newark, and Union City. The District will host an informational meeting to give customers the opportunity to talk with staff members and ask questions about proposed rate increases and services USD provides to the cities it serves. The informational meeting will be held from 6:00 – 8:00 p.m. at the Fremont Main Library located at 2400 Stevenson Boulevard in Fremont. General Manager Eldredge stated edits proposed by the Legal/Community Affairs Committee had been incorporated into hardcopies of the presentation which were provided at the meeting.

#### **Report on the East Bay Dischargers Authority (EBDA) Commission Meeting of December 17, 2015**

General Manager Eldredge stated the EBDA General Managers Report focused on a video inspection of the EBDA Outfall Pipe. The Commission was informed that there was a leak found at Location 7 near the San Leandro Channel. Inspection of the Outfall Pipe will resume in spring 2016. The Managers Advisory Committee discussed the need to replace the Hayward Effluent Pump Station (HEPS) and how it should be accomplished. The Financial Management Committee reviewed the Valuation of Retiree Health Benefits (as of July 1, 2015), and recommended approval of Resolution 15-24 accepting the GASB 45 valuation report. The Operations and Maintenance Committee reviewed the EBDA Outfall Pipe Inspection, discussed the need for a pump replacement at the Alvarado Effluent Pump Station, and the HEPS Motor Control Center replacement.

#### **COMMITTEE MEETING REPORTS:**

The Construction and Legal/Community Affairs Committees met.

## **GENERAL MANAGER'S REPORT:**

General Manager Eldredge reported the following:

- The Microbead-Free Waters Act of 2015 was signed into law by the President December 28, 2015. Manufacturing rinse-off cosmetics that contain intentionally-added plastic microbeads will be banned beginning July 1, 2017, and such products cannot be sold beginning January 1, 2018.
- PG&E staff contacted the District at 3:30 a.m. on Saturday January 9, 2016, requesting assistance removing a sewer line located beneath the intersection of Christy Street and Albrae Avenue in Fremont. The line needed to be removed in order for PG&E to complete one of its projects. The City of Fremont issued a Nixle report which erroneously indicated the excavation was a sinkhole with a sewage leak. There was groundwater present at the site which District staff tested and confirmed no sewage was detected. District staff completed removal of the sewer line per PG&E's request without incident.
- Aaron Shong began work as the District's new Mechanic II on January 11, 2016.
- FMC mechanics recently started a new work schedule and are now uniformly working 6:00 a.m. – 3:30 p.m.
- The new Business Services Manager/CFO Pamela Arends-King first day at the District will be January 13, 2016.
- The Co-digestion Pilot Project is continuing with the feed at a rate of 3.5 gallons per minute.
- District staff will conduct a public Informational Meeting at the Fremont Main Library from 6:00 – 8:00 p.m. on January 12, 2016.
- Technical Services Manager Ghossain will attend the Union City Council meeting on January 12, 2016, to present information regarding the upcoming Alvarado-Niles Road Sanitary Sewer Rehabilitation Project.
- General Manager Eldredge will present a general overview of the District and its services as well as information regarding currently proposed rates at the Newark City Council meeting on January 14, 2016.
- General Manager Eldredge will be presenting at the Fremont Chamber of Commerce Government Affairs Committee meeting to be held at the Fremont Chamber of Commerce Office at 7:30 a.m. on January 27, 2016.

## **OTHER BUSINESS:**

Director Lathi stated she recently participated in a General Manager Evaluations webinar, which addressed intermediate check-ins with a general manager. Director Lathi recommended the Board consider intermediate check-in's with the General Manager in addition to annual evaluations. Director Lathi requested the item be brought back to the Board for consideration.

Director Lathi also requested a future agenda item to allow the Board to consider conducting a workshop to assess a communications strategy to include social media.

Vice President Handley agreed with Director Lathi's requests. Both items will be included on the February 8, 2016, Board meeting agenda.

Director Lathi also requested Attorney Murphy to provide the Board with information on reporting out of closed sessions.

**ADJOURNMENT:**

The meeting was adjourned at 7:56 p.m. to the next scheduled Regular Board Meeting to be held in the Boardroom on Monday, January 25, 2016, at 7:00 p.m.

SUBMITTED:

ATTEST:

\_\_\_\_\_  
REGINA McEVOY  
SECRETARY TO THE BOARD

\_\_\_\_\_  
PAT KITE  
SECRETARY

APPROVED:

\_\_\_\_\_  
JENNIFER TOY  
PRESIDENT

Adopted this 25<sup>th</sup> day of January, 2016



**Directors**  
Manny Fernandez  
Tom Handley  
Pat Kite  
Anjali Lathi  
Jennifer Toy

**Officers**  
Paul R. Eldredge  
*General Manager/  
District Engineer*

Karen W. Murphy  
*Attorney*

**DATE:** January 19, 2016

**MEMO TO:** Board of Directors - Union Sanitary District

**FROM:** Paul R. Eldredge, General Manager / District Engineer  
Karen Murphy, General Counsel

**SUBJECT:** Agenda Item No. 7 – Meeting of January 25, 2016  
**CONSIDERATION OF SEWER SERVICE CHARGE RATES FOR FISCAL YEARS 2017 TO 2021:**  
**(A) HOLD PUBLIC HEARING ON SEWER SERVICE CHARGES FOR FISCAL YEARS 2017 TO 2021, CONSIDER PROTESTS AND COST OF SERVICE STUDY ON SEWER SERVICE CHARGE RATES FOR FISCAL YEARS 2017 THROUGH 2021; AND**  
**(B) CONSIDER ADOPTING ORDINANCE NO. 31.39, AMENDING ORDINANCE NO. 31.38, SETTING THE SEWER SERVICE CHARGES SPECIFIED THEREIN FOR FISCAL YEARS 2017 THROUGH 2021.**

### **Recommendation**

- (a) Hold Public Hearing on sewer service charges for Fiscal Years 2017 to 2021, consider protests and cost of service study on sewer service charge rates for fiscal years 2017 through 2021; and
- (b) Consider adopting Ordinance 31.39, amending Ordinance No. 31.38, setting the sewer service charges specified therein for fiscal years 2017 through 2021.

### **Background**

Serving the cities of Fremont, Newark, and Union City, Union Sanitary District manages a large collection of facilities that includes over 800 miles of sewer lines, seven pump stations, and the buildings and equipment at the Union City Wastewater Treatment Plant. In total, the District is responsible for operating, maintaining, and replacing over \$650.9 million of assets. The District's FY 2016 operating budget is approximately \$60.2 million, and raises revenue from two primary sources: (1) Sewer service charges paid by residential customers, businesses, and other users of the system; and (2) Capacity fees paid by developers and others who connect to USD's system.

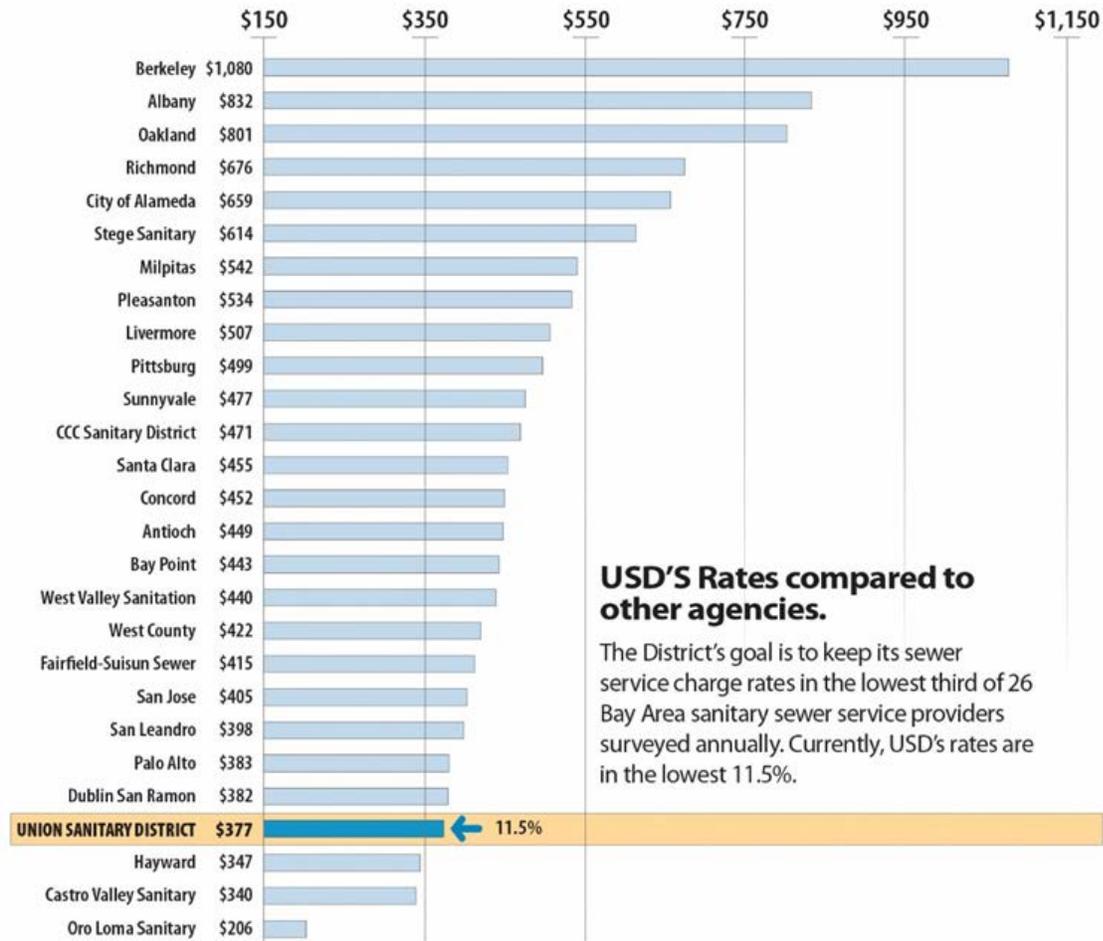
A public hearing notice was sent to all USD customers in early December of 2015 pursuant to Article XIII(D), Section 6 of the California Constitution and California Government Code Section 53755. The proposed rates are based on the results of the most recent, comprehensive study of the cost of providing sewer service from July 2016 through June 2021. This study calculated rates by determining the fair allocation of costs for sewer service between residential, commercial, and industrial users based on each class' use of services and impact on the system. State law requires the District to establish rates sufficient to cover operating expenses, including interest on debts, and expenses necessary for the replacement or construction of facilities.

**Proposed Rates**

Prior to 2004, USD had not increased rates since 1997. During that time, the District used reserves to finance the majority of its capital improvements, significantly depleting this critical account. Beginning in 2004, USD implemented a rate increase program to fund these improvements and keep pace with increasing operation costs facing the agency. This was to implement the Board of Directors' philosophy of keeping rates relatively stable over time, and protect ratepayers from large rate increases that often occur in a service delivery business. The below table summarizes the sewer service charges for all customer classifications for FYs 2017-2021.

|   | FY 17    | FY 18    | FY 19    | FY 20    | FY 21    |
|---|----------|----------|----------|----------|----------|
| <b>Residential (\$/Dwelling Unit)</b>               |          |          |          |          |          |
| Single Family Residences                            | \$380.05 | \$393.35 | \$407.12 | \$421.37 | \$436.12 |
| Multiple Family Residences                          | \$329.50 | \$341.03 | \$352.97 | \$365.32 | \$378.11 |
|   |          |          |          |          |          |
| <b>Commercial (\$/1,000 gals)</b>                   |          |          |          |          |          |
| Strong  | \$9.59   | \$9.93   | \$10.28  | \$10.64  | \$11.01  |
| Moderate  | \$4.74   | \$4.90   | \$5.07   | \$5.25   | \$5.43   |
| Weak  | \$3.95   | \$4.08   | \$4.23   | \$4.37   | \$4.53   |
| Fast-Food Restaurant                                | \$8.97   | \$9.29   | \$9.61   | \$9.95   | \$10.30  |
| Full-Service Restaurant                             | \$11.89  | \$12.30  | \$12.73  | \$13.18  | \$13.64  |
|   |          |          |          |          |          |
| <b>Industrial</b>                                   |          |          |          |          |          |
| Volume (\$/1,000 gals)                              | \$2.23   | \$2.31   | \$2.39   | \$2.48   | \$2.56   |
| COD (\$/1,000 lbs)                                  | \$296.05 | \$306.41 | \$317.14 | \$328.24 | \$339.72 |
| Suspended Solids (\$/1,000 lbs)                     | \$688.62 | \$712.72 | \$737.66 | \$763.48 | \$790.20 |
|   |          |          |          |          |          |
| <b>Minimum Charge for non-residential customers</b> | \$329.50 | \$341.03 | \$352.97 | \$365.32 | \$378.11 |

USD conducts an annual rate comparison survey of 26 Bay Area wastewater agencies. The District's goal is to remain in the lower 1/3 of agencies surveyed (i.e. USD's rates would be lower than 2/3 of neighboring agencies). Today, only **three** districts have lower rates. A summary of this rate comparison is shown graphically below:



The District conducted a survey of these 26 Bay Area sewer service providers to see how many did a multi-year rate study. The following is a summary of the results of this inquiry (note: 1 agency did not respond)

- 7\*** agencies propose rates **1 year** at a time
- 2** agencies propose rates for **2 years**
- 1** agency proposes rates for **3 years**
- 15** agencies propose rates for **5 years**

*\* it is important to note that 3 of the 7 agencies that propose rates every year are from the same agency (Delta Diablo). We track the rates separately for each of the areas served by Delta Diablo as each has a different rate due to collection system or other expenses.*

Historically the District has considered rate increases in three year increments. Staff is recommending that the District consider implementing rates over a five year period. Multiyear rate studies are done in the interest of cost and time efficiency. The typical rate study process last anywhere from 8 to 12 months with direct costs of approximately \$121,000, not including staff time. Proposition 218 specifically allows rates to be set over a five year period, and based upon the survey results above, the District would be consistent with many other sewer service providers.

The rates proposed represent the maximum the District can charge for providing this service. Approval of the proposed rates for the recommended time frame does not preclude the District from re-evaluating the rate structure and corresponding inputs should conditions warrant within this five year period. If conditions warranted a reduction in rates for example, the District could authorize a rate reduction as long as it was done proportionally to ensure that any reduction is consistent between customer classes. The District would also need to make sure that reserve requirements would still be met with the reduced revenues. However, should circumstances necessitate rates greater than what is currently proposed during this time frame, the District would need to prepare a new rate analysis and conduct a new Proposition 218 hearing process.

#### **Public Outreach**

The District is legally required to notify all rate paying customers via a mailed notice and set a public hearing pursuant to Proposition 218. The District's Board of Directors had provided direction to staff that additional outreach beyond the legal requirements is prudent and desired. Staff developed and implemented a comprehensive public outreach program that is summarized below:

- Mailed a Public Hearing notification to all rate payers
- Issued two separate press releases to all local newspapers
- Conducted a public informational meeting
- Notified the Cities and offered to present at a City Council meeting
- Reached out to various stakeholders

#### **Procedures for Proposed Public Hearing**

Article XIII(D), Section 6 of the California Constitution requires the Board to consider written protests to the proposed increases of utility charges. A majority protest exists if written protests are timely submitted and not withdrawn by the parcel owners of a majority (50% plus 1) of the parcels subject to the proposed charge. In this instance the District would need to receive approximately 47,709 protests to trigger a majority protest.

Upon the conclusion of the public hearing and once any public testimony is received by the Board and any remaining protests are submitted, it is recommended that the Board shall take a short recess to allow the ballots to be tabulated by the Assistant to the GM/Board Secretary (and designee's).

If the total number of protests received are obviously substantially fewer than the number required to constitute a majority protest, the Assistant to the GM/Board Secretary may

determine the absence of a majority protest without validating and tabulating all of the protest received. (i.e. the number of protest received is clearly less than the 47,709 required to trigger a majority protest).

Upon the conclusion of the protest tabulation the Board president shall reconvene the meeting and the Assistant to the GM/Board Secretary shall report the results of the tabulation to the Board. If a majority protest exists then the Board is precluded from proceeding with the proposed increase, however, if a majority protest does not exist then the Board may consider the item.

Should it be warranted, the Board shall consider the ordinance that would set the rates for the five year period. As mentioned previously, adoption of this ordinance does not preclude the District from re-evaluating these rates should conditions or circumstances warrant over this proposed five year time frame. Staff is recommending adoption of the rates as proposed over the five years. Also, staff is recommending that the ordinance be adopted with all of the proposed rates included which would preclude the administrative process of bringing the ordinance back every year. However, the District will continue to hold an annual public hearing for the Board to consider if the rates should be placed on the tax roll. This is a majority protest hearing, but only for the consideration of collecting the rates on the tax roll or not. If for example, a sufficient number of protest were received for the annual hearing, the Districts rate structure would still be valid, however, the District would need to collect the sewer charges in some other fashion other than the tax roll.

**UNION SANITARY DISTRICT  
ORDINANCE NO. 31.39**

AN ORDINANCE ESTABLISHING SEWER SERVICE CHARGES FOR FISCAL YEAR 2017 THROUGH 2021 FOR SERVICES AND FACILITIES FURNISHED BY DISTRICT'S WASTEWATER SYSTEM, COLLECTION PROCEDURES, PENALTIES FOR DELINQUENCY, AND RESTRICTION ON USE OF FUNDS DERIVED

The Board of Directors of the UNION SANITARY DISTRICT does ordain as follows:

**ARTICLE I**

**GENERAL**

**SECTION 1. PURPOSE**

- (a) The purpose of the sewer service charge is to raise revenue for the cost of maintenance and operation of the UNION SANITARY DISTRICT wastewater facilities used for the collection, treatment and disposal of wastewater, industrial wastewater, industrial waste, and payment of principal and interest on bonds or other debt service and capital recovery costs in accordance with Federal and State Revenue Program guidelines. The funds derived from the sewer service charge shall be used for only those purposes provided for in Division 5, Part 3, Chapter 6, Article 4 (commencing with Section 5470) of the Health and Safety Code of the State of California.
- (b) The purpose of this Ordinance is to establish a method of allocating the cost of operation of the District's collection, transport, and treatment facilities among the users of sewer service in proportion to the cost to serve each. For commercial and industrial dischargers, an estimation of the relevant wastewater flow and constituents loadings are utilized, which are known to be historically accurate.
- (c) Quantity of wastewater flow is an important factor in the cost of collection, transport and treatment of industrial and commercial wastewater discharge. Therefore, the quantity of discharge is calculated from flow for the prior year. These flows may vary widely over time and from customer to customer. The District bills industrial and commercial users the following year for what is in essence the previous year's discharge. For this reason there can be no adjustments to sewer service charges based only upon a change in water usage for a particular industrial or commercial user. This change in usage will be reflected in the ensuing year's bill.

**ARTICLE II**

**DEFINITIONS**

**SECTION 1. DWELLING UNITS**

The following residential establishments shall be deemed to have the following number of dwelling units:

- (a) Single family residential dwelling, designed for occupancy by one family: one dwelling unit.
- (b) Multiple family residential dwelling, including duplex, triplex, fourplex, townhouse or condominium, apartment house, mobile home park or other multi-residential establishment, designed for occupancy for living purposes by more than one family, which is divided into separate

housekeeping units, each of which is designed for occupancy by one family only: each housekeeping unit shall be deemed to be one dwelling unit.

**SECTION 2. DOMESTIC WASTEWATER**

Wastewater of a quality essentially similar to that of a single family dwelling.

**SECTION 3. COMMERCIAL OR INSTITUTIONAL USE**

Any parcel or portion thereof discharging non-domestic wastewater and shall include the following:

- (a) Parcels used for commercial or business purposes.
- (b) Hotel, auto court, motel and similar transient living facilities.
- (c) Schools, churches, hospitals, convalescent homes, parks, public office and service buildings, public transportation facilities, or other types of public facilities or publicly owned facilities available for public use.

**SECTION 4. INDUSTRIAL**

Any parcel or portion thereof used for manufacturing, processing or other operations which discharges non-domestic wastewater by reason of manufacturing, processing or other operations involved.

**SECTION 5. OWNER**

Any person, individual, firm, company, partnership, association, and private or public and municipal corporations, the United States of America, the State of California, districts and all political subdivisions, governmental agencies which owns real property from which wastewater flows to the District's wastewater collection system as reflected on the Alameda County Assessor's Roll or, for tax-exempt agencies, in such other records upon which the District may reasonably rely.

**SECTION 6. FAST FOOD RESTAURANTS**

Restaurants that serve all food on disposable plates, cups and utensils.

**SECTION 7. FULL SERVICE RESTAURANTS**

Restaurants with sit down service that utilize washable plates, cups or utensils.

**ARTICLE III**  
**SEWER SERVICE CHARGE**

**SECTION 1. CLASSIFICATION**

The owner of each parcel of property as it appears on the Assessor's records of Alameda County lying within the UNION SANITARY DISTRICT and upon which there are wastewater facilities shall pay a sewer

service charge in accordance with the purpose for which said parcel is used, as hereinafter set forth in Section 2. In the event that the use of any parcel results in the discharge of wastewater in more than one classification, there shall be an annual charge for each classification of use of said parcel and the annual sewer service charges for such parcel shall be the aggregate of all such annual charges.

**SECTION 2. RATES FOR FISCAL YEARS 2017 THROUGH 2021**

(a) The below table summarizes the sewer service charges for all customer classifications for FYs 2017-2021.

|   | FY 17    | FY 18    | FY 19    | FY 20    | FY 21    |
|---|----------|----------|----------|----------|----------|
| <b>Residential (\$/ Dwelling Unit)</b>              |          |          |          |          |          |
| Single Family Residences                            | \$380.05 | \$393.35 | \$407.12 | \$421.37 | \$436.12 |
| Multiple Family Residences                          | \$329.50 | \$341.03 | \$352.97 | \$365.32 | \$378.11 |
|   |          |          |          |          |          |
| <b>Commercial (\$/1,000 gals)</b>                   |          |          |          |          |          |
| Strong  | \$9.59   | \$9.93   | \$10.28  | \$10.64  | \$11.01  |
| Moderate  | \$4.74   | \$4.90   | \$5.07   | \$5.25   | \$5.43   |
| Weak  | \$3.95   | \$4.08   | \$4.23   | \$4.37   | \$4.53   |
| Fast-Food Restaurant                                | \$8.97   | \$9.29   | \$9.61   | \$9.95   | \$10.30  |
| Full-Service Restaurant                             | \$11.89  | \$12.30  | \$12.73  | \$13.18  | \$13.64  |
|   |          |          |          |          |          |
| <b>Industrial</b>                                   |          |          |          |          |          |
| Volume (\$/1,000 gals)                              | \$2.23   | \$2.31   | \$2.39   | \$2.48   | \$2.56   |
| COD (\$/1,000 lbs)                                  | \$296.05 | \$306.41 | \$317.14 | \$328.24 | \$339.72 |
| Suspended Solids (\$/1,000 lbs)                     | \$688.62 | \$712.72 | \$737.66 | \$763.48 | \$790.20 |
|   |          |          |          |          |          |
| <b>Minimum Charge for non-residential customers</b> | \$329.50 | \$341.03 | \$352.97 | \$365.32 | \$378.11 |

(b) Residential units, as defined in Section 1 of Article II, shall be subject to the following rates:

Single family residential dwelling units as defined in Section 1(a) of Article II: FY 2017 \$380.05 per dwelling unit per year, FY 2018 \$393.35 per dwelling unit per year, FY 2019 \$407.12 per dwelling unit per year, FY 2020 \$421.37 per dwelling unit per year, and FY 2021 \$436.12 per dwelling unit per year.

Multiple family residential dwelling units as defined in Section 1(b) of Article II: FY 2017 \$329.50 per dwelling unit per year, FY 2018 \$341.03 per dwelling unit per year, FY 2019 \$352.97 per

dwelling unit per year, FY 2020 \$365.32 per dwelling unit per year, and FY 2021 \$378.11 per dwelling unit per year.

- (c) Each non-residential parcel of land connected to the District's sewer system is subject to a minimum charge equal to one multiple family residential dwelling unit as listed in (b) above. Sewer service charges for non-residential units that exceed the minimum rate specified above in subsection (b) shall be calculated as follows:
  
- (d) Rates for commercial or institutional uses as defined in Section 2 of Article II, or wastewater discharged from industrial uses as defined in Section 3 of Article II that are not sampled by the District, shall be determined by classifying the wastewater flowing from that parcel into one of three strength classifications: strong, moderate or weak. Unit rates for the volume of wastewater discharged and examples of the types of uses which fall into the strong, moderate and weak categories are as follows:

Strong: FY 2017 \$9.59 per 1,000 gallons discharged per year, FY 2018 \$9.93 per 1,000 gallons discharged per year, FY 2019 \$10.28 per 1,000 gallons discharged per year, FY 2020 \$10.64 per 1,000 gallons discharged per year, and FY 2021 \$11.01 per 1,000 gallons discharged per year.

Examples of establishments assigned to the strong user classification group include, but are not limited to the following: auto steam cleaners, bakeries, restaurants, markets with a bakery or deli, mortuaries, bowling alleys with dining facilities. The strong strength category is based on an average wastewater strength for the group of 489 milligrams per liter of suspended solids, and 1,839 milligrams per liter of chemical oxygen demand.

Moderate: FY 2017 \$4.74 per 1,000 gallons discharged per year, FY 2018 \$4.90 per 1,000 gallons discharged per year, FY 2019 \$5.07 per 1,000 gallons discharged per year, FY 2020 \$5.25 per 1,000 gallons discharged per year, and FY 2021 \$5.43 per 1,000 gallons discharged per year.

Examples of establishments assigned to the moderate user classification group include, but are not limited to the following: car washes, service stations, bars, dining and reception halls, hotels and motels without dining facilities, hospitals, convalescent homes, mixed multi-tenant retail (unless a more specific rate applies), cold storage facilities, theaters, medical offices, and miscellaneous commercial and industrial. The moderate strength category is based on an average wastewater strength for the group of 199 milligrams per liter of suspended solids, and 536 milligrams per liter of chemical oxygen demand.

Weak: FY 2017 \$3.95 per 1,000 gallons discharged per year, FY 2018 \$4.08 per 1,000 gallons discharged per year, FY 2019 \$4.23 per 1,000 gallons discharged per year, FY 2020 \$4.37 per 1,000 gallons discharged per year, and FY 2021 \$4.53 per 1,000 gallons discharged per year.

Examples of establishments assigned to the weak user classification group include, but are not limited to the following: gardens/nurseries, libraries, retail stores, schools, churches, spas and health clubs, professional offices, and soft water processing. The weak strength category is based on an average wastewater strength for the group of 144 milligrams per liter of suspended solids, and 331 milligrams per liter of chemical oxygen demand.

- (e) Restaurants shall pay either the rate for Fast Food Restaurants or Full Service Restaurants as defined in Sections 6 and 7 of Article II. Unit rates for the volume of wastewater discharged are as follows:

Fast Food Restaurants: FY 2017 \$8.97 per 1,000 gallons, FY 2018 \$9.29 per 1,000 gallons, FY 2019 \$9.61 per 1,000 gallons, FY 2020 \$9.95 per 1,000 gallons, and FY 2021 10.30 per 1,000 gallons.

Full Service Restaurants: FY 2017 \$11.89 per 1,000 gallons, FY 2018 12.30 per 1,000 gallons, FY 2019 \$12.73 per 1,000 gallons, FY 2020 \$13.18 per 1,000 gallons, and FY 2021 \$13.64 per 1,000 gallons.

- (f) Rates for industrial use as defined in Section 3 of Article II and uses that have wastewater sampled by the District shall be based on the total volume, chemical oxygen demand and suspended solids discharged to the District's sewer system. The charges for these three components shall be calculated and added to arrive at the total sewer service charge. The unit rates for each of the three components are provided below:

Volume: FY 2017 \$2.23 per 1,000 gallons per year, FY 2018 \$2.31 per 1,000 gallons per year, FY 2019 \$2.39 per 1,000 gallons per year, FY 2020 \$2.48 per 1,000 gallons per year, FY 2021 \$2.56 per 1,000 gallons per year.

Chemical Oxygen Demand: FY 2017 \$296.05 per 1,000 pounds per year, FY 2018 \$306.41 per 1,000 pounds per year, FY 2019 \$317.14 per 1,000 pounds per year, FY 2020 \$328.24 per 1,000 pounds per year, and FY 2021 \$339.72 per 1,000 pounds per year.

Suspended Solids: FY 2017 \$668.62 per 1,000 pounds per year, FY 2018 \$712.72 per 1,000 pounds per year, FY 2019 \$737.66 per 1,000 pounds per year, FY 2020 \$763.48 per 1,000 pounds per year, and FY 2021 \$790.20 per 1,000 pounds per year.

### **SECTION 3. ADJUSTMENTS**

The owner of any parcel subject to the scheduled charges set forth in Section 2 above may appeal to the Union Sanitary District staff if owner believes that the charges imposed do not fairly reflect the quantity of discharge to the sanitary sewer for any period. Any appeal should be made within ninety (90) days of receiving the bill for the service charge. In most instances, the Union Sanitary District staff, Customer Service Coach and/or General Manager, will make any adjustment which is in order. Any such appeal can only relate to the quantity of non-domestic wastewater actually discharged to the sewer system and cannot relate to strength of discharge or category of discharger. The Union Sanitary District staff will have forty-five (45) days to act on any request for adjustment or the request will be deemed denied. After a decision on the adjustment request, the owner will have fifteen (15) days to appeal to the Board of Directors, in writing. The Board of Directors shall act on such appeal at a noticed hearing within sixty (60) days. The determination of an appeal by the Board of Directors of Union Sanitary District shall constitute a final determination of the District regarding any requested adjustment and shall be subject to judicial review pursuant to California Code of Civil Procedure section 1094.5.

**SECTION 4. OPTIONAL SERVICES**

- (a) Segregation of Charges for Multi-tenant Parcels — Sewer service charges for parcels of land with multiple occupancies shall be determined by assigning the parcel into one of three strength categories, strong, moderate, or weak as defined by this Ordinance. This determination shall be made by the District based on the quantity of flow from each strength category. The strength category which includes a majority of flow shall be the strength category assigned to the entire parcel.
- (b) As an optional service, an owner may request in writing that the District segregate the annual sewer service charges by considering the flow from each water meter on a property as a separate calculation. The flow from each water meter would be assigned into one of three strength categories (strong, moderate, or weak) or into one of the restaurant categories and calculated separately. The charge for each water meter shall be totaled and the entire amount billed to the parcel with the property tax bill. When the charges are segregated, a written breakdown of the District's strength assignments and calculations will be provided to the owner by October first of each year. To request the start or stop of this optional service, an owner or his or her authorized representative shall give written notice by June first for the upcoming fiscal year starting July first. Upon receipt of written request for this optional service, the District will continue to segregate the charges each year until it is given a written notice to discontinue the service.
- (c) In order to qualify for and receive this optional service, an owner must provide documentation acceptable to the District (such as a site plan or plumbing plan) showing which water meters serve which tenants. Insufficient documentation, as determined by the District, will be grounds to deny this optional service to an owner.
- (d) Owners who request this optional service shall pay an annual service charge, which shall be added to the total sewer service charges and collected with the property tax bill. Annual service charges shall be as follows:

\$50.00 Per year per water meter, for the first year the service is started or re-started;

\$25.00 Per year per water meter, for the second and succeeding years the service is provided.

**ARTICLE IV**  
**BILLING AND COLLECTING**

**SECTION 1. MAILING**

Except as provided elsewhere in this Ordinance, the District shall ascertain the amount of each sewer service charge applicable to each parcel in the District, and shall mail to the owner thereof a bill for the first installment on or before November 1 of each year, and a bill for the second installment on or before the following February 1 of each year. Each bill so mailed shall contain a statement that a delinquency in payment for sixty (60) days shall constitute a lien against the parcel against which the charge is imposed, and that when recorded shall have the force, effect and priority of a judgment lien for three years unless sooner released or otherwise discharged. Failure of the District to mail any such bill or failure of an owner

to receive any such bill shall not excuse an owner of any parcel from the obligation to pay any sewer service charge for any parcel he, she or it owns.

**SECTION 2. DUE DATES OF CHARGES**

All sewer service charges shall become due and payable in the following installments. One-half thereof on November 1 of each year and one-half thereof on the following February 1 of each year.

**SECTION 3. DELINQUENCY DATES**

The first installment due on November 1 of each year is delinquent if not paid by 5:00 P.M. on December 10 of each year. The second installment due February 1 of each year is delinquent if not paid by 5:00 P.M. on the following April 10 of each year.

(a) Government and Other Non-Taxable Parcels. For all government or public parcels or for any parcel which is not subject to property taxation or otherwise not on the tax roll, the sewer service charge shall become due and payable on January 1 of each year and is delinquent if not paid by 5:00 P.M. on February 15 of each year.

**SECTION 4. PENALTIES FOR NON-PAYMENT, LIEN**

Except as otherwise provided by ordinance, resolution, or regulation of the District for collection of sewer service charges or by law, whenever a delinquency shall occur for non-payment, a penalty shall be paid in accordance with the requirements of the Alameda County Tax Collector. After delinquency for sixty (60) days, such unpaid charge and penalty shall constitute a lien upon the parcel of land against which the charge was levied.

**SECTION 5. TIMING OF SEWER SERVICE CHARGE CALCULATIONS**

- (a) The sewer service charge to be billed for the current fiscal year is calculated based on water use and pollutant strength records for the period March to February in the preceding fiscal year.
- (b) An owner of property served by Union Sanitary District is responsible for the payment of sewer service charges regardless of whether or not that owner actually conducts any business or utilizes any services for wastewater disposal on the premises. The charges made herein are for the fiscal year beginning July 1 and ending the following June 30.
- (c) In the event a non-residential property receives a new connection from the Alameda County Water District after March of a given year, a minimum charge will be imposed per Article III, Section 2c; the following year, the sewer service charge imposed will be calculated on the basis of water usage for the previous fiscal year. Residential parcels will charged per Article III, Section 2b.

**SECTION 6. RESPONSIBILITY TO PAY**

In the event of a sale or transfer of real property, the owner of record when the annual sewer service charge bill is payable (one-half each on November 1 and February 1 of each year) is responsible for

payment of charges. It is understood that the current owner will be assessed sewer service charges based on flows as calculated in Section 2 of Article III and Section 6 of Article IV. It shall be the responsibility of the prior and new owners to account for the payment of upcoming sewer service charges in their real property transfer agreements. Notwithstanding such accounting, the owner of record at the time the annual sewer service charge is payable is responsible for payment.

## **ARTICLE V ENFORCEMENT**

### **SECTION 1. FAILURE TO PAY**

In the event of the failure of any owner to pay when due any sewer service charges, applicable to a parcel he, she or it owns, the District may enforce payment of such delinquent charges in any of the following manners:

- (a) The District may have such parcel disconnected from the sanitary sewer system. In the event such disconnection should create a public hazard or nuisance, the District General Manager or the Manager's representatives may enter upon the parcel for the purpose of doing such things as may be reasonably necessary to alleviate or remove such hazard or menace.

The owner of such parcel shall have a duty to reimburse the District for all expenses incurred by District in disconnecting any such parcel, or in doing other things authorized by this Section; and no reconnection shall be made until all charges due the District are paid.

- (b) During the period of non-connection or disconnection, habitation of such parcel by human beings may constitute a public nuisance, whereupon the Board of Directors may cause proceedings to be brought for the abatement of the occupancy of said parcel by the human beings. In such event, and as a condition of connection or reconnection, there shall be paid to the District reasonable attorney's fees and costs of suit arising in said action.
- (c) The District may institute action in any court of competent jurisdiction to collect any charges, penalties and interest which may be due and payable in the same manner as any other debts owing to the District may be collected, in which event the District shall seek judgment for the costs of suit and reasonable attorney's fees.
- (d) Any and all delinquent payments may be placed on the tax roll, and collected with property taxes, as provided in this Ordinance.
- (e) Such other action may be taken as may be authorized by law and the District Board.

### **SECTION 2. AUTHORITY**

All powers authorized by this Article for the enforcement and collection of said sewer service charges, penalties and interest are cumulative and may be pursued alternatively or collectively as the District determines.

**ARTICLE VI**  
**MISCELLANEOUS**

**SECTION 1. VACANCY**

No credit, adjustment or refund will be made to any owner because the structure or any portion thereof on a parcel is vacant or the wastewater facilities are not being utilized.

**SECTION 2. AMENDMENT AND REPLACEMENT OF ORDINANCE NO. 31.38**

This Ordinance No. 31.39 amends and replaces Ordinance No. 31.38 in its entirety as to all sewer service charges commencing FY 2017.

**SECTION 3. SEVERABILITY**

If any section, sentence, clause or phrase of this Ordinance is for any reason held to be invalid, unconstitutional, or unenforceable; such decision shall not affect the validity of the remaining portions of this Ordinance. The Board of Directors of the UNION SANITARY DISTRICT hereby declares that it would have passed the provisions of this Ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases may be declared invalid, unconstitutional or unenforceable.

**SECTION 4. PUBLICATION AND MINUTE ENTRY**

This Ordinance shall take effect and be in force as of \_\_\_\_\_, and at least one week prior to said date a summary of the Ordinance shall be published in The Argus, a newspaper of general circulation published in the UNION SANITARY DISTRICT service area. This Ordinance shall be entered in the minutes of the District.

Passed and adopted by the Board of Directors of UNION SANITARY DISTRICT on this 25<sup>th</sup> day of January 2016, by the following vote:

AYES:            ----  
NOES:            ----  
ABSENT:        ----  
ABSTAIN:        ----

\_\_\_\_\_  
President, Board of Directors  
UNION SANITARY DISTRICT

ATTEST:

\_\_\_\_\_  
Secretary, Board of Directors  
UNION SANITARY DISTRICT



**Directors**  
Manny Fernandez  
Tom Handley  
Pat Kite  
Anjali Lathi  
Jennifer Toy

**Officers**  
Paul R. Eldredge  
*General Manager/  
District Engineer*

Karen W. Murphy  
*Attorney*

**DATE:** January 18, 2016

**MEMO TO:** Board of Directors - Union Sanitary District

**FROM:** Paul R. Eldredge, General Manager / District Engineer  
Sami E. Ghossain, Manager of Technical Services  
Raymond Chau, CIP Coach  
Chris Elliott, Associate Engineer

**SUBJECT:** Agenda Item No. 8 – Meeting of January 25, 2016  
**Consider Confirming and Declaring the Need to Continue the Emergency Action to Repair 33-Inch Sewer on Alvarado Boulevard and Update on the Repairs**

### **Recommendation**

Receive update on repairs and adopt motion by a four-fifths vote finding that there is a need to continue the action and confirming and declaring the continuance of the emergency.

### **Background**

On Wednesday, October 14<sup>th</sup>, a sinkhole surfaced at the intersection of Alvarado Blvd. and New Haven St. in Union City; see attached location map. The sinkhole was amplified by a subsequent water main break, which was repaired by Alameda County Water District on the same day. Union Sanitary District's 20-foot deep, 33-inch pipeline and manhole located in the intersection were inspected and found to be damaged.

Given the potential for the sinkhole to affect the health and safety of the community and the possible impact to the District facilities, it was determined that an emergency existed and the necessary steps were taken to meet the emergency, secure the site, and start the repair process. Compliance with competitive bidding procedures typically takes a number of months and would not have allowed prompt action to be taken, as required to safeguard the public and District facilities.

Therefore, District staff called upon the District's emergency contractor, McGuire & Hester Inc., for assistance. Immediate repairs to the damaged sewer facilities could not be accomplished due

to the high groundwater level and unstable soil conditions. For safety and traffic reasons and to avoid additional damage to the street, McGuire & Hester quickly stabilized the site by backfilling the sinkhole.

At the Board Meeting of November 9, 2015, the Board adopted a resolution confirming and declaring the need to continue an emergency and authorizing emergency expenditures to allow staff to proceed with expeditious repairs to the 33-inch sewer main, and related appurtenances (e.g. manhole and overflow pipe) on Alvarado Boulevard. Subsequently, at the Board Meetings of November 23, 2015, December 14, 2015, and January 11, 2016, the Board found that there was a need to continue the action and confirmed and declared the continuance of the emergency. The Board meeting of December 28, 2015 was cancelled.

### **Update on the Alvarado Boulevard Sewer Main Repairs**

#### **Trunk Sewer Repair**

Efforts to control the high groundwater level and unstable soils were unsuccessful and a trenchless repair is not feasible. Therefore, the damaged facilities will be repaired by open-cut method. The approach is to construct a deep shaft around the manhole and pipeline by installing interlocking steel sheet piles, and then to excavate the soil within the shaft down to the pipe. The deep steel sheet piles will stop the inflow of groundwater into the shaft and allow the necessary cleaning, inspection, and repairs to proceed unhindered.

The five phases envisioned for this repair work are as follows:

*Phase 1 – PG&E (Complete):* On December 23<sup>rd</sup>, PG&E disconnected and removed a gas line to facilitate the excavation necessary to complete the final repairs.

*Phase 2 – Shoring, Jet Grouting, & Excavation (In Progress):* On December 28th, McGuire & Hester mobilized to begin Phase 2 work. First, seventy (70) feet of Alameda County Water District's (ACWD) water line which was in conflict with the shoring plan was removed for the duration of the work; it will be replaced once the final repairs are complete. Sheet pile installation around the excavation area then began on January 4, 2016, and was completed on January 8, 2016. The sheet piles installation was followed by jet grouting, a process during which grout is injected by pressure into the soils surrounding the sheet piles to seal up gaps and prevent water intrusion into the shaft. Jet grouting work began on January 12, 2016, and is currently still in progress. The jet grouting will be closely followed by excavation of the shaft itself.

*Phase 3 – Sewer Repair:* Once the excavation is completed, the sewer pipeline repair will proceed. The damaged manhole along with several feet of pipe on each side of it will be

completely replaced. In addition, over 700 feet of the existing pipeline upstream and downstream of the damaged manhole will likely be rehabilitated.

*Phase 4 – Backfill:* After the sewer repair and rehabilitation is complete, the excavated shaft will be backfilled.

*Phase 5 – Utilities:* Before the project may be completed, several utilities must be re-connected. PG&E will re-install and reconnect the gas line that was disconnected and removed in Phase 1. McGuire and Hester will replace 70 feet of ACWD water line removed in Phase 2. A storm drain line temporarily relocated to facilitate shaft excavation will also be replaced.

*Phase 6 – Site Restoration:* Final restoration work includes reconstructing the damaged street area and re-paving the street and returning to normal traffic operations.

District staff is coordinating closely with the City of Union City, New Haven Unified School District, Union City Police Dept., Alameda County Fire Dept., ACWD, and contractor McGuire & Hester to accomplish the work in an efficient and safe manner.

### **Traffic Control**

Due to the large size and location of the repair shaft, the resulting available lane width on westbound Alvarado Blvd. will be less than 11 feet. Thus, the City's preference is that westbound Alvarado Blvd. between Fair Ranch Rd. and Fredi St. be closed entirely to facilitate the work and provide the staging area needed by McGuire & Hester. This closure went into effect on December 28, 2015, and will continue through the duration of the project, which is expected by April 15, 2016, weather permitting.

At least one eastbound lane on Alvarado Blvd. will be open at all times. Left turns into and out of New Haven St. will be closed. Westbound transit buses and vehicular traffic are being detoured. The New Haven Unified School District requested help directing traffic at the school entrance near Fredi St. and Horner St. during the street closure, and staff has worked with the Union City Police Dept. and McGuire & Hester to provide the appropriate traffic control. The fire truck at Fire Station #32 will continue to be able to enter and exit the fire station safely.

### **Sewer Bypass**

The damaged 33-inch sewer continues to be plugged and its flows bypassed through a permanent overflow pipe to the unaffected 39-inch trunk sewer on the south side of the street. A standby pump is retained on site as a contingency. District Collection Services staff continues to provide daily monitoring of the collection system upstream of the overflow pipe to prevent sanitary sewer

overflows, of which none have been reported. Staff will also continue chemical dosing of the sewer mains upstream of the sinkhole area on a 3-week schedule to control odors. In addition, Collection Services staff is planning to pump down and clean the surcharged sewers upstream of the overflow pipe and install odor absorbing, activated carbon canisters in a number of select manholes.

### **Public Information**

Staff continues to develop and issue press releases about the field work on an as-needed basis only. These updates are disseminated via the “What’s New” page on the District website, as well as through USD social media.

A CMS (changeable message sign) traffic board, as well as other traffic signs, remain on Alvarado Blvd. notifying motorists of the shutdown of westbound Alvarado Blvd. Additionally, flyers were distributed on December 23, 2015, to the businesses at Alvarado Blvd. and Fair Ranch Rd and the apartment complex to the west, notifying them of the same.

### **Review of Emergency Status**

After the determination of an emergency pursuant to Public Contract Code section 22050, the Board is required to review the status of the emergency action at each subsequent meeting until the emergency action is terminated, and authorize continuation of the emergency action by a four-fifths vote. This staff report seeks such authorization. As discussed above, the sinkhole continues to affect traffic and people that live, work, or commute in the area. Furthermore, District facilities need to be protected and there is a need to complete the actions described above as expeditiously as possible. Therefore, staff believes that there is a need to continue the emergency action.

Staff will continue to bring a similar item to the Board until the emergency is terminated.

PRE/SEG/RC/CE:ks

Attachment: Exhibit A – Location Map

# EXHIBIT A - LOCATION MAP

## ALVARADO BLVD. SEWER REPAIR



**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| <b>Check No.</b> | <b>Date</b> | <b>Invoice No.</b> | <b>Vendor</b>                 | <b>Description</b>                              | <b>Invoice Amt</b> | <b>Check Amt</b> |
|------------------|-------------|--------------------|-------------------------------|---|--------------------|------------------|
| 159940           | 1/14/2016   | 20151119.2         | SWRCB - STATE WATER RESOURCES | SRF LOAN #C065085110 - NEWARK PS                | \$685,404.62       | \$685,404.62     |
| 159888           | 1/7/2016    | 20151119.1         | SWRCB - STATE WATER RESOURCES | SRF LOAN #C065219110 - PRIMARY CLARIFIER        | \$589,782.72       | \$589,782.72     |
| 159906           | 1/14/2016   | 3133               | CAL SAN RISK MNGT AUTH        | 12/31/15-12/31/16 PLP PROGRAM                   | \$152,095.00       | \$152,095.00     |
| 159928           | 1/14/2016   | 1033158            | MUNIQUEIP, LLC                | 1 EA MIIXING PUMP ROTATING ASSY                 | \$44,222.81        | \$44,222.81      |
| 159946           | 1/14/2016   | 533620151222       | US BANK CORP PAYMENT SYSTEM   | MONTHLY CAL CARD STMT - DEC 2015                | \$30,140.49        | \$30,140.49      |
| 159898           | 1/14/2016   | 11694              | ALAMEDA COUNTY WATER DISTRICT | WATER RECYCLING & CONSERVATION PROGRAM          | \$23,237.88        | \$23,237.88      |
| 159845           | 1/7/2016    | 145681             | CAROLLO ENGINEERS             | THICKENER CONROL BUILDING IMPROVEMENTS PHASE II | \$18,090.08        | \$21,275.00      |
|                  | 1/7/2016    | 145863             |                               | TRANSPORT SYSTEM MISC.                          | \$3,184.92         |                  |
| 159897           | 1/14/2016   | 64997              | 3T EQUIPMENT COMPANY INC      | 1 BAGGER MAX 10 JET                             | \$6,241.40         | \$16,336.11      |
|                  | 1/14/2016   | 64975              |                               | 11 PIPEPATCH KIT - WINTER                       | \$4,827.91         |                  |
|                  | 1/14/2016   | 64993              |                               | 12 PIPEPATCH KIT - WINTER                       | \$5,266.80         |                  |
| 159943           | 1/14/2016   | 20160237           | CITY OF UNION CITY            | UNION CITY 2015-16 OVERLAY PROJECT              | \$16,180.00        | \$16,180.00      |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| Check No. | Date      | Invoice No.  | Vendor                    | Description   | Invoice Amt          | Check Amt   |
|-----------|-----------|--------------|---------------------------|---|----------------------|-------------|
| 159930    | 1/14/2016 | 096020151231 | PACIFIC GAS AND ELECTRIC  | SERV TO 12/30/15 CATHODIC PROJECT                         | \$45.69              | \$14,532.93 |
|           | 1/14/2016 | 224720151222 |                           | SERV TO 12/21/15 CS TRAINING TRAILER                      | \$53.37              |             |
|           | 1/14/2016 | 380420151231 |                           | SERV TO 12/29/15 CHERRY ST PS                             | \$158.13             |             |
|           | 1/14/2016 | 666720151231 |                           | SERV TO 12/30/15 PASEO PADRE PS                           | \$170.97             |             |
|           | 1/14/2016 | 761520151224 |                           | SERV TO 12/23/15 NEWARK PS                                | \$13,846.34          |             |
|           | 1/14/2016 | 892820151231 |                           | SERV TO 12/30/15 HAYWARD MARSH                            | \$44.00              |             |
|           | 1/14/2016 | 898220151231 |                           | SERV TO 12/30/15 FREMONT PS                               | \$214.43             |             |
| 159856    | 1/7/2016  | 1462069C     |                           | DELTA DENTAL SERVICE                                      | DECEMBER 2015 DENTAL |             |
|           | 1/7/2016  | 1462069A     | DECEMBER 2015 DENTAL      |   | \$1,644.95           |             |
| 159934    | 1/14/2016 | 21046        | RMC WATER AND ENVIRONMENT | HAYWARD MARSH REHABILITATION OPTIONS                      | \$1,312.00           | \$11,684.50 |
|           | 1/14/2016 | 21043        |                           | OLD ALAMEDA CREEK NPDES PERMIT RENEWAL                    | \$1,928.00           |             |
|           | 1/14/2016 | 21109        |                           | CS PREVENTATIVE MAINTENANCE PROGRAM                       | \$2,443.50           |             |
|           | 1/14/2016 | 21108        |                           | ALVARADO BLVD SEWER MAIN REPAIR                           | \$6,001.00           |             |
| 159858    | 1/7/2016  | 902442973    | EVOQUA WATER TECHNOLOGIES | 24,000 LBS HYDROGEN PEROXIDE                              | \$11,193.60          | \$11,193.60 |
| 159914    | 1/14/2016 | 109447       | FOLGER GRAPHICS           | 85,000 PROPOSITION 218 NOTIFICATIONS - PRINTING & MAILING | \$11,004.40          | \$11,004.40 |
| 159907    | 1/14/2016 | 6705         | CDW GOVERNMENT LLC        | 24 CISCO PHONE POWER INJECTORS                            | \$2,145.00           | \$8,670.76  |
|           | 1/14/2016 | 3306         |                           | SECOND BOARDROOM PROJECTOR                                | \$1,925.00           |             |
|           | 1/14/2016 | 9363         |                           | CISCO PHONE POWER INJECTORS                               | \$536.26             |             |
|           | 1/14/2016 | 3590         |                           | 1 R&R SWITCH  | \$4,064.50           |             |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

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| 159868    | 1/7/2016  | 37432220160101 | LINCOLN NATIONAL LIFE INS COMP | LIFE & DISABILITY INSURANCE - JAN 2016 | \$7,705.70  | \$7,705.70 |
| 159944    | 1/14/2016 | 721984         | UNIVAR USA INC                 | 5,009 GALS SODIUM HYPOCHLORITE         | \$2,265.12  | \$6,795.81 |
|           | 1/14/2016 | 722838         |                                | 5,010 GALS SODIUM HYPOCHLORITE         | \$2,265.57  |            |
|           | 1/14/2016 | 723072         |                                | 5,009 GALS SODIUM HYPOCHLORITE         | \$2,265.12  |            |
| 159915    | 1/14/2016 | 234516         | FRANK A OLSEN COMPANY          | 5 DEZURIK PLUG VALVES                  | \$5,833.20  | \$5,833.20 |
| 159843    | 1/7/2016  | 587034         | BRENNTAG PACIFIC, INC.         | 2564 LBS SODIUM HYDROXIDE              | \$1,361.39  | \$5,767.35 |
|           | 1/7/2016  | 586419         |                                | 641 LBS SODIUM HYDROXIDE               | \$340.35    |            |
|           | 1/7/2016  | 587033         |                                | 5128 LBS SODIUM HYDROXIDE              | \$2,710.41  |            |
|           | 1/7/2016  | 57032          |                                | 2564 LBS SODIUM HYDROXIDE              | \$1,355.20  |            |
| 159869    | 1/7/2016  | 12167          | LOOKINGPOINT INC               | 1 EA ADDITIONAL CISCO SERVER           | \$5,503.50  | \$5,503.50 |
| 159844    | 1/7/2016  | 28355          | CALIFORNIA WATER TECHNOLOGIES  | 42,600 LBS FERROUS CHLORIDE            | \$4,954.07  | \$4,954.07 |
| 159947    | 1/14/2016 | 817853         | VALLEY OIL COMPANY             | CLEANING & POLISHING OF 2 TANKS        | \$3,919.50  | \$3,919.50 |
| 159850    | 1/7/2016  | 22170          | CLI-METRICS SERVICE COMPANY    | SERVICE: BOYCE AIRFLOW ENG             | \$3,482.00  | \$3,482.00 |
| 159852    | 1/7/2016  | 7865           | LORENA CRUZ                    | REFUND # 18295                         | \$3,300.00  | \$3,300.00 |
| 159866    | 1/7/2016  | 8037           | KCS WEST INC                   | REFUND # 18625                         | \$3,300.00  | \$3,300.00 |
| 159924    | 1/14/2016 | 13802          | ROBERT KENG                    | REFUND # 18641                         | \$3,300.00  | \$3,300.00 |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

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| 159882    | 1/7/2016  | 1689978004   | SAN LEANDRO ELECTRIC SUPPLY | ASTD PARTS & MATERIALS                                  | \$508.46    | \$3,279.56 |
|           | 1/7/2016  | 1689978003   |                             | ASTD PARTS & MATERIALS                                  | \$468.35    |            |
|           | 1/7/2016  | 1689978005   |                             | 1 CONDUIT PVC COATED 1 INCH                             | \$86.67     |            |
|           | 1/7/2016  | 1691197001   |                             | 1,400 NYLON BLACK CABLE TIES                            | \$271.78    |            |
|           | 1/7/2016  | 1689978002   |                             | ASTD PARTS & MATERIALS                                  | \$1,944.30  |            |
| 159892    | 1/7/2016  | 20160101     | VISION SERVICE PLAN - CA    | JANUARY 2016 VISION STMT                                | \$3,271.68  | \$3,271.68 |
| 159920    | 1/14/2016 | 28267017003  | HERTZ EQUIPMENT RENTAL      | MIX TANK RENTAL 11/25 - 12/23/2015                      | \$2,926.00  | \$2,926.00 |
| 159929    | 1/14/2016 | 12150321     | NBS                         | SEWER SERVICE CHARGE DATA SERV JAN - MAR 2016           | \$2,862.68  | \$2,862.68 |
| 159840    | 1/7/2016  | 995          | AUTOMATED NETWORK CONTROLS  | SCADA/PLC SUPPORT SERVICES                              | \$2,686.90  | \$2,686.90 |
| 159881    | 1/7/2016  | 237303       | SAN JOSE CITY OF            | ANALYTICAL LAB SERVICES HAYWARD MARSH MIXING ZONE STUDY | \$2,561.00  | \$2,561.00 |
| 159851    | 1/7/2016  | 630630       | CONTROLWORX LLC             | WATERCHAMP REPAIR                                       | \$2,541.33  | \$2,541.33 |
| 159900    | 1/14/2016 | 7457524      | AT&T                        | SERV: 11/20/15 - 12/19/15                               | \$17.96     | \$2,511.05 |
|           | 1/14/2016 | 7451812      |                             | SERV: 11/20/15 - 12/19/15                               | \$2,493.09  |            |
| 159846    | 1/7/2016  | 4713         | CDW GOVERNMENT LLC          | 1 PLANT CONFERENCE PROJECTOR                            | \$1,925.00  | \$2,282.50 |
|           | 1/7/2016  | 9635         |                             | 1 FIBER PORT FOR WAN RTR FOR MPLS MIGRATION             | \$357.50    |            |
| 159925    | 1/14/2016 | 1414559      | LIEBERT CASSIDY WHITMORE    | NOR-CAL EMP REL CONSORT MEMBERSHIP 2016                 | \$2,280.00  | \$2,280.00 |
| 159931    | 1/14/2016 | 916002620240 | REPUBLIC SERVICES #916      | RECYCLE & ROLL OFF - DECEMBER 2015                      | \$2,216.88  | \$2,216.88 |
| 159891    | 1/7/2016  | 721416       | UNIVAR USA INC              | 4,849 GALS SODIUM HYPOCHLORITE                          | \$2,192.76  | \$2,192.76 |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

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| 159905    | 1/14/2016 | 587733      | BRENNTAG PACIFIC, INC.       | 1282 LBS SODIUM HYDROXIDE                                | \$677.61    | \$2,032.81 |
|           | 1/14/2016 | 587732      |                              | 2564 LBS SODIUM HYDROXIDE                                | \$1,355.20  |            |
| 159917    | 1/14/2016 | 9910567842  | GRAINGER INC                 | 2 EA MALE TO THOR COUPLER                                | \$49.17     | \$1,997.85 |
|           | 1/14/2016 | 9907255187  |                              | ASTD PARTS & MATERIALS                                   | \$785.51    |            |
|           | 1/14/2016 | 9907157037  |                              | ASTD PARTS & MATERIALS                                   | \$643.08    |            |
|           | 1/14/2016 | 9910567834  |                              | 2 EA LAMP REMOVAL TOOL                                   | \$7.76      |            |
|           | 1/14/2016 | 9907255179  |                              | 100 FT SHRINK TUBING                                     | \$33.80     |            |
|           | 1/14/2016 | 9908274856  |                              | 1 EA HOOKUP WIRE   | \$63.59     |            |
|           | 1/14/2016 | 9907880786  |                              | ASTD PARTS & MATERIALS                                   | \$265.58    |            |
|           | 1/14/2016 | 9912644979  |                              | 1 EA SOLDER GUN  | \$149.38    |            |
| 159941    | 1/14/2016 | 6241        | THORNTON ENVIRONMENTAL CONST | CALL OUT FOR GENERATOR ROOM 1 TLS 350                    | \$1,358.75  |            |
|           | 1/14/2016 | 6240        |                              | CALL OUT FOR SYSTEM DOWN                                 | \$448.25    |            |
| 159949    | 1/14/2016 | 9757569386  | VERIZON WIRELESS             | WIRELESS SERV 11/21/15-12/20/15                          | \$1,801.44  | \$1,801.44 |
| 159903    | 1/14/2016 | 70416       | BELILOVE COMPANY ENGINEERS   | 3 PRESSURE SWITCHES                                      | \$1,659.31  | \$1,659.31 |
| 159933    | 1/14/2016 | 18988       | RM AUTOMATION INCORPORATED   | 3 ITT NEODYN PRESSURE SWITCHES                           | \$1,583.31  | \$1,583.31 |
| 159919    | 1/14/2016 | 20160107    | RICHARD & JUNE HASHIMOTO     | THIRD PARTY CLAIM SETTLEMENT                             | \$1,463.00  | \$1,463.00 |
| 159910    | 1/14/2016 | 20160113    | CWEA-NRTC                    | 11 CERT & 3 MEMBERSHIP RENEWALS - COLL SERV 12 EMPLOYEES | \$1,438.00  | \$1,438.00 |
| 159948    | 1/14/2016 | 32638       | VALLEY OIL COMPANY           | 2 DRS SHELL ROTELLA ULTRA 50/50 ANTIFREEZE               | \$1,427.80  | \$1,427.80 |
| 159867    | 1/7/2016  | 151222      | KL BRAJENOVICH CONSULTING    | PHYS STDS - SENIOR PROCESS ENGINEER                      | \$1,372.31  | \$1,372.31 |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| Check No. | Date      | Invoice No.  | Vendor                         | Description                           | Invoice Amt | Check Amt  |
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| 159893    | 1/7/2016  | 8043400284   | VWR INTERNATIONAL LLC          | ASTD SAMPLING SUPPLIES                | \$634.66    | \$1,241.90 |
|           | 1/7/2016  | 8043451892   |                                | 1 CASE OF RACK TEST TUBES             | \$218.55    |            |
|           | 1/7/2016  | 8043400285   |                                | 5 PKS FILTER GLASS FIBR 4.25CM        | \$388.69    |            |
| 159841    | 1/7/2016  | 2521883049   | BANK OF NEW YORK               | JUN 2015 SERVICE FEE                  | \$677.35    | \$1,231.88 |
|           | 1/7/2016  | 2521891013   |                                | JUL 2015 SERVICE FEE                  | \$554.53    |            |
| 159926    | 1/14/2016 | 46981385     | MCMASTER SUPPLY INC            | 1 EA APPLIANCE INDOOR EXTENSION CORD  | \$12.16     | \$1,049.46 |
|           | 1/14/2016 | 46551791     |                                | 1 EA HOSE CLAMP                       | \$204.15    |            |
|           | 1/14/2016 | 46965440     |                                | 1 EA WALL MOUNT EYE WASH STATION      | \$487.98    |            |
|           | 1/14/2016 | 46771728     |                                | 1 EA IMPACT SOCKET                    | \$44.05     |            |
|           | 1/14/2016 | 46734618     |                                | 3 PACKS SCREWS                        | \$39.53     |            |
|           | 1/14/2016 | 46853640     |                                | 2 EA PLASTIC DANGER SIGNS             | \$33.94     |            |
|           | 1/14/2016 | 46666042     |                                | 1 EA STEEL DRUM DOLLY                 | \$127.31    |            |
|           | 1/14/2016 | 46551790     |                                | 1 LENGTH SUPER-ADHESIVE HOOK & LOOP   | \$100.34    |            |
| 159890    | 1/7/2016  | 133627278001 | UNITED RENTALS NORTHWEST INC   | FORKLIFT VAR REACH 5000# 2 DAY RENTAL | \$1,035.30  | \$1,035.30 |
| 159912    | 1/14/2016 | 14707        | EEC ENVIRONMENTAL INC          | CWT & PRETREATMENT PROGRAM ASSISTANCE | \$1,035.00  | \$1,035.00 |
| 159918    | 1/14/2016 | 3J0113       | HARRINGTON INDUSTRIAL PLASTICS | ASTD PVC PARTS & MATERIALS            | \$927.90    | \$1,027.92 |
|           | 1/14/2016 | 3J0114       |                                | ASTD PARTS & MATERIALS                | \$100.02    |            |
| 159857    | 1/7/2016  | 8655         | EAST BAY MUNI UTILITY DISTRICT | 16 LAB SAMPLE ANALYSIS                | \$913.70    | \$913.70   |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| <b>Check No.</b> | <b>Date</b> | <b>Invoice No.</b> | <b>Vendor</b>               | <b>Description</b>                     | <b>Invoice Amt</b> | <b>Check Amt</b> |
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| 159937           | 1/14/2016   | 8122768123115      | SIERRA SPRING WATER COMPANY | BOTTLESS COOLERS RENTAL                | \$239.00           | \$840.23         |
|                  | 1/14/2016   | 4868173123115      |                             | WATER SERVICE 12/04/15 - 12/31/15      | \$601.23           |                  |
| 159839           | 1/7/2016    | 7420913            | AT&T                        | SERV: 11/13/15 - 12/12/15              | \$643.68           | \$785.87         |
|                  | 1/7/2016    | 7434050            |                             | SERV: 11/13/15 - 12/12/15              | \$43.14            |                  |
|                  | 1/7/2016    | 7430084            |                             | SERV: 11/13/15 - 12/12/15              | \$99.05            |                  |
| 159871           | 1/7/2016    | 24856418           | MOTION INDUSTRIES INC       | 1 EA BUSHING                           | \$37.54            | \$774.93         |
|                  | 1/7/2016    | 24855952           |                             | ASTD SHEAVES & BUSHINGS                | \$141.03           |                  |
|                  | 1/7/2016    | 24856250           |                             | 2 PR STEEL TOE BOOTS                   | \$105.02           |                  |
|                  | 1/7/2016    | 24856510           |                             | 2 EA BEARING                           | \$271.87           |                  |
|                  | 1/7/2016    | 24856028           |                             | 1 EA SHEAVE                            | \$219.47           |                  |
| 159911           | 1/14/2016   | 201694             | EDA - ECONOMIC DEVELOPMENT  | ANNUAL MEMBERSHIP DUES                 | \$750.00           | \$750.00         |
| 159889           | 1/7/2016    | 181354115          | TRENCH PLATE RENTAL COMPANY | 28 DAYS TRENCH PLATE & EYEBOLT RENTAL  | \$350.00           | \$700.00         |
|                  | 1/7/2016    | 181251915          |                             | 28 DAYS TRENCH PLATE & EYEBOLT RENTAL  | \$350.00           |                  |
| 159838           | 1/7/2016    | 87896581212252015  | AT&T                        | SERV: 11/18/15 - 12/17/15              | \$677.25           | \$677.25         |
| 159909           | 1/14/2016   | 261293             | CURTIS & TOMPKINS, LTD      | 40 LAB SAMPLE ANALYSIS                 | \$660.00           | \$660.00         |
| 159849           | 1/7/2016    | 54506067           | CINTAS CORPORATION          | 2 JACKETS EACH - BERLING & CHRISTOPHER | \$317.44           | \$621.54         |
|                  | 1/7/2016    | 54508321           |                             | 2 THERMAL-LINED SWEATSHIRT - DEL TORO  | \$202.73           |                  |
|                  | 1/7/2016    | 54508320           |                             | 1 THERMAL-LINED SWEATSHIRT - COUTO     | \$101.37           |                  |
| 159872           | 1/7/2016    | 20151231           | NAPA AUTO PARTS             | MONTHLY AUTO PARTS STMT - DEC 2015     | \$595.74           | \$595.74         |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| <b>Check No.</b> | <b>Date</b> | <b>Invoice No.</b> | <b>Vendor</b>                  | <b>Description</b>                       | <b>Invoice Amt</b> | <b>Check Amt</b> |
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| 159902           | 1/14/2016   | 20160111           | IRMA REGINA BASTIAN            | TUITION REIMBURSEMENT FALL SEMESTER 2015 | \$587.52           | \$587.52         |
| 159842           | 1/7/2016    | 11047991           | BLAISDELL'S                    | 5 DAILY PLANNERS                         | \$55.66            | \$565.65         |
|                  | 1/7/2016    | 11051180           |                                | 1 PK LITHIUM PHOTO BATTERY               | \$2.63             |                  |
|                  | 1/7/2016    | 11051120           |                                | ASTD OFFICE SUPPLIES                     | \$169.92           |                  |
|                  | 1/7/2016    | 11047280           |                                | ASTD OFFICE SUPPLIES                     | \$59.63            |                  |
|                  | 1/7/2016    | 11047281           |                                | 1 PK BULBS                               | \$23.09            |                  |
|                  | 1/7/2016    | 11047990           |                                | ASTD OFFICE SUPPLIES                     | \$11.94            |                  |
|                  | 1/7/2016    | 11051122           |                                | 2 WK/MO PLANNERS                         | \$48.38            |                  |
|                  | 1/7/2016    | 11051630           |                                | 1 3 MO WALL CALENDAR                     | \$17.04            |                  |
|                  | 1/7/2016    | 11053470           |                                | 1 PK CALC PAPER                          | \$6.04             |                  |
|                  | 1/7/2016    | 11051631           |                                | 1 3 MO WALL CALENDAR                     | \$20.34            |                  |
|                  | 1/7/2016    | 11054640           |                                | ASTD OFFICE SUPPLIES                     | \$150.98           |                  |
| 159899           | 1/14/2016   | 5130879            | ALL INDUSTRIAL ELECTRIC SUPPLY | 1 GE THN3361SS 30A-600V-3PNF SW          | \$535.72           | \$535.72         |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| <b>Check No.</b> | <b>Date</b> | <b>Invoice No.</b> | <b>Vendor</b>                  | <b>Description</b>                  | <b>Invoice Amt</b> | <b>Check Amt</b> |
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| 159859           | 1/7/2016    | 18251              | FREMONT TEST ONLY              | ANNUAL SMOG TESTING - VEHICLE T1339 | \$30.00            | \$530.00         |
|                  | 1/7/2016    | 18318              |                                | ANNUAL SMOG TESTING - VEHICLE T1038 | \$40.00            |                  |
|                  | 1/7/2016    | 18421              |                                | ANNUAL SMOG TESTING - VEHICLE T1263 | \$30.00            |                  |
|                  | 1/7/2016    | 18248              |                                | ANNUAL SMOG TESTING - VEHICLE T1269 | \$30.00            |                  |
|                  | 1/7/2016    | 19372              |                                | ANNUAL SMOG TESTING - VEHICLE T1306 | \$30.00            |                  |
|                  | 1/7/2016    | 18519              |                                | ANNUAL SMOG TESTING - VEHICLE T2071 | \$30.00            |                  |
|                  | 1/7/2016    | 18685              |                                | ANNUAL SMOG TESTING - VEHICLE T1328 | \$30.00            |                  |
|                  | 1/7/2016    | 18581              |                                | ANNUAL SMOG TESTING - VEHICLE T1282 | \$30.00            |                  |
|                  | 1/7/2016    | 18549              |                                | ANNUAL SMOG TESTING - VEHICLE T256  | \$30.00            |                  |
|                  | 1/7/2016    | 19472              |                                | ANNUAL SMOG TESTING - VEHICLE T1051 | \$30.00            |                  |
|                  | 1/7/2016    | 18229              |                                | ANNUAL SMOG TESTING - VEHICLE T1028 | \$40.00            |                  |
|                  | 1/7/2016    | 18595              |                                | ANNUAL SMOG TESTING - VEHICLE T1303 | \$30.00            |                  |
|                  | 1/7/2016    | 18590              |                                | ANNUAL SMOG TESTING - VEHICLE T1337 | \$30.00            |                  |
|                  | 1/7/2016    | 18555              |                                | ANNUAL SMOG TESTING - VEHICLE T1340 | \$30.00            |                  |
|                  | 1/7/2016    | 18292              |                                | ANNUAL SMOG TESTING - VEHICLE T1268 | \$30.00            |                  |
|                  | 1/7/2016    | 18871              |                                | ANNUAL SMOG TESTING - VEHICLE T1341 | \$30.00            |                  |
|                  | 1/7/2016    | 19464              |                                | ANNUAL SMOG TESTING - VEHICLE T1327 | \$30.00            |                  |
| 159901           | 1/14/2016   | 2521891404         | BANK OF NEW YORK               | AUG 2015 SERVICE FEE                | \$511.38           | \$511.38         |
| 159836           | 1/7/2016    | 5130291            | ALL INDUSTRIAL ELECTRIC SUPPLY | 2 MERSEN FUSE W300652               | \$506.73           | \$506.73         |

**UNION SANITARY DISTRICT  
CHECK REGISTER  
1/02/2016-01/15/2016**

| Check No. | Date      | Invoice No. | Vendor                         | Description                               | Invoice Amt | Check Amt |
|-----------|-----------|-------------|--------------------------------|---|-------------|-----------|
| 159883    | 1/7/2016  | 7994        | SANACT INC DBA ROTO-ROOTER     | REFUND # 18623                            | \$500.00    | \$500.00  |
| 159885    | 1/7/2016  | 8177        | STAR ROOTER AND PLUMBING       | REFUND # 18621                            | \$500.00    | \$500.00  |
| 159887    | 1/7/2016  | 8170        | STREAMLINE PLUMBING & DRAIN    | REFUND # 18622                            | \$500.00    | \$500.00  |
| 159932    | 1/14/2016 | 7021        | RESCUE RESPONSE GROUP INC      | REFUND # 18646                            | \$500.00    | \$500.00  |
| 159927    | 1/14/2016 | 890251      | MOBILE MODULAR MANAGEMENT CORP | FMC TRAILER RENTAL - JAN 2016             | \$493.90    | \$493.90  |
| 159863    | 1/7/2016  | 1636191     | HANSON AGGREGATES INC          | 6.47 TONS 1/2 MED TYPE A AC-R             | \$489.97    | \$489.97  |
| 159855    | 1/7/2016  | 201512.10   | DALE HARDWARE INC              | 12/15 - ASTD PARTS & MATERIALS            | \$487.58    | \$487.58  |
| 159884    | 1/7/2016  | 20160105    | JAMES SCHOFIELD                | CLOSED SOCIAL COMMITTEE BANK ACCT BALANCE | \$479.82    | \$479.82  |
| 159916    | 1/14/2016 | 1083751694  | G&K SERVICES CO                | UNIFORM LAUNDERING SERVICE                | \$121.68    | \$460.53  |
|           | 1/14/2016 | 1083751701  |                                | ASTD DUST MOPS, WET MOPS & TERRY TOWELS   | \$33.78     |           |
|           | 1/14/2016 | 1083751698  |                                | UNIFORM LAUNDERING SERVICE                | \$16.96     |           |
|           | 1/14/2016 | 1083751697  |                                | UNIFORM LAUNDERING SERVICE                | \$32.15     |           |
|           | 1/14/2016 | 1083751699  |                                | UNIFORMS & MATS                           | \$59.22     |           |
|           | 1/14/2016 | 1083751700  |                                | UNIFORM LAUNDERING SERVICE                | \$11.20     |           |
|           | 1/14/2016 | 1083751695  |                                | UNIFORM LAUNDERING SERVICE                | \$95.98     |           |
|           | 1/14/2016 | 1083751696  |                                | UNIFORM LAUNDERING SERVICE                | \$89.56     |           |
| 159864    | 1/7/2016  | 601888189   | HILLYARD/SAN FRANCISCO         | ASTD JANITORIAL SUPPLIES                  | \$426.86    | \$426.86  |
| 159870    | 1/7/2016  | 46506811    | MCMASTER SUPPLY INC            | ASTD PARTS & MATERIALS                    | \$388.11    | \$388.11  |
| 159942    | 1/14/2016 | 17015801    | TRI DIM FILTER CORPORATION     | 200 TRI-DEK 15/40 2 PLY PADS              | \$362.49    | \$362.49  |

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1/02/2016-01/15/2016**

| Check No. | Date      | Invoice No.    | Vendor                         | Description  | Invoice Amt | Check Amt |
|-----------|-----------|----------------|--------------------------------|--|-------------|-----------|
| 159923    | 1/14/2016 | 965447         | INTERNATIONAL PAINT LLC        | ASTD PAINT SUPPLIES                                  | \$361.91    | \$361.91  |
| 159922    | 1/14/2016 | 5582317        | HOSE & FITTINGS ETC            | ASTD PARTS & MATERIALS                               | \$354.78    | \$354.78  |
| 159853    | 1/7/2016  | 261084         | CURTIS & TOMPKINS, LTD         | 14 LAB SAMPLE ANALYSIS                               | \$305.00    | \$305.00  |
| 159913    | 1/14/2016 | 12929          | FERRIS HOIST AND REPAIR INC    | INSPECT VEHICLE HOIST                                | \$300.00    | \$300.00  |
| 159878    | 1/7/2016  | 285176         | RKI INSTRUMENTS INC            | EAGLE CALIBRATION SERVICE LEVEL 3                    | \$281.06    | \$281.06  |
| 159904    | 1/14/2016 | 11057990       | BLAISDELL'S                    | 1 PK RTR ERASER                                      | \$5.49      | \$257.97  |
|           | 1/14/2016 | 11058700       |                                | ASTD OFFICE SUPPLIES                                 | \$69.04     |           |
|           | 1/14/2016 | 11063790       |                                | 1 MO PLANNER   | \$13.37     |           |
|           | 1/14/2016 | 11065950       |                                | 2 3 MO WALL CALENDARS                                | \$40.68     |           |
|           | 1/14/2016 | 11062310       |                                | 3 BX ZIPLOCK BAGS                                    | \$129.39    |           |
| 159935    | 1/14/2016 | 20160107       | JOHN SEO                       | EXP REIMB: CWEA MEMBERSHIP/CERTIFICATION RENEWAL FEE | \$255.00    | \$255.00  |
| 159886    | 1/7/2016  | 26198          | STARLINE SUPPLY COMPANY        | 5 CS COMPOSTABLE UTENSILS                            | \$252.73    | \$252.73  |
| 159895    | 1/7/2016  | 20160105       | WEF-WATER ENVIRONMENT FEDERATI | WEF MEMBERSHIP R PIPKIN                              | \$235.00    | \$235.00  |
| 159837    | 1/7/2016  | 20151222       | BRIAN ANDERSON                 | EXP REIMB: CERTIFICATION RENEWAL                     | \$230.00    | \$230.00  |
| 159894    | 1/7/2016  | 35525          | WECO INDUSTRIES LLC            | REPAIR TRUCK T2372                                   | \$220.38    | \$220.38  |
| 159938    | 1/14/2016 | 20160101       | SPOK INC                       | JANUARY 2016 PAGER SERVICE                           | \$218.31    | \$218.31  |
| 159896    | 1/7/2016  | 20160104       | WEF-WATER ENVIRONMENT FEDERATI | WEF MEMBERSHIP A LULLO                               | \$218.00    | \$218.00  |
| 159875    | 1/7/2016  | 820000009088   | RED WING SHOE STORE            | SAFETY SHOES - PORTEOUS                              | \$208.00    | \$208.00  |
| 159880    | 1/7/2016  | 85340220151223 | SAN FRANCISCO WATER DEPT       | SERVICE 11/20/15 TO 12/21/15                         | \$201.09    | \$201.09  |

**UNION SANITARY DISTRICT  
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| Check No. | Date      | Invoice No.      | Vendor                        | Description                               | Invoice Amt | Check Amt |
|-----------|-----------|------------------|-------------------------------|---|-------------|-----------|
| 159874    | 1/7/2016  | 20158501         | QUICK SPACE RENTALS           | GUARD BOOTH RENTAL DECEMBER 2015          | \$192.50    | \$192.50  |
| 159860    | 1/7/2016  | 1185534900       | GLACIER ICE COMPANY INC       | 120 7-LB BAGS OF ICE                      | \$166.80    | \$166.80  |
| 159876    | 1/7/2016  | 1690000010533    | RED WING SHOE STORE           | SAFETY SHOES - BASTIAN                    | \$163.32    | \$163.32  |
| 159877    | 1/7/2016  | 8164             | RESCUE ROOTER                 | REFUND # 18624                            | \$150.00    | \$150.00  |
| 159879    | 1/7/2016  | 20160106         | THERESA RODRIGUEZ             | EXP REIMB: MANAGEMENT MEETING LUNCH       | \$144.63    | \$144.63  |
| 159936    | 1/14/2016 | 889213541        | SHARP BUSINESS SYSTEMS        | MTHLY MAINTENANCE BASED ON USE            | \$115.88    | \$115.88  |
| 159939    | 1/14/2016 | 3288180296       | STAPLES CONTRACT & COMMERCIAL | 23 ASTD CALENDARS - R&S                   | \$114.88    | \$114.88  |
| 159865    | 1/7/2016  | 526537           | HULBERT LUMBER SUPPLY         | ASTD LUMBER SUPPLIES                      | \$113.53    | \$113.53  |
| 159854    | 1/7/2016  | 20160105         | CWEA-NRTC                     | SEMINAR REG: S. LEBON                     | \$50.00     | \$100.00  |
|           | 1/7/2016  | 20160104         |                               | SEMINAR REG: S. BULLIS                    | \$50.00     |           |
| 159950    | 1/14/2016 | 8043502222       | VWR INTERNATIONAL LLC         | 1 BX HYDROGEN SULFUR DETECTOR TUBES       | \$75.72     | \$75.72   |
| 159862    | 1/7/2016  | 260605           | HANIGAN COMPANY INC           | 2 LOTS BUSINESS CARDS: WALKER & M. POWELL | \$69.96     | \$69.96   |
| 159873    | 1/7/2016  | 20160104         | STEVEN NOEGEL                 | EXP REIMB: MILEAGE FOR CALLOUT            | \$57.15     | \$57.15   |
| 159835    | 1/7/2016  | 4088644120151221 | ALAMEDA COUNTY WATER DISTRICT | SERV TO: 12/21/15 - BOYCE ROAD            | \$53.04     | \$53.04   |
| 159908    | 1/14/2016 | 412781           | CHEMETRICS INC                | ASTD SAMPLING SUPPLIES                    | \$44.48     | \$44.48   |
| 159921    | 1/14/2016 | 944720151228     | HOME DEPOT CREDIT SERVICES    | MONTHLY HARDWARE STMT - DEC 2015          | \$43.98     | \$43.98   |
| 159861    | 1/7/2016  | 9904210037       | GRAINGER INC                  | 1 EA BUTT SPLICE CONNNECTOR               | \$10.61     | \$42.10   |
|           | 1/7/2016  | 9904210011       |                               | 1 EA CLASS 2 TRANSFORMER                  | \$17.97     |           |
|           | 1/7/2016  | 9904210029       |                               | 1 EA BUTT SPLICE CONNNECTOR               | \$13.52     |           |

**UNION SANITARY DISTRICT  
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| Check No. | Date      | Invoice No. | Vendor                      | Description                   | Invoice Amt | Check Amt |
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| 159945    | 1/14/2016 | 9853515.0   | UPS - UNITED PARCEL SERVICE | SHIPPING CHARGES W/E 12/19/15 | \$12.33     | \$12.33   |
| 159847    | 1/7/2016  | 285626      | CENTERVILLE LOCKSMITH       | 6 SCHLAGE DND KEY BLANK       | \$10.84     | \$10.84   |
| 159848    | 1/7/2016  | 448838      | CENTERVILLE SAW AND TOOL    | 1 TUBE 410X350X5 L STEM       | \$10.81     | \$10.81   |

**Invoices:**

|                        |            |                     |
|------------------------|------------|---------------------|
| Credit Memos :         | 0          |                     |
| \$0 - \$1,000 :        | 151        | 32,675.49           |
| \$1,000 - \$10,000 :   | 50         | 139,936.80          |
| \$10,000 - \$100,000 : | 9          | 180,766.75          |
| Over \$100,000 :       | 3          | 1,427,282.34        |
| <b>Total:</b>          | <b>213</b> | <b>1,780,661.38</b> |

**Checks:**

|                        |            |                     |
|------------------------|------------|---------------------|
| \$0 - \$1,000 :        | 62         | 21,726.70           |
| \$1,000 - \$10,000 :   | 40         | 117,348.52          |
| \$10,000 - \$100,000 : | 11         | 214,303.82          |
| Over \$100,000 :       | 3          | 1,427,282.34        |
| <b>Total:</b>          | <b>116</b> | <b>1,780,661.38</b> |



**Directors**

Manny Fernandez  
Tom Handley  
Pat Kite  
Anjali Lathi  
Jennifer Toy

**Officers**

Paul R. Eldredge  
*General Manager/  
District Engineer*

Karen W. Murphy  
*Attorney*

**DATE:** January 18, 2016

**MEMO TO:** Board of Directors - Union Sanitary District

**FROM:** Paul R. Eldredge, General Manager/District Engineer  
Sami E. Ghossain, Manager of Technical Services  
Raymond Chau, CIP Coach  
Curtis Bosick, Associate Engineer

**SUBJECT:** Agenda Item No. 9.b - Meeting of January 25, 2016  
Information Item: **Solar and Cogeneration Facilities Operational Update**

**Recommendation**

This is an information item. Staff will provide the Board with an operational update of the solar and cogeneration facilities at the District.

**Alvarado Wastewater Treatment Plant Solar Carport**

The District completed construction of the solar carport facility located at the Alvarado Wastewater Treatment Plant at a cost of \$884,000 and began operation in September 2011. The system consists of 637 solar panels and is rated at 125 kilowatt (kW). The system rating is based on the California Energy Commission's calculation that takes into account the number of panels, the rating of each panel and the inverter efficiency.

The District applied for the California Solar Initiative (CSI) incentive that would rebate \$0.2568 per kilowatt-hour (kWh) of power generated by the system for a period of five years. PG&E, the administrator of the CSI program, approved an estimated incentive amount of \$252,850.

Through November 30, 2015, the Solar Carport facility has generated a total of 1,074,420 kWh of power, which equates to \$178,768 in energy savings at the Plant. Additionally, the District has received \$232,498 or approximately 92% of CSI incentive rebate from PG&E. The total benefit of

the Solar Carport is \$411,265, which represents 46.5% of simple payback for the initial construction cost of the facility.

### **Irvington Pump Station Solar Facility**

The District completed construction of the solar facility located at the Irvington Pump Station at a cost of \$2.85 million and began operation in April 2012. The system consists of 1,680 solar panels and is rated at 408 kW.

The District applied for the CSI incentive that would rebate \$0.15 per kWh of power generated by the system for a period of five years. PG&E approved an estimated incentive amount of \$623,370.

Through December 3, 2015, the solar facility has generated a total of 3,479,940 kWh of power, which equates to \$1,093,885 in energy savings at the Irvington Pump Station. Additionally, the District has received \$487,262 or 78% of CSI incentive rebate from PG&E. The total benefit of the solar facility is \$1,581,147, which represents 55.5% of simple payback for the initial construction cost of the facility.

### **Cogeneration Facility**

The District completed construction of the Cogeneration Facility located at the Alvarado Wastewater Treatment Plant at a construction cost of \$11.8 million and the facility was fully operational in late November 2014. The facility consists of two 850-kW biogas-fueled engine generators and a packaged biogas conditioning system.

The District applied for the Self-Generation Incentive Program (SGIP) that provides financial incentives for the installation of new, qualifying self-generation equipment installed to meet all or a portion of the electric energy needs of a facility. PG&E, the administrator of the SGIP in Northern California, approved the District's application for a maximum rebate of \$3.38 million. The District has already received half of the total rebate from PG&E. The other half will be paid to the District annually over the next five years and will depend on the actual electric energy generated by the facility and the actual amount of engine and exhaust heat recovered and utilized to heat the biosolids in the primary digesters.

Through December 31, 2015, the facility has generated a total of 17,226,495 kWh of power, which equates to approximately \$1,634,324 in energy savings at the plant. The District received \$1.69 million of the SGIP incentive rebate from PG&E in April 2015. The total benefit of the facility is \$3,324,324 since operation began in late November 2014, which represents 28.2% of simple payback for the initial construction cost of the facility.

Staff will provide the Board with an operational update of the solar and cogeneration facilities on a semi-annual basis. The attached Table 1 summarizes the operational data that was discussed in this update.

PRE/SEG/RC/CB:ks

Attachment: Table 1 – Solar and Cogeneration Facilities Operational Data

**Union Sanitary District  
Table 1 - Solar and Cogeneration Facilities Operational Data**

| <b>Facility</b>                       | <b>System Rating<sup>1</sup><br/>(kW)</b> | <b>Energy Generated This Period<sup>2</sup><br/>(kWh)</b> | <b>Total Energy Generated To Date<br/>(kWh)</b> | <b>Value of Energy Generated To Date<br/>(\$)</b> | <b>Rebates Received To Date<br/>(\$)</b> | <b>Total Received or Generated<br/>(\$)</b> | <b>Construction Cost<br/>(\$)</b> | <b>Simple Payback To Date<br/>(%)</b> | <b>Comments</b>   |
|---------------------------------------|---|---|---|---|--|---|-----------------------------------|---------------------------------------|---|
| Alvarado WWTP Solar Carport           | 125                                       | 116,087   | 1,074,420                                       | 178,768   | 232,498                                  | 411,265                                     | 884,000                           | 46.5%                                 | System began operation in September 2011. Values are current through November 30, 2015.     |
| Irvington Pump Station Solar Facility | 408                                       | 482,081   | 3,479,940                                       | 1,093,885   | 487,262                                  | 1,581,147                                   | 2,850,000                         | 55.5%                                 | System began operation in April 2012. Values are current through December 3, 2015.          |
| Cogeneration Facility <sup>3</sup>    | 1,700                                     | 10,449,652  | 17,226,495                                      | 1,634,324   | 1,690,000                                | 3,324,324                                   | 11,800,000                        | 28.2%                                 | System began operation in late November 2014. Values are current through December 31, 2015. |

1) System Rating for the solar facilities is based on the number of panels, the rating of each panel, and the inverter efficiency.

2) Period is from May/June through November/December 2015.

3) The cogeneration equipment consists of two 850-kW engine generators.

# California drought: How will we know when it's over?

**By Paul Rogers**

progers@mercurynews.com

POSTED: 01/09/2016 04:39:25 PM PST

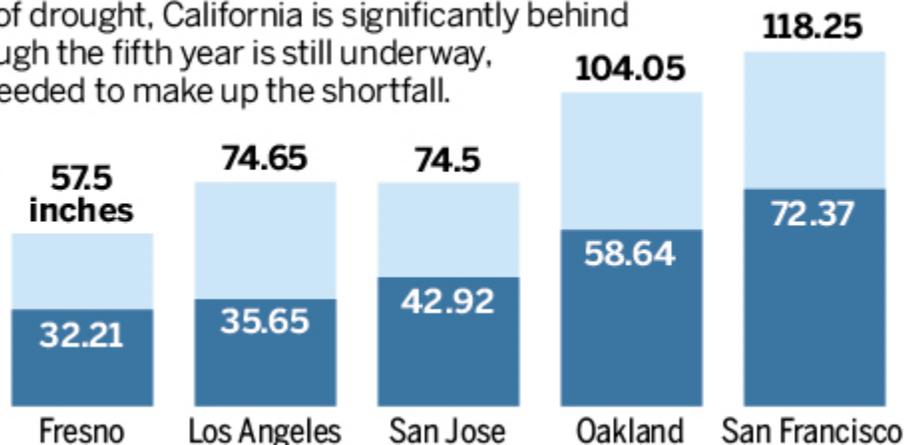
## BIG RAINFALL DEFICITS

After four years of drought, California is significantly behind on rainfall. Although the fifth year is still underway, big storms are needed to make up the shortfall.

### 5-year rainfall totals

Period ending Thursday

Historic average  
Actual



Source: Golden Gate Weather Services

BAY AREA NEWS GROUP

Now that 2016 has gotten off to a wet start, with a series of El Niño storms drenching California in recent days, the question is turning up with increasing frequency at dinner parties and coffee shops:

"How will we know when the drought is over?"

The answer, water experts say, is more complicated than you'd think.

Simply put: The drought could end this year, according to state water officials. But for that to happen, as California enters the fifth year of the worst drought in the state's history, rains will have to continue arriving in pounding, relentless waves through April to fill depleted reservoirs and dry rivers and push the Sierra snowpack to at least 150 percent of normal.

"One week of rain doesn't make up for four years of historic drought. We are in a very deep hole," said Mike Anderson, California's state climatologist.

Other disasters are easier to understand. Everyone knows when a forest fire is contained, an earthquake stops shaking or a tornado has passed.

But with California droughts, there isn't widespread agreement among scientists and water managers about what signifies the finish line. California is a huge state, with many different climates, water sources and water users. Decent rain over a few months may be enough to grow green grass so that a Sacramento Valley cattle rancher's business returns to normal in one season. But it might not fill reservoirs enough so a Bay Area city can lift water conservation rules.

"As they say, all politics is local. And all droughts are local," said Jeanine Jones, a top drought manager at the state Department of Water Resources. "The impacts are in the eye of the beholder."

Many experts say that if the state's big reservoirs fill, the drought will be over because it will be nearly impossible to convince Californians there is a drought emergency when they see water rushing over spillways and headed out to sea.

Others say California needs to make up the sizable rainfall deficit over the past four years, which almost certainly won't happen this winter. Other experts say that California has to replace billions of gallons of overpumped groundwater to have a true recovery -- which will take decades.

"How will we know when the drought is over?" said Leon Szeptycki, a water use attorney and executive director of Stanford's Water in the West program. "That's a really good question. There are lots of different answers."

Jones said various state agencies have been meeting nearly every week as part of a drought task force. They will make a recommendation to the governor about whether to lift the drought declaration at the end of the winter rainy season -- probably not before April -- after it's clear how much rain and snow fell, she said.

How far do we still have to go?

Anderson researched years when other major droughts were widely considered to have ended: 1938, 1978 and 1993. In each case, the Sierra snowpack -- the source of one-third of California's water supply -- was roughly 150 percent of the historic average. And precipitation levels at eight key weather stations in Northern California, located in watersheds that feed Shasta, Oroville, Folsom and other massive reservoirs, also was between 130 percent and 150 percent of normal.

His conclusion: If California receives 150 percent snowpack by this April and 150 percent of normal precipitation in the north, that should be enough to fill the biggest reservoirs and probably end the drought.

On Friday, the Sierra Nevada snowpack was at 107 percent of the historic average, and the eight-station index was at 94 percent.

"I'm encouraged. It's glorious. I went up to the Sierra last week, and I wanted to kiss each snowflake," said Felicia Marcus, director of the State Water Resources Control Board. "It was spectacular. It was tinged with the fact that I know it could still get warmer and melt, but I'm trying to look at it as a glass half full."

On Feb. 2, the board will vote on whether to relax the mandatory water conservation rules that have been in place since last June. Those require a statewide reduction of 25 percent in urban water use, and cities and water companies that violate the rules face fines. They have forced hundreds of water agencies to impose water restrictions.

The board is expected to ease the rules somewhat in areas with hotter climates or fast population growth, while keeping most of them in place. However, it will come back in April for another look, Marcus said.

"If we are flush, then we'll drop them then," she said. "If we are in some middle ground, we might adjust them and ease up a bit."

One of the biggest problems statewide is that nearly every major reservoir is at dangerously low levels. Since Dec. 8, rain has boosted the level of Shasta Lake, the state's largest reservoir, by 12 feet, adding 168,000 acre feet of water -- enough for 840,000 people's needs for a year.

That's impressive, until you realize that all that water only increased Shasta's storage by 4 percentage points, to 33 percent full.

Similarly, all the recent rain raised the 10 reservoirs in Santa Clara County to 31 percent full, up from 29 percent on New Year's Day.

"There's still an awful lot of room in those reservoirs," Anderson said.

And then there is the rainfall deficit.

Since the drought began in 2011, most major cities in California are missing at least a year of supply.

San Francisco, for example, receives 23.65 inches of rain in an average year. So over five years, it should have received 118.25 inches. But so far, since the drought began, it has received just 72.37 inches. That means that to get "back to normal," the city would need 45.88 inches this rainy season.

The record wettest year in San Francisco was 49.27 inches, during the winter of 1861-62. Similar shortfalls of 25 to nearly 40 inches exist in San Jose, Oakland, Fresno and Los Angeles.

In strong El Niño years like this one, history shows, the chance of a wet winter in California is greater. But it's not guaranteed.

"The big question is: Are we going to stay in a wet pattern?" said Jan Null, a meteorologist with Golden Gate Weather Services in Saratoga. "We don't have much skill after a week or two to know for sure.

"The fact that we have a very strong El Niño in place loads up the dice a little bit in favor of it being wetter," he said. "But even loaded dice don't always come up the way you want."

NASA scientists using satellite data estimate that California is 12 trillion gallons of water short because of the drought -- in rivers, creeks, snowpack and, most importantly, in underground aquifers that have been pumped at record levels by Central Valley farmers. Groundwater experts say that will take decades to recover. And it might not ever happen.

"California suffers from what I call 'chronic water scarcity.' We simply don't have enough water to do all the things that we want to do," said Jay Famiglietti, a senior water scientist with NASA's Jet Propulsion Lab and a UC Irvine professor of Earth systems science.

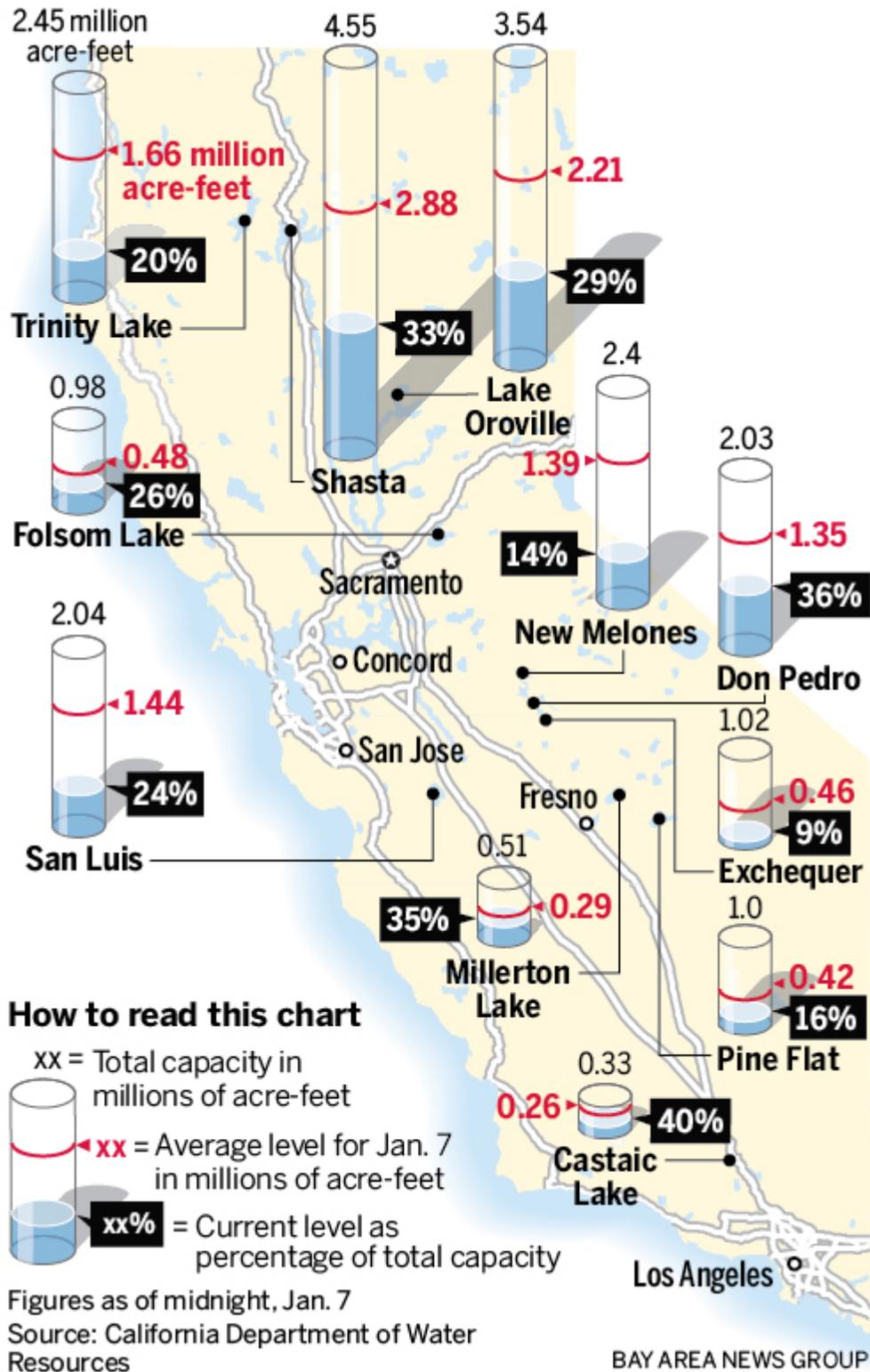
Famiglietti said farms need more drip irrigation, changes in water pricing and perhaps importing more water from out of state to stay sustainable in the future. Making up the lost 12 trillion gallons of water could take four years of normal or above-normal rainfall, he added.

When the drought does finally end, some leaders will push to make certain rules permanent, such as not allowing anyone to water grass within 48 hours of rainfall or requiring hotels to ask customers if they want to waive washing sheets and towels.

"It's rained a little, so we're all celebrating right now," said Dick Santos, a director with the Santa Clara Valley Water District. "It's like the economy. Things are going good right now, but they won't always be. Rainy days are going to come, but don't be fooled. Our population is growing, and California is a dry state. Droughts will come back. We should be better prepared next time than we were this time."

Paul Rogers covers resources and environmental issues. Contact him at 408-920-5045. Follow him at [Twitter.com/PaulRogersSJMN](https://twitter.com/PaulRogersSJMN)

# RESERVOIR LEVELS OFFER LITTLE RELIEF



# The Argus

## \$12 parcel fee heading for June ballot?

## Bay restoration tax proposed for all 9 area counties

*Levy would raise \$500M to help protect against flooding, stormsurges*

**By Paul Rogers**

*January 13, 2016*

[progers@mercurynews.com](mailto:progers@mercurynews.com)

In a milestone for San Francisco Bay restoration that also raises questions about who should pay to protect property from rising seas caused by climate change, a low-profile government agency is expected to place a \$12 annual parcel tax on the June ballot in all nine Bay Area counties.

The measure, whose campaign is being bankrolled by Silicon Valley business leaders and Bay Area environmental groups, is believed to be the first local tax ever placed before voters in all nine Bay Area counties.

If approved by two-thirds of voters, the tax would raise \$500 million over the next 20 years to build levees and restore thousands of acres of wetlands and tidal marshes as a buffer to storm surges and floods in every Bay Area county.

“The bay is a beautiful asset we all want to protect and restore,” said Carl Guardino, CEO of the Silicon Valley Leadership Group, which represents 390 large technology companies and other employers. “We are also concerned about the risk of sea level rise over time, or a storm that could cause flooding in unprecedented fashion. Either way we want to be prepared for it.”

The leadership group, along with Save the Bay and the Bay Area Council, a business group, already has raised \$700,000 toward a campaign and plans to raise up to \$5 million. Influential leaders such as Robert Fisher of the Gap and John Doerr, a Silicon Valley venture capitalist, already have donated to the campaign.

On Jan. 13 at 1 p.m., the San Francisco Bay Restoration Authority, a sevenmember board created in 2008 by state lawmakers, will meet in Oakland at the headquarters of the state Coastal Conservancy. The authority will vote on whether to place the measure on the June 7 election ballot in Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, Solano, Sonoma and San Francisco counties.

Studies done by the Bay Area Council and other organizations show that 270,000 residents, 1,780 miles of road and highways, and a combined total of 89 schools and health care facilities near the bay’s shoreline are at risk of catastrophic flooding from a 100-year flood and sea level rise. Other areas that computer models indicate could be flooded include the Oakland and San Francisco airports, communities along the Marin waterfront, Highway 101 through the Peninsula, and the headquarters of at least 20

major technology companies in San Mateo and Santa Clara counties, including Google, Oracle, Facebook, Yahoo and Cisco.

The unique tax raises complex questions, however.

Since the \$12-per-parcel tax will apply to all property owners in the nine counties, will people who live far away from the bay, such as residents of Cloverdale, Gilroy, Half Moon Bay or Livermore be willing to vote yes?

Will opponents be able to write different language in the ballot pamphlets of each county to tailor their message to local concerns? Will homeowners be willing to open their wallets to fund a measure that not only protects wildlife but also protects some of the richest companies on Earth?

“You have big companies like Apple that will only pay \$12 per parcel,” said Jon Coupal, president of the Howard Jarvis Taxpayers Association. “I respectfully suggest that Apple can afford the \$12.

“You have large businesses trying to spread the burden to other taxpayers. If this were structured as a benefit assessment district, the properties closer to the bay would have to pay more.”

Guardino contends, however, that not only do major companies employ tens of thousands of workers, the costs should be spread widely because public assets — freeways, schools, sewage treatment plants, airports and hospitals — are at risk. And internal polling by supporters found that more people said they are likely to vote yes on a parcel tax than a property tax that would be based on the value of each parcel.

A telephone poll of 1,505 people commissioned in December by the Restoration Authority found that 65 percent of likely voters in the Bay Area support the tax.

The number grew to 70 percent when arguments in favor were explained. But support varied widely. While 76 percent of Marin County voters, 71 percent of San Franciscans, 70 percent of Alameda County residents and 65 percent of Santa Clara County residents backed the idea, only 44 percent did in Napa County, 55 percent in Solano County, 61 percent in Contra Costa County, 62 percent in San Mateo County and 63 percent in Sonoma County.

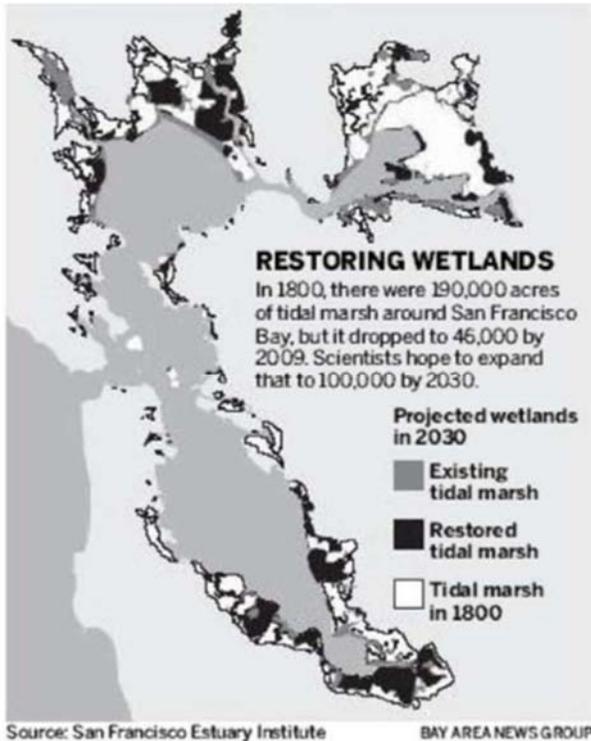
Because the two-thirds requirement applies to the entire region, however, a large majority in one area could offset a lower margin in a different county.

Environmentalists say the measure is critical in helping fulfill long-term restoration plans around the bay. A study in October by more than 100 scientists, coordinated by the Coastal Conservancy and other organizations, found that 54,000 acres of wetlands — an area twice the size of the city of San Francisco — need to be restored around the bay in the next 15 years to provide protection from surging storms. The alternative is concrete sea walls, which can cost more and would turn the bay into a giant bathtub over time, with far fewer birds, fish and other wildlife, the report concluded.

Driven by melting ice and expanding warming water, the bay and the Pacific Ocean off California will rise up to 1 foot in the next 20 years, 2 feet by 2050 and up to 5 feet by 2100, according to a 2012 study by the National Academy of Sciences.

“This is the most important thing we can do for the bay,” said David Lewis, executive director of Oakland-based Save the Bay. “There’s an urgency to restore tidal marshes, for ecological benefits and flood control benefits. The sooner we start the sooner they can provide benefits. But money has been the missing ingredient for a long time.”

*Paul Rogers covers resources and environmental issues. Contact him at 408-9205045. Follow him at Twitter. com/paulrogerssjmn.*



# The Argus

January 14, 2016

Environment

## Bay protection tax approved for June ballot

*Levy would restore shoreline, fortify levees that may be damaged by rising sea levels*

**By Denis Cuff**

[dcuff@bayareanewsgroup.com](mailto:dcuff@bayareanewsgroup.com)

OAKLAND — Bay Area voters will be asked in June to approve a \$12 annual parcel tax to protect and restore the San Francisco Bay shoreline and wetlands from rising sea levels due to climate change.

The proposed tax is believed to be the first to go on the ballot in all nine Bay Area counties. It needs two-thirds approval to pass.

In authorizing the measure unanimously on Wednesday, members of the San Francisco Bay Restoration Authority said the tax is needed to provide \$500 million over 20 years to fortify levees and create flood relief plains to protect homes, businesses, airports, highways and parks around the bay, and restore wetlands important to fish and wildlife.

"This is a historic day for Bay Area counties to get together on wetlands restoration on a scale not seen before," said Dave Pine, a San Mateo County supervisor who is chairman of the restoration authority board. "San Francisco Bay is a common resource people in our region want to protect. It's part of our identity."

The Contra Costa Taxpayers Association hasn't yet taken a stand on the measure, but Jack Weir, a leader of the group, said he is concerned 2016 is going to produce a rush of tax and fee ballot measures.

The panel is made up of seven elected county, city and special district officials who oversee a partnership that aims to protect bay wildlife and wetlands.

Board members, environmentalist and business leaders say the tax is needed to guard against the growing risk of flooding from rising sea levels because of climate change. Scientists predict the sea level to rise 3 to 5 feet through 2100.

Business groups such as the Bay Area Council and Silicon Valley Leadership Group, and environmental groups such as Save San Francisco Bay, back the measure.

But not everyone is pleased.

Zelda Bronstein, of Berkeley, said big corporations, such as high-tech firms in the flood-vulnerable South Bay, would get a disproportionately large benefit from the tax that would burden all Bay Area property owners for two decades.

"This isn't fair," she said Wednesday, urging the board to look into other financing tools that would make big corporations pay more.

John Gioia, of Richmond, a Contra Costa County supervisor on the restoration authority board, disagreed.

"This is not subsidizing any corporation," he said. "This is improving land under public ownership, making the bay more accessible, and cleaning the bay." Gioia said \$1 a month per parcel is a modest price to invest to protect San Francisco Bay.

The Bay Area Council, a business coalition, supports the tax. The worst flood expected every 150 years from the combined impact of high tides and four-to-seven consecutive days of rain would cause more than \$10 billion in economic damage to the region, said Adrian Covert, the Bay Area Council's policy director.

Restoration board members also said they expect the tax dollars would provide leverage to secure federal grants.

The Contra Costa Taxpayers Association hasn't yet taken a stand on the measure, but a leader of the group said he is concerned 2016 is going to produce a rush of tax and fee ballot measures.

"We are worried this is going to put a tremendous burden on taxpayers," said Jack Weir, president of the taxpayers association board.

Weir said he believes the restoration tax is on the June ballot because backers want to avoid the November Presidential election ballot expected to be crowded with many other tax and fee measures. With many tax measures on the same ballot, voters are likelier to vote against all of them, he said. *Contact Denis Cuff at 925-943-8267. Follow him at [Twitter.com/deniscuff](https://twitter.com/deniscuff).*

### FLOOD RISK

Areas shown in red will face flooding if the bay rises 55 inches, which scientists predict will occur by 2100.



Source: San Francisco Bay Restoration Authority  
BAY AREA NEWS GROUP

## **USEPA Announcement**

*January 14, 2016*

### **EPA Survey Shows \$271 Billion Needed for Nation's Wastewater Infrastructure**

WASHINGTON — The U.S. Environmental Protection Agency (EPA) today released a survey showing that \$271 billion is needed to maintain and improve the nation's wastewater infrastructure, including the pipes that carry wastewater to treatment plants, the technology that treats the water, and methods for managing stormwater runoff.

The survey is a collaboration between EPA, states, the District of Columbia, Puerto Rico, and other U.S. territories. To be included in the survey, projects must include a description and location of a water quality-related public health problem, a site-specific solution, and detailed information on project cost.

“The only way to have clean and reliable water is to have infrastructure that is up to the task,” said Joel Beauvais, EPA's Acting Deputy Assistant Administrator for Water. “Our nation has made tremendous progress in modernizing our treatment plants and pipes in recent decades, but this survey tells us that a great deal of work remains.”

Adequate wastewater infrastructure plays a vital role in the health of streams, rivers, and lakes, where discharged wastewater and stormwater runoff often end up. Wastewater infrastructure must also become more resilient to the impacts of climate change, including sea level rise, stronger and more frequent storms, flooding, and drought.

Wastewater infrastructure improvements also support healthy economies. Construction projects create good-paying jobs, and where new facilities are built, workers are needed to operate and maintain them. Upgraded infrastructure results in cleaner water, which is essential for many businesses and sectors of the economy.

EPA launched the Water Infrastructure and Resiliency Finance Center in January 2015 to work with states and communities to identify innovative financing strategies for drinking water, wastewater, and stormwater infrastructure. The center recently selected regional Environmental Finance Centers to help communities across the country develop sustainable “how-to-pay” solutions to meet environmental goals. This financial expertise and technical assistance helps communities make informed funding decisions for resilient infrastructure projects that best meet local needs.

In addition, EPA offers financial assistance to address the types of infrastructure needs covered in the survey. The Clean Water State Revolving Fund has provided more than \$111 billion in low-interest loans since its inception in 1987, with \$5.8 billion in FY 2015 alone. Grant funding is available through the Alaska Native Villages and Rural Communities program, the Clean Water Indian Set-Aside, and the U.S.-Mexico Border Water Infrastructure program.

The average American receives a much higher level of wastewater treatment today compared to when the Clean Water Act was passed in 1972. Between 1972 and 2012, the U.S. population receiving secondary treatment increased from about 75 million to 90 million, and the population receiving advanced treatment increased from 7.8 million to 127 million. Over the same period, the population receiving less-than-secondary treatment decreased from almost 60 million to 4.1 million. This has resulted in dramatic improvements in the waterways receiving discharges from these treatment plants.

The \$271 billion is primarily for projects needed within five years. The survey reported the following infrastructure needs:

- Secondary wastewater treatment: \$52.4 billion to meet secondary treatment standards. Secondary treatment uses biological processes to meet the minimum level of treatment required by law.
- Advanced wastewater treatment: \$49.6 billion to provide upgrades so treatment plants can attain a level of treatment more protective than secondary treatment. Advanced treatment may also treat nonconventional or toxic pollutants such as nitrogen, phosphorus, ammonia or metals.
- Conveyance system repair: \$51.2 billion to rehabilitate and repair conveyance systems.
- New conveyance systems: \$44.5 billion to install new sewer collection systems, interceptor sewers and pumping stations.
- Combined sewer overflow correction: \$48 billion to prevent periodic discharges of mixed stormwater and untreated wastewater during wet-weather events.
- Stormwater management programs: \$19.2 billion to plan and implement structural and nonstructural measures to control polluted runoff from storm events.
- Recycled water distribution: \$6.1 billion for conveyance and further treatment of wastewater for reuse.

Visit <http://www.epa.gov/cwns> for more information on the report.

# El Niño not fizzling: More storms barreling toward California

By Paul Rogers  
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San Jose Mercury News

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Don't even think about putting that umbrella away.

El Niño conditions may have peaked in the Pacific Ocean, federal scientists said Thursday, but powerful weather systems -- like a new series of storms on track to soak the greater Bay Area over the next five days -- have only just begun and will likely continue at least through May.

"This is the time of year when El Niño acts the most reliably," said Mike Halpert, deputy director of the climate prediction center for the National Oceanic and Atmospheric Administration in College Park, Maryland. "So we would certainly expect the impacts to continue well through the rest of the winter and into the early part of the spring."

There is a 96 percent chance that El Niño conditions will remain through March, scientists at NOAA and Columbia University reported Thursday, and a 62 percent probability they will continue through May.

Simply put, that means the likelihood of regular storms across California and heavy snow in the Sierra Nevada will continue to be greater this year than in regular years, offering hope that 2016 may finally be the year that the state's four-year drought -- now starting its fifth year -- is broken.

But, experts caution, a lot more rain and snow is needed.

On Thursday, the government's weekly "drought monitor" update showed that 69 percent of California remains in extreme drought, barely changed from three months ago, when it was 71 percent. The scale measures more than 40 indicators, from soil moisture to snowpack to reservoir levels.

"The likelihood of eliminating a drought of this magnitude in one winter is possible, but historically speaking we don't see it that often," said Brian Fuchs, climatologist with the National Drought Mitigation Center in Lincoln, Nebraska.

"We're seeing a lot of things lining up in terms of seeing a substantial easing of the drought, but until it happens, don't count all your eggs until they are in the basket," he said. "We've got to be cautious."

On Thursday, the Sierra snowpack, the source of a third of California's water supply, was at 104 percent of the historic average. But scientists at the state Department of Water Resources say that the snowpack needs to be at about 150 percent by April 1 to end the drought. Rain totals in Northern California also need to be at about 150 percent by April, they say.

On Thursday, rainfall was at 89 percent of the historic average for this date in San Francisco, 70 percent in Oakland, 102 percent in San Jose, 145 percent in Fresno and 69 percent in Los Angeles.

But the trend is in the right direction. A series of four storms starting Friday night and forecast to continue through early Wednesday morning could bring as much as three feet of new snow to the Lake Tahoe area, the National Weather Service said Thursday.

In the Bay Area, those storms are expected to deliver between 1 and 2.5 inches of rain to most Bay Area cities by early Wednesday morning, with the Santa Cruz Mountains and Big Sur areas potentially receiving up to 5 inches.

"This is a typical El Niño weather pattern," said Steve Anderson, a meteorologist with the National Weather Service in Monterey. "We're looking at storms about every 24 hours."

Although Friday will be mostly dry, Anderson said, rain will be fairly steady for four days beginning Friday night, with the heaviest storms Sunday and Monday, until another break on Wednesday. Some longer-range forecasts show even more rain the following week.

After four years of rough sledding at Sierra ski resorts, the thrill is back.

"This year and last year are a tale of two different winters," said Kevin Cooper, a spokesman for Heavenly and Kirkwood ski areas. "It's just been amazing, a great start to the year. We're seeing happy faces skiing out on the mountain."

Last year at this time, there had been 56 inches of snow at Heavenly, he said. This year, that figure is 193 inches. The historic average for this time of year is 74.

The latest storms are coming from the mid-latitudes of the Pacific Ocean in classic, one-after-another El Niño fashion, rather than the occasional colder storms from the Gulf of Alaska that normally characterize California winters. That makes them very similar to storms that drenched the Bay Area from Jan. 3 to Jan. 7, bringing up to 3 inches of rain in most Bay Area cities and 5 or more inches in coastal mountain communities.

El Niño is a warming of the ocean along the equator off Peru that affects the weather worldwide. The warmer the water, the stronger the impact. Strong El Niños have historically been associated with wetter-than-normal winters in California. In December, the water temperature reached 4.3 degrees Fahrenheit above the historic average, breaking the previous record of 4 degrees from December 1997, a winter that ended up with double the normal rainfall in California -- among the wettest ever recorded.

One of the biggest challenges: water storage after four very dry years.

California's largest reservoirs have slowly begun to fill, but remain low. In the last five weeks, Shasta Lake has added 218,000 acre-feet of water, enough for 1.1 million people for a year. But the reservoir was so low it has only risen to 34 percent full. Historically, it's averaged 66 percent full on this date.

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## GOVERNMENT

## Proposed sewer rate hikes go to protest phase



JANUARY 14, 2016 12:15 PM • BARRY EBERLING  
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City of Napa property owners will soon receive Proposition 218 notices informing them that the Napa Sanitation District intends to raise sewer rates 53 percent over five years.

Then they will have the final word. Proposition 218, passed by state voters in 1996, gives property owners the ability to stop proposed fee hikes if a majority submit

written protests.

The bar is high, though – district officials estimate about 13,000 written protests would have to be lodged.

The Napa Sanitation District Board of Directors on Wednesday decided to mail out the notices. District officials said the higher rates are needed to help maintain and repair an aging sewer system before it requires more expensive, emergency fixes.

“It’s ‘pay me now or pay me later,’” said county Supervisor Keith Caldwell, who is on the district board.

The district will count the protest votes at a March 16 meeting. Absent a successful protest, the district board could then pass the higher rates.

Today’s annual household rate of \$482.50 would rise on July 1 by 15 percent to \$554.88. Subsequent hikes of 15 percent, 6 percent, 5 percent and 4 percent would take the annual amount to \$738.62 in July 2020. People pay the sewer bill along with their property tax.

The board agreed that a 28-percent discount should be available to low-income ratepayers.

Jack Gray of the Napa County Taxpayers Association asked that the Proposition 218 notice include a tear-out section that those wanting to protest could send in.

“Just make it easy for the ratepayers to show a protest,” he said to the board.

Attorney John Bakker, who advises the district, said Proposition 218 doesn’t require agencies to provide reply cards for protests. Most of his clients don’t do that.

The district board decided to include a protest note with the Proposition 218 hearing notice that people can cut out. As described at the meeting, people would put the note in an envelope, write down the district address and put a stamp on the envelope.

Caldwell had a dissenting view. He simply wanted to follow the letter of the law – inform property owners that the protest procedure exists.

Board member Charles Gravett agreed with Caldwell. Having to write a protest requires more thought. An easy, tear-off protest card allows people to submit their objection “on a lark,” rather than learning about the issues facing the district, he said.

But a majority of the board disagreed. Napa City Councilman Peter Mott said having a cut-out protest for ratepayers is consistent with having a government that serves the people.

“This will give us an idea if they believe we’re doing well,” Mott said.

Most board meetings are held at 4 p.m. at the district treatment plant near the county airport. The board decided the March 16 meeting, which will include taking public comments on the proposed rate increase, needs to be more convenient for residents to attend.

Given that, the district plans to hold the meeting at 6 p.m. at the Napa Valley Unified School District building at Jefferson Street and Lincoln Avenue.

Napa Sanitation District Chief Financial Officer Jeff Tucker talked about planned projects to be funded by the increase. These projects would help avoid such possible scenarios as raw sewage coming out of manholes during heavy rains and collapsing pipes.

The district maintains 270 miles of sewers. About 15 percent of the system is at least 61 years old and 16 percent is between 50 years old and 60 years old, officials say.

Without the proposed increases, the district will average spending \$1.2 million annually over five years rehabilitating sewers, Tucker said. With the increases, the district would boost the amount to \$3.1 million annually four years from now and rehabilitate about three miles of sewers annually.

One \$15.3 million project to improve sewer capacity in the Browns Valley and downtown areas has been in the district’s master plan since 1989. The rate increases would allow the district to bond for the project.

“It’s been put off for an eternity,” Mott said. “Some things can’t be put off forever. You have to address them.”

Pam Kindig of Covenant Presbyterian Church said the church pays commercial rates and could see its sewer bills rise from \$14,000 annually to \$16,500. “That’s a significant amount of money,” she said.

The commercial rates, unlike the flat household rates, depend on a formula that includes water consumption. Caldwell suggested taking such steps as installing low-flow toilets. The district has a toilet rebate program.

District officials and board members expressed confidence throughout the meeting that the hours they've put into looking at the sewer system challenges have yielded the right answer for needed rate increases.

"It's a painful rate, I'm not going to mince words on that," Tucker told the board. "It's a rate that's difficult for a lot of people to accept. But we believe it is necessary."