



**BOARD MEETING AGENDA**  
**Monday, November 12, 2018**  
**Regular Meeting - 7:00 P.M.**

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

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

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

Karen W. Murphy  
*Attorney*

1. Call to Order.  
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2. Pledge of Allegiance.  
\_\_\_\_\_
3. Roll Call.  
\_\_\_\_\_
- Motion 4. Approve Minutes of the Regular Meeting of October 22, 2018.  
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- Motion 5. Approve Minutes of the Special Meeting of October 23, 2018.  
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- Motion 6. Approve Minutes of the Special Meeting of October 29, 2018.  
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7. Written Communications.  
\_\_\_\_\_
8. 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.*
- Public Hearing 9. Conduct a Public Hearing to Receive Comments on the Initial Study and Mitigated Negative Declaration of Environmental Impacts for the Primary Digester No. 7 Project *(to be reviewed by the Engineering and Information Technology Committee)*.  
\_\_\_\_\_
- Motion 10. Certified Annual Financial Report (CAFR) for the Fiscal Year (FY) Ending June 30, 2018 *(to be reviewed by the Audit Committee)*.  
\_\_\_\_\_
- Motion 11. Consider Approving a Capacity Charge Refund for the Palmdale Estates - Phase 2 Development Located Near Mission Boulevard and Washington Boulevard in the City of Fremont *(to be reviewed by the Budget & Finance Committee)*.  
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- Motion 12. Authorize the General Manager to Execute an Agreement and Task Order No. 1 with Carollo Engineers for the WAS Thickener Replacement Project *(to be reviewed by the Engineering and Information Technology Committee)*.  
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- Motion 13. Authorize the General Manager to Execute an Agreement and Task Order No. 1 with Woodard & Curran, Inc. for the Control Box No. 1 Improvements Project *(to be reviewed by the Engineering and Information Technology Committee)*.

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- Motion 14. Authorize the General Manager to Execute Task Order No. 3 with CH2M HILL Engineers, Inc. for the Odor Control Alternatives Study *(to be reviewed by the Engineering and Information Technology Committee)*.
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- Information 15. Status of Priority 1 Capital Improvement Program Projects *(to be reviewed by the Engineering and Information Technology Committee)*.
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- Information 16. First Quarterly Report on the Capital Improvement Program for FY19 *(to be reviewed by the Engineering and Information Technology Committee)*.
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- Information 17. Report on the East Bay Dischargers Authority (EBDA) Meeting of October 18, 2018.
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- Information 18. Check Register.
- 
- Information 19. Committee Meeting Reports. *(No Board action is taken at Committee meetings)*:
- a. Budget & Finance Committee – Wednesday, November 7, 2018, at 10:00 a.m.
    - Director Kite and Director Toy
  - b. Audit Committee – Thursday, November 8, 2018, at 9:00 a.m.
    - Director Kite and Director Toy
  - c. Engineering and Information Technology Committee – Thursday, November 8, 2018, at 12:30 p.m.
    - Director Fernandez and Director Lathi
  - d. Legal/Community Affairs Committee – will not meet.
  - e. Personnel Committee – will not meet.
  - f. Legislative Committee – will not meet.
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- Information 20. General Manager’s Report. *(Information on recent issues of interest to the Board)*.
- 
21. 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.
- 
22. Adjournment – The Board will adjourn to a Special Meeting on Monday, November 26, 2018, at 6:00 p.m.
- 
23. Adjournment – The Board will then adjourn to a Regular Meeting in the Boardroom on Monday, December 10, 2018, at 7:00 p.m.
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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



**BUDGET & FINANCE COMMITTEE MEETING**  
Committee Members: Director Kite and Director Toy

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

**AGENDA**  
**Wednesday, November 7, 2018**  
**10:00 a.m.**

**Alvarado Conference Room**  
**5072 Benson Road**  
**Union City, CA 94587**

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

Karen W. Murphy  
*Attorney*

**THIS MEETING WILL BE TELECONFERENCED WITH DIRECTOR KITE FROM THE EXTERIOR OF  
35040 NEWARK BOULEVARD, NEWARK, CALIFORNIA.**

1. Call to Order  
\_\_\_\_\_
2. Roll Call  
\_\_\_\_\_
3. Public Comment  
\_\_\_\_\_
4. Items to be reviewed for the Regular Board meeting of November 12, 2018:
  - Consider Approving a Capacity Charge Refund for the Palmdale Estates – Phase 2 Development Located Near Mission Boulevard and Washington Boulevard in the City of Fremont\_\_\_\_\_
5. Adjournment  
\_\_\_\_\_

Items reviewed at committee meetings will be included in the agenda packet for the upcoming Board meeting. No action will be taken at committee meetings.

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 "Public Comment" 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 and are to be completed prior to discussion of the agenda item.

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**THE PUBLIC IS INVITED TO ATTEND**



**Directors**

Manny Fernandez  
Tom Handley  
Pat Kite  
Anjali Lathi  
Jennifer Toy

**AUDIT COMMITTEE MEETING**

Committee Members: Director Kite and Director Toy

**AGENDA**

**Thursday, November 8, 2018**

**9:00 A.M.**

**Officers**

Paul R. Eldredge  
*General Manager/  
District Engineer*

**Alvarado Conference Room  
5072 Benson Road  
Union City, CA 94587**

Karen W. Murphy  
*Attorney*

1. Call to Order

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2. Roll Call

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3. Public Comment

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4. Items to be reviewed for the Board meeting of November 12, 2018:
  - Certified Annual Financial Report (CAFR) for the Fiscal Year (FY) Ending June 30, 2018

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5. Adjournment

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Items reviewed at committee meetings will be included in the agenda packet for the upcoming Board meeting. No action will be taken at committee meetings.

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 "Public Comment" 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 and are to be completed prior to discussion of the agenda item.

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THE PUBLIC IS INVITED TO ATTEND

# REVISED



## ENGINEERING AND INFORMATION TECHNOLOGY COMMITTEE MEETING

Committee Members: Director Fernandez and Director Lathi

### AGENDA

Thursday, November 8, 2018

12:30 P.M.

Alvarado Conference Room

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. Roll Call

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3. Public Comment

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4. Items to be reviewed for the Regular Board meeting of November 12, 2018:
  - Conduct a Public Hearing to Receive Comments on the Initial Study and Mitigated Negative Declaration of Environmental Impacts for the Primary Digester No. 7 Project
  - Authorize the General Manager to Execute an Agreement and Task Order No. 1 with Carollo Engineers for the WAS Thickener Replacement Project
  - ~~Authorize the General Manager to Execute Agreement and Task Order No. 1 with Carollo Engineers for the Cherry Street Pump Station Project~~
  - Authorize the General Manager to Execute an Agreement and Task Order No. 1 with Woodard & Curran, Inc. for the Control Box No. 1 Improvements Project
  - Authorize the General Manager to Execute Task Order No. 3 with CH2M HILL Engineers, Inc. for the Odor Control Alternatives Study
  - Status of Priority 1 Capital Improvement Program Projects
  - First Quarterly Report on the Capital Improvement Program for FY19

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5. Adjournment

Items reviewed at committee meetings will be included in the agenda packet for the upcoming Board meeting. No action will be taken at committee meetings. 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 "Public Comment" 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 and are to be completed prior to discussion of the agenda item.

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THE PUBLIC IS INVITED TO ATTEND

**MINUTES OF THE MEETING OF THE  
BOARD OF DIRECTORS OF  
UNION SANITARY DISTRICT  
October 22, 2018**

**CALL TO ORDER**

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

**PLEDGE OF ALLEGIANCE**

**ROLL CALL**

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

STAFF: Paul Eldredge, General Manager/District Engineer  
Karen Murphy, District Counsel  
Armando Lopez, Treatment and Disposal Services Manager  
Sami Ghossain, Technical Services Manager  
Robert Simonich, Fabrication, Maintenance, and Construction Manager  
Laurie Brenner, Business Services Coach  
Jose Rodrigues, Collection Services Coach  
Regina McEvoy, Executive Assistant to the General Manager/Board Clerk

VISITOR: Alice Johnson, League of Women Voters  
Roelle Balan, Tri-City Voice Newspaper

**APPROVE MINUTES OF THE REGULAR MEETING OF OCTOBER 8, 2018**

It was moved by Director Handley, seconded by Director Kite, to Approve the Minutes of the Regular Meeting of October 8, 2018. Motion carried unanimously.

**SEPTEMBER 2018 MONTHLY OPERATIONS REPORT**

This item was reviewed by the Budget & Finance and Legal and Community Affairs Committees. General Manager Eldredge provided an overview of the Odor Report and work group reports included in the Board meeting packet. Business Services Coach Brenner reviewed the financial reports included in the Board meeting packet.

**WRITTEN COMMUNICATIONS**

There were no written communications.

## **ORAL COMMUNICATIONS**

There were no oral communications.

### **CONSIDER RESOLUTIONS FOR THE APPLICATION FOR CLEAN WATER STATE REVOLVING FUND FINANCIAL ASSISTANCE FOR THE PRIMARY DIGESTER NO. 7 PROJECT**

This item was reviewed by the Engineering and Information Technology Committee. Technical Services Manager Ghossain stated staff will prepare an application package to submit to the State Water Resources Control Board (SWRCB) for financial assistance of up to \$25 million for design and construction of the Primary Digester No. 7 Project. The financial assistance application required three separate resolutions be adopted by the Board: Authorizing Resolution, Pledged Revenues and Fund(s) Resolution, and Reimbursement Resolution. Staff recommended the Board consider three resolutions required for the SWRCB application.

It was moved by Vice President Fernandez, seconded by Secretary Toy, to Adopt Resolution No. 2839 Authorizing Resolution, Resolution No. 2840 Pledged Revenues and Fund(s) Resolution, and Resolution No. 2841 Reimbursement Resolution for the SWRCB Financial Assistance Application for the Primary Digester No. 7 Project. Motion carried unanimously.

### **CONSIDER RESOLUTIONS FOR THE APPLICATION OF CLEAN WATER STATE REVOLVING FUND FINANCIAL ASSISTANCE FOR THE STANDBY POWER GENERATION SYSTEM UPGRADE PROJECT**

This item was reviewed by the Engineering and Information Technology Committee. Technical Services Manager Ghossain stated staff will prepare an application package to submit to the State Water Resources Control Board (SWRCB) for financial assistance of up to \$28 million for design and construction of the Standby Power Generation System Upgrade Project. The financial assistance application required three separate resolutions be adopted by the Board: Authorizing Resolution, Pledged Revenues and Fund(s) Resolution, and Reimbursement Resolution. Staff recommended the Board consider three resolutions required for the SWRCB application.

It was moved by Secretary Toy, seconded by Director Handley, to Adopt Resolution No. 2842 Authorizing Resolution, Resolution No. 2843 Pledged Revenues and Fund(s) Resolution, and Resolution No. 2844 Reimbursement Resolution for the SWRCB Financial Assistance Application for the Standby Power Generation System Upgrade Project. Motion carried unanimously.

### **AUTHORIZE THE GENERAL MANAGER TO EXECUTE CONTRACT CHANGE ORDER NO. 9 WITH MONTEREY MECHANICAL COMPANY FOR THE PRIMARY DIGESTER NO. 3 REHABILITATION PROJECT**

This item was reviewed by the Engineering and Information Technology Committee. Technical Services Manager Ghossain stated the District has six primary and two

secondary digesters at the Alvarado Wastewater Treatment Plant that require periodic cleaning and maintenance. The Board awarded the construction contract to Monterey Mechanical Company (MMC) to repair and rehabilitate Primary Digester No. 3 in November of 2017, and the Project was scheduled to be completed by August 1, 2018. As of the date of the meeting, District staff had executed eight contract orders with MMC. Contract Change Order No. 9 would extend substantial completion of the Project to March 28, 2018. Staff recommended the Board authorize the General Manager to execute Contract Change Order No. 9 with Monterey Mechanical Company (MMC) in the amount of \$457,371 for the Primary Digester No. 3 Rehabilitation Project.

It was moved by Vice President Fernandez, seconded by Director Kite, to Authorize the General Manager to Execute Contract Change Order No. 9 with Monterey Mechanical Company in the Amount of \$457,371 for the Primary Digester No. 3 Rehabilitation Project. Motion carried unanimously.

**AUTHORIZE THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 2 TO TASK ORDER NO. 2 WITH CAROLLO ENGINEERS FOR THE PRIMARY DIGESTER NO. 3 REHABILITATION PROJECT**

This item was reviewed by the Engineering and Information Technology Committee. Technical Services Manager Ghossain stated the purpose of Amendment No. 2 to Task Order No. 2 would be to authorize additional engineering services during construction, mainly due to upcoming sludge mixing pipelines replacement work. The scope of services for Amendment No. 2 will include additional project management, submittal review, requests for information, and site visits associated with the sludge mixing pipelines replacement and tasks that exceed the original assumptions during construction. Staff recommended the Board authorize the General Manager to execute Amendment No. 2 to Task Order No. 2 with Carollo Engineers in the amount of \$32,398 to provide additional design services during construction of the Primary Digester No. 3 Rehabilitation Project.

It was moved by Vice President Fernandez, seconded by Director Kite, to Authorize the General Manager to Execute Amendment No. 2 to Task Order No. 2 with Carollo Engineers in the Amount of \$32,398 to Provide Additional Design Services During Construction of the Primary Digester No. 3 Rehabilitation Project. Motion carried unanimously.

**AUTHORIZE THE GENERAL MANAGER TO EXECUTE TASK ORDER NO. 6 WITH WEST YOST ASSOCIATES FOR THE FORCE MAIN CORROSION REPAIRS PROJECT, PHASE 3**

This item was reviewed by the Engineering and Information Technology Committee. Technical Services Manager Ghossain stated all of the District's 78 manholes were corroded and in need of rehabilitation or replacement. Phases 1 and 2 of the Force Main Corrosion Repairs Project rehabilitated 34 manholes. Phase 3 of the Project will address corrosion repairs for manholes between Newark Pump Station and Irvington Pump Station. Task Order No. 6 will authorize design for Project Phase 3. Staff recommended the Board consider authorizing the General Manager to execute Task Order No. 6 with

West Yost Associates in the amount of \$59,533 to provide design services for the Force Main Corrosion Repairs Project, Phase 3.

It was moved by Secretary Toy, seconded by Director Handley, to Authorize the General Manager to Execute Task Order No. 6 with West Yost Associates in the Amount of \$59,533 to Provide Design Services for the Force Main Corrosion Repairs Project, Phase 3. Motion carried unanimously.

**AUTHORIZE THE GENERAL MANAGER TO EXECUTE AMENDMENT NO. 1 TO TASK ORDER NO. 2 WITH WOODARD & CURRAN, INC. FOR THE HEADWORKS SCREEN NO. 3 PROJECT**

This item was reviewed by the Engineering and Information Technology Committee. Technical Services Manager Ghossain stated the Headworks Screen No. 3 Project will include replacement of the manual bar rack of Screen No. 3 with a mechanical multi-rake bar screen. The Fiscal Year (FY) 2019 CIP budget included a replacement project for Mechanical Screens No. 1 and 2 starting in FY 2021. Due to the critical nature of the bar screens to the Plant's treatment processes, staff decided to move up the replacement timeline for both Mechanical Screens No. 1 and 2 to be included in this Project. Staff recommended the Board authorize the General Manager to execute Amendment No. 1 to Task Order No. 2 with Woodard & Curran, Inc. in the amount of \$56,490 to provide additional design services for the Headworks Screen No. 3 Project.

It was moved by Vice President Fernandez, seconded by Director Kite, to Authorize the General Manager to Execute Amendment No. 1 to Task Order No. 2 with Woodard & Curran, Inc. in the Amount of \$56,490 to Provide Additional Design Services for the Headworks Screen No. 3 Project. Motion carried unanimously.

**CONSIDER APPROVAL OF PORTFOLIO MANGEMENT SERVICES CONTRACT**

This item was reviewed by the Budget & Finance Committee. General Manager Eldredge and Business Services Coach Brenner stated staff issued an RFP (request for proposals) for portfolio management services, including service options, costs, and estimated rates of return from professional investment firms specializing in the public sector. Staff conducted interviews with the top scoring investment management firms, and unanimously selected PFM Asset Management LLC. Staff recommended the Board consider authorizing the General Manager to execute a Portfolio Management Services Contract with PFM Asset Management LLC.

It was moved by Director Kite, seconded by Vice President Fernandez, to Authorize the General Manager to Execute a Portfolio Management Services Contract with PFM Asset Management LLC. Motion carried unanimously.

**INFORMATION ITEMS:**

**Cal-Card Quarterly Activity Report**

This item was reviewed by the Budget & Finance Committee. Business Services Coach Brenner reviewed the Cal-Card activity report for the first quarter of Fiscal Year 2019 included in the Board meeting packet.

**Report on the East Bay Dischargers Authority (EBDA) Meeting of September 20, 2018**

Director Handley provided an overview of the September 20, 2018, EBDA meeting summary included in the Board meeting packet.

**Board Member Expenses, First Quarter FY19**

This item was reviewed by the Budget & Finance Committee. There were no questions regarding the report included in the Board meeting packet.

**Check Register**

Staff answered Board questions regarding the Check Register.

**COMMITTEE MEETING REPORTS:**

The Budget & Finance, Engineering and Information Technology, and Legal/Community Affairs Committees met.

**GENERAL MANAGER'S REPORT:**

General Manager Eldredge reported the following:

- General Manager Eldredge stated he requested a copy of a report highlighting the status of nutrients in the greater Bay Area presented at a recent EBDA commission meeting, and will share with the Board via email upon receipt.
- General Manager Eldredge stated he recently met with the Oro Loma and Castro Valley Sanitary District General Managers, and will discuss the conversation with the EBDA JPA Ad Hoc at its next meeting.
- District staff will soon receive the results from Hazen regarding the secondary treatment process evaluation.

**OTHER BUSINESS:**

There was no other business.

**ADJOURNMENT:**

The meeting was adjourned at 7:41 p.m. to a Special Meeting in the Alvarado Conference Room on Tuesday, October 23, 2018, at 6:00 p.m.

SUBMITTED:

ATTEST:

\_\_\_\_\_  
REGINA McEVOY  
BOARD CLERK

\_\_\_\_\_  
JENNIFER TOY  
SECRETARY

APPROVED:

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ANJALI LATHI  
PRESIDENT

Adopted this 12<sup>th</sup> day of November 2018

**MINUTES OF THE SPECIAL MEETING OF THE  
BOARD OF DIRECTORS OF  
UNION SANITARY DISTRICT  
October 23, 2018**

**CALL TO ORDER**

President Lathi called the special meeting to order at 6:00 p.m.

**ROLL CALL**

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

STAFF: Paul Eldredge, General Manager  
Karen Murphy, District Counsel  
Gene Boucher, Human Resources Manager

**ORAL COMMUNICATIONS**

There were no oral communications.

**CLOSED SESSION**

The Board adjourned to Closed Session for the following:

PUBLIC EMPLOYEE PERFORMANCE EVALUATION  
Pursuant to Government Code Section 54957  
Title: General Manager

CONFERENCE WITH LABOR NEGOTIATORS  
Agency designated representatives: Vice President Fernandez and Secretary Toy  
Unrepresented employee: General Manager

The Board reconvened to Open Session. President Lathi reported there was no reportable action.

**ADJOURNMENT:**

The special meeting was adjourned at approximately 8:30 p.m. to a Special Board Meeting in the Alvarado Conference Room on Monday, October 29, 2018, at 6:00 p.m.

SUBMITTED:

ATTEST:

\_\_\_\_\_  
REGINA McEVOY  
BOARD CLERK

\_\_\_\_\_  
JENNIFER TOY  
SECRETARY

APPROVED:

\_\_\_\_\_  
ANJALI LATHI  
PRESIDENT

Adopted this 12<sup>th</sup> day of November, 2018

**MINUTES OF THE SPECIAL MEETING OF THE  
BOARD OF DIRECTORS OF  
UNION SANITARY DISTRICT  
October 29, 2018**

**CALL TO ORDER**

President Lathi called the special meeting to order at 6:00 p.m.

**ROLL CALL**

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

STAFF: Paul Eldredge, General Manager  
Gene Boucher, Human Resources Manager  
Glenn Berkheimer, Industrial Employers Distributors Association

**ORAL COMMUNICATIONS**

There were no oral communications.

**CLOSED SESSION**

The Board adjourned to Closed Session for the following matters:

CONFERENCE WITH LABOR NEGOTIATORS  
(Pursuant to Government Code Section 54957.6)

Agency designated representatives:  
Paul Eldredge  
Glenn Berkheimer  
Gene Boucher

Employee Organization:  
Service Employees International Union, Local 1021 (SEIU)

CONFERENCE WITH LABOR NEGOTIATORS  
(Pursuant to Government Code Section 54957.6)

Agency designated representatives: Vice President Fernandez and Secretary Toy

Unrepresented employee: General Manager

The Board reconvened to Open Session. President Lathi reported there was no reportable action.

**ADJOURNMENT:**

The special meeting was adjourned at approximately 7:30 p.m. to the next Regular Board Meeting in the Boardroom on Monday, November 12, 2018, at 7:00 p.m.

SUBMITTED:

ATTEST:

\_\_\_\_\_  
REGINA McEVOY  
BOARD CLERK

\_\_\_\_\_  
JENNIFER TOY  
SECRETARY

APPROVED:

\_\_\_\_\_  
ANJALI LATHI  
PRESIDENT

Adopted this 12<sup>th</sup> day of November, 2018



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

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

Karen W. Murphy  
*Attorney*

**DATE:** November 5, 2018

**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 - Meeting of November 12, 2018  
**Conduct a Public Hearing to Receive Comments on the Initial Study and Mitigated Negative Declaration of Environmental Impacts for the Primary Digester No. 7 Project**

### **Recommendation**

The Board of Directors opens the public hearing and receives comments regarding the Initial Study and Mitigated Negative Declaration for the Primary Digester No. 7 Project.

### **Background**

The Primary Digester No. 7 Project (Project) was one of the outcomes of the Plant Solids System/Capacity Assessment – Phase 1 that was completed in November 2016. The assessment concluded that the plant’s anaerobic digestion process was at or nearing capacity and Primary Digester No. 6, the largest existing digester, could not reliably be taken out of service for cleaning and maintenance until additional digestion capacity is provided.

The Project’s major scope items include:

- Construction of a new anaerobic digester, Primary Digester No. 7, with an effective volume of approximately 2.4 million gallons.
- Installation of new heating, mixing, and conveyance equipment and piping within or adjacent to existing Heating and Mixing Building No. 4.

- Integration of new digester equipment and piping with existing digester feed, withdrawal, transfer, heating and gas systems.
- Improvements to the existing sludge conveyance and transfer systems.
- Improvements to existing digester heat generation and conveyance systems.
- Installation of electrical and instrumentation equipment for interfacing with existing electrical systems and controls.
- Replacement of existing boiler and related plant hot water loop improvements.
- Installation of a new iron salts chemical storage and pumping facility for the purposes of hydrogen sulfide and struvite management.

Brown and Caldwell was selected as the design consultant for the Project. The Project is currently in the design phase with construction anticipated to begin in the summer of 2019.

Scheidegger and Associates, subconsultant to Brown and Caldwell, prepared the Initial Study for the proposed Project. Pursuant to the California Environmental Quality Act, the consultant analyzed the Project's potential impact with respect to various environmental factors (e.g., air quality, biological resources, cultural resources, etc.) and required mitigation measures to be included in the Project to mitigate impacts to the environment. The Initial Study concluded that while several potential adverse environmental impacts could result from the Project, measures could be used to effectively mitigate these impacts. Accordingly, it has been determined that a Mitigated Negative Declaration is appropriate for the Project.

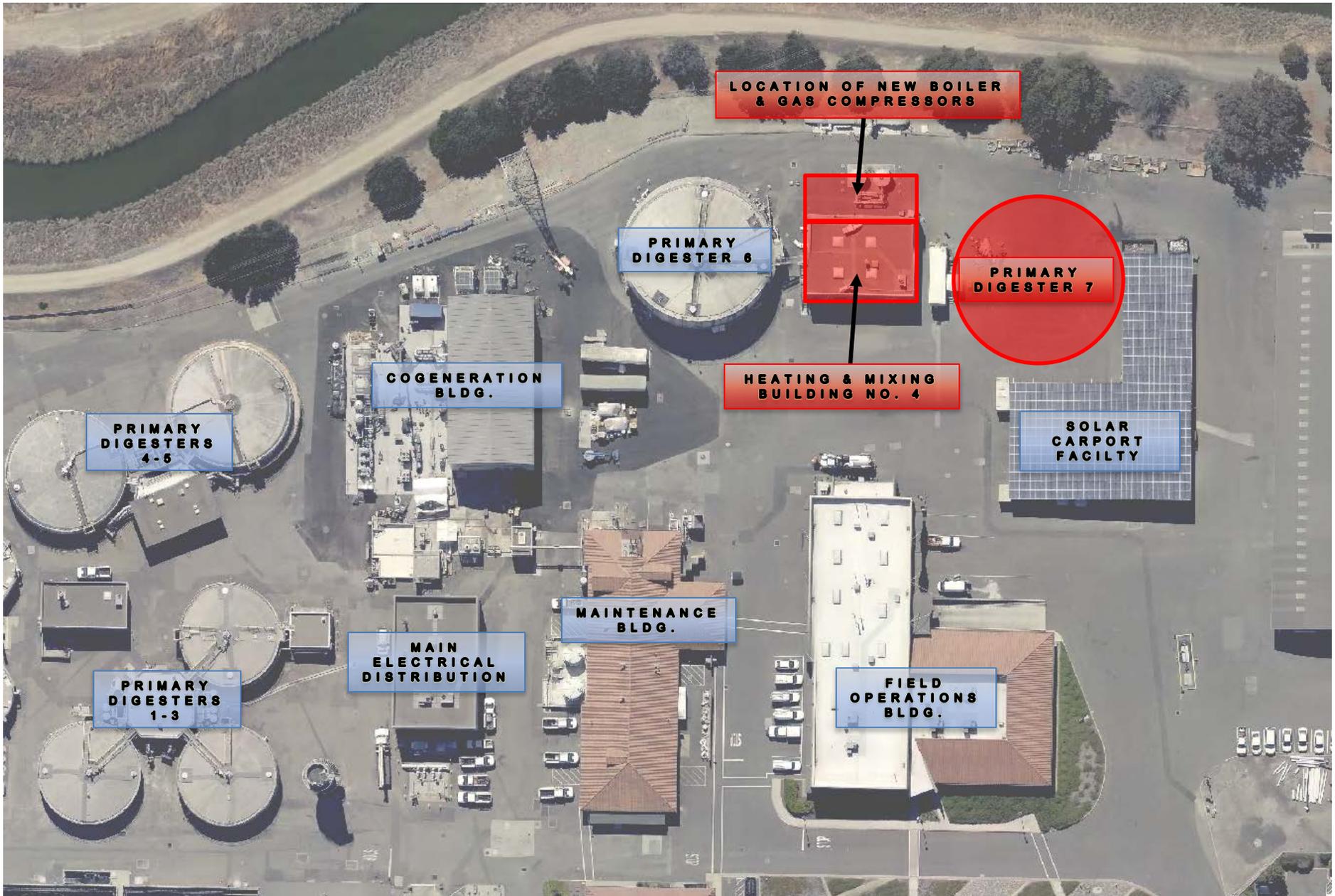
A public hearing is being held to allow for public comment on the Initial Study and Mitigated Negative Declaration (IS/MND) for the Project. Staff circulated the IS/MND to local and state agencies for review during the period of October 23, 2018 through November 26, 2018. The attached "Notice of Document Availability and Intent to Adopt a Mitigated Negative Declaration" was published in the Tri-City Voice on October 23, 2018 and in The Argus on October 26, 2018. The public may comment on the IS/MND both in writing during the review period or during the public hearing.

Consultant and staff will review and consider the written and oral comments from the public and the local and state agencies. Staff has scheduled consideration of the IS/MND for the December 10, 2018 Board Meeting.

PRE/SEG/RC/CB;dl

Attachment: Figure 1 – Site Plan  
Notice of Document Availability and Intent to Adopt a Mitigated Negative Declaration

FIGURE 1 – PRIMARY DIGESTER NO. 7 PROJECT



UNION SANITARY DISTRICT

NOTICE OF DOCUMENT AVAILABILITY  
AND INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

**NOTICE IS HEREBY GIVEN** that a Mitigated Negative Declaration has been prepared for Union Sanitary District's (USD) Primary Digester No. 7 Project (Project) and is available for public review and comment. The document can be reviewed at the Union Sanitary District, 5072 Benson Road, Union City, California.

**PUBLIC REVIEW AND COMMENT PERIOD:** October 23, 2018 through November 26, 2018. Please send all comments to Curtis Bosick, Union Sanitary District, 5072 Benson Road, Union City, California 94587-2508.

**PROJECT LOCATION AND DESCRIPTION:** The Project consists of a new Digester No. 7, transfer tank, iron salts facility, replacement boiler, and various pipeline and utility improvements within USD's Alvarado Wastewater Treatment Plant in Union City. In 2016, results from a capacity assessment indicated that current volatile solids loadings for anaerobic digestion are at original design capacity with all digesters in service. Additionally, it was determined that Digester No. 6, the largest existing digester, cannot reliably be taken out of service for cleaning until additional digestion capacity is provided.

**INITIAL STUDY:** An Initial Study was prepared to determine if the proposed Project would result in significant adverse impacts on the environment. That document concluded that while several potential adverse environmental impacts could result from the Project, measures could be used to effectively mitigate these impacts. Accordingly, it has been determined that a Mitigated Negative Declaration is appropriate for the Project.

**TO REVIEW DOCUMENT:** Copies of the Initial Study and proposed Mitigated Negative Declaration can be reviewed at the Union Sanitary District, 5072 Benson Road, Union City, California. All written comments on the proposed Mitigated Negative Declaration must be submitted no later than the November 26, 2018 deadline.

**PUBLIC HEARING:** The Union Sanitary District Board of Directors will conduct a public hearing to receive oral comments at a regularly scheduled meeting on November 12, 2018, beginning at 7:00 p.m. The Board will consider adoption of the Mitigated Negative Declaration at a regularly scheduled meeting on December 10, 2018, beginning at 7:00 p.m.

**TOXIC SITES:** The Alvarado WWTP site is identified as a program cleanup site as enumerated under Section 65962.5 of the California Government Code due to historical occurrence of petroleum hydrocarbon contamination in several areas of the plant site.



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

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

Karen W. Murphy  
*Attorney*

**DATE:** November 12, 2018

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

**FROM:** Paul R. Eldredge, General Manager/District Engineer  
Laurie Brenner, Finance & Acquisition Services Coach

**SUBJECT:** Agenda Item No. 10 - Meeting of November 12, 2018  
**Certified Annual Financial Report (CAFR) for the Fiscal Year (FY) Ending June 30, 2018**

### **Recommendation**

Receive and file the Certified Annual Financial Report (CAFR) for the FY ending June 30, 2018.

### **Background**

The District engages an independent accounting firm to audit the financial statements and records for each fiscal year. The Audit Committee has reviewed this document. Attached is the FY 2018 CAFR with comparative information for FY 2017.

Highlights for FY 2018 include the increase in Net Position to \$371.5 million, a \$19.8 million increase from FY 2017. Contributing factors include an increase of \$11 million in connection fees, \$3.8 million in contributed capital, marginal rate increases, inspection fees and other area development-related revenue.

Net Position consists of \$296.4 million invested in capital assets; \$55.4 million restricted for specifically stipulated spending agreements originated by law, contract or other agreements with external parties; and \$19.7 million unrestricted and subject to designation by the District Board of Directors for use in meeting the District's ongoing obligations.

The District placed \$11.6million in capital assets into service in FY 2018 compared to \$12 million in FY 2017. Long-term liabilities increased \$10.7 million from FY 2017, largely due to changes in financial reporting mandated by the existing GASB 68 and new GASB 75 pronouncements.

There were no significant audit findings for FY 2018 as stated in the attached Government Auditing Standards (GAS) letter from auditors, Lance, Soll, & Lunghard, LLP, Certified Public Accountants.

**Attachments**

FY 2018 CAFR

Government Accounting Standards letter

Independent Auditors' Report on Internal Control



Union Sanitary District

Union City, California

# Comprehensive Annual Financial Report



USD 2018

Fiscal Year Ended June 30, 2018

Union Sanitary District

Union City, California

Comprehensive Annual

Financial Report



USD 1964



Fiscal Year Ended June 30, 2018

Prepared by Business Services Work Group

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# Introductory Section



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

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

Karen W. Murphy  
*Attorney*

November 2, 2018

Board of Directors

Union Sanitary District  
Union City, California

Subject: Comprehensive Annual Financial Report  
For the Year Ended June 30, 2018

We are pleased to present the Union Sanitary District's Comprehensive Annual Financial Report (CAFR) for the fiscal year (FY) ended June 30, 2018. Responsibility for both the accuracy of presented data and the completeness and fairness of the presentation, including all disclosures, rests with the District. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and reported in a manner designed to present fairly the financial position and results of operations of the District. All disclosures necessary to enable the reader to gain the maximum understanding of the District's financial activities have been included.

The CAFR is presented in accordance with Generally Accepted Accounting Principles (GAAP) as set forth by the Governmental Accounting Standards Board (GASB).

### **District Profile**

#### **The Reporting Entity**

The Union Sanitary District (District) is an independent Special District, and is accounted for as an enterprise fund type (proprietary fund category). A fund is an accounting entity with a self-balancing set of accounts established to record the financial position and results of operations of a specific governmental activity. The activities of enterprise funds closely resemble those of ongoing businesses in which the purpose is to conserve and add to basic resources while meeting operating expenses from current revenues. Enterprise funds account for operations that provide services on a continuous basis and are substantially financed by revenues derived from user charges. As an enterprise fund, the District uses the accrual basis of accounting. Revenues are recognized when earned and expenses are recognized as they are incurred, regardless of when cash is paid or received. The District has no component units.

The District applies all applicable GASB pronouncements in accounting and reporting for proprietary operations. District policy requires that its financial statements be audited on an annual basis by an independent certified public accounting firm approved by the Board of Directors. The independent auditor's report for the fiscal years ended June 30, 2018 and compared to 2017 are presented in the Financial Section of this report. Please refer to the Management's Discussion and Analysis immediately following the independent auditor's report in the Financial Section for additional information about the financial statements.

### **District Formation and Organization**

The Union Sanitary District was formed in 1918 and subsequently reorganized in 1923 to serve Newark and the Centerville area of what is now Fremont. Between 1949 and 1962, Niles, Decoto, Irvington, and Alvarado Sanitary Districts joined the Union Sanitary District. The District is empowered to own and operate wastewater facilities and the Board of Directors may prescribe, revise and collect fees or charges for services and facilities. The District provides wastewater collection, treatment and disposal services to the residents and businesses of the cities of Fremont, Newark, and Union City, commonly referred to as the Tri-City Area, with a combined population of 355,897. The Cities are located along Interstates 680 and 880, between Oakland and San Jose in southern Alameda County.

The District is governed by a five-member Board of Directors, which is independently and directly elected by voters to staggered four-year terms. The Board appoints the General Manager to manage and oversee the day-to-day operations. The District, which employs 136.45 Full Time Equivalent (FTE) staff, operates in a team-based environment and uses the Balanced Scorecard as a model for its strategic plan and performance measurement tool.

### **Local Economic Condition and Outlook**

Located at the northern end of Silicon Valley, the Tri-City area of Fremont, Newark and Union City has a diverse population, as well as a varied mix of employers including bio-tech, research and development, education, manufacturing and retail. Summary notes of the prevailing economic conditions in the Tri-City area and the District are below, delineated by City.

#### **The City of Fremont\***

Located on the southeast side of the San Francisco Bay, Fremont is a city of over 235,000 people and 76,000 households, with an area of 92-square miles. Fremont remains the fourth most populous city in the Bay Area and California's 15th largest city. With its moderate climate and its proximity to major universities, shopping areas, recreation and cultural activities, employment centers, major airports, and the Bay Area Rapid Transit system, Fremont captures metropolitan living at its best. Fremont is home to a broad variety of innovative firms with recent strength evidenced in hardware and advanced manufacturing. Economic development efforts in 2017 focused on next generation workforce, leveraging opportunities in strategic business areas, and facilitating new business development through real estate investment. Residents are attracted to Fremont for its nationally-recognized high-ranking public schools, its numerous well-kept parks, and a variety of recreational amenities, including beautiful Lake Elizabeth, Central Park, and Mission San José (California's 14th mission). To preserve economic diversity, Fremont has accelerated efforts and projects to produce new, affordable housing and adopted the Rent Review Ordinance (RRO) that went into effect in 2017.

#### **The City of Newark\***

Newark has an area of 13 square miles, a population of over 47,000. The city continues to maintain their balanced budget through appropriate budgeting practices including conservative estimates for revenue growth. The local economy is heavily influenced by the housing market and spending patterns evidenced throughout the San Francisco (Bay Area). Consumers are spending, home sales and construction are up, and the business community is doing well. Property and Sales taxes represent over 51% of the city's

revenue. Newark also continues to experience increases in revenues from development and building permit fees because of the significant construction activity that is occurring throughout the City. The NewPark Mall continues to transform into a leading retail, entertainment, and dining destination, and several large new industrial and commercial businesses have opened or have plans to open offices or locations in Newark (SAS Automotive Systems, Sprout Farmers Market, Mission Linen, etc.).

### **The City of Union City\***

Union City is 18 square miles in area. Union City's proximity to major highways, bridges, airports, public transportation, colleges and universities, and cultural and recreational areas make it a desirable community in which to live and work. The City is a family-oriented community where the focus is on the enrichment of the quality of life for its citizens. Union City also maintains many wonderful parks, sports fields, community centers, and a variety of recreation programs and social services for residents of all ages. Union City has grown into an ethnically diverse community of over 73,000 residents and is home to the highly regarded New Haven Unified School District. Currently, the creation of the Intermodal Station District, the area surrounding the Union City BART Station, is the City's premier redevelopment project. The former 105-acre brownfield site and under-utilized land is being transformed into a vibrant transit-oriented neighborhood consisting of housing, shopping and offices, focused around a community plaza.

Region-wide, the Tri-City area is continuing to experience significant—residential and commercial development due to the healthy economy. Annual average unemployment rates for the cities of Fremont, Newark and Union City were 2.7%, 3.0%, and 3.4% respectively, compared with 3.1%, 3.4%, and 4.4% one year earlier.

\*Sources: Fremont and Newark State of the City addresses and websites 2018; [www.fremont.gov](http://www.fremont.gov), [www.newark.org](http://www.newark.org), [www.ci.union-city.ca.us](http://www.ci.union-city.ca.us), [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov), [www.247wallst.com](http://www.247wallst.com).

## **Major Projects or Initiatives**

During fiscal year 2018, the District continued, completed or initiated several significant projects:

**Plant Master Plan** - The Master Plan is focused on reviewing and assessing the District's critical projects and recommending the sequence of design and construction implementation based on priorities and schedules; existing and future space needs; process adjacencies; economic feasibility; and other planned capital improvement projects. This major initiative started in FY 2017 and is now expected to be completed in FY 2019, due to a time extension to evaluate additional technologies and solutions. The Master Plan has highlighted the need for an additional project for Secondary Treatment Capacity Improvements. This effort will encompass multiple smaller projects intended to position the treatment plant to continue to meet both current and future treatment and capacity needs. Core process data has been reviewed and analyzed by management, and this project will address aeration, clarification, filtration, equalization (storage), and many other critical elements in our treatment process, including the potential for new technologies to ensure that the District can continue to meet or exceed our National Pollutant Discharge Elimination System (NPDES) permit limits in the future, with a focus on long-term system expansion availability.

**Digester 7** - The District previously identified the need for additional digester capacity to ensure appropriate solids handling. An additional anaerobic digester will be built and placed into service with this project. The pre-design phase was completed in FY 2017, but the decision has been made to increase the size of the digester, so the updated design will now be completed in FY 2019. Construction is scheduled to begin in FY 2020.

**Standby Power Generation System Upgrade** - The District's current emergency power facilities are old and outdated and have questionable reliability if the District were to lose commercial power. The pre-design of this project was completed in FY 2017 and the design will conclude in FY 2019, with construction scheduled to begin in FY 2020.

**East Bay Discharge Authority (EBDA) Joint Powers Agreement (JPA) contract negotiations** - This involves negotiation and formal documentation of a new contractual relationship between the members of the existing JPA, which includes Union Sanitary District, the City of Hayward, City of San Leandro, Oro Loma Sanitary District, and the Castro Valley Sanitary District. Negotiations have been underway and are expected to continue through FY 2019.

**Collection Services Preventive Maintenance Schedule Evaluation** - This project is intended to review the detailed study and data provided by West Yost on the age and condition of the District's existing collections system infrastructure throughout the service area and to determine the viability of modifying the existing cleaning processes for improved efficiencies moving forward. A pilot program is currently underway based on analyses done to date and we will be implementing associated schedule changes in FY 2019.

**Emergency Response** - Over the next several years FMC will develop specific emergency response procedures for each remote pump station. This will include writing SOPs, procuring equipment, creating inventory sheets, identifying staging areas, and communicating new information with staff. Progress continues to be made on this important endeavor and the necessary equipment to ensure reliable operations is currently being acquired, with a project completion in FY 2021.

**Rebranding Initiative** - This project was initiated in late FY 2017 to explore options for rebranding and updating the District's logo to increase customer awareness of the services the District provides to our constituent communities and increase brand recognition for the District. The effort is based on feedback from staff and customers received over time. The multi-disciplinary project team assembled is expected to provide actionable suggestions to management in FY 2020.

### **Future Projects or Initiatives**

**Force Main Relocation Project, Phase II** - This project will continue work done previously to relocate sections of the force main to allow for development and construction of new residential housing, in conjunction with local area developers.

**Dumbarton Transit Oriented Development Project, Phase II** - This development requires the relocation of the District force mains in collaboration with local area developers. Phase I of this project was completed in FY 2018 and management will ensure that the District's interests are met, and concerns are mitigated in the Phase II activities of the project in the future.

### **Financial Information**

#### **Accounting System**

District financial records are maintained on the accrual basis of accounting as required by GASB Section 1600.125. Accrual basis accounting recognizes transactions, events, and circumstances when they occur, rather than when cash is received or paid.

#### **Internal Controls**

While developing and evaluating the District's accounting system, consideration is given to the adequacy of internal accounting controls. Internal controls are designed to give reasonable, but not absolute, assurance regarding: (1) the safeguarding of assets against loss from unauthorized use or disposition; and (2) the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the evaluation of costs and benefits requires estimates and judgments by management.

All internal control evaluations occur within the above framework. We believe that the District's internal accounting controls adequately safeguard assets and provide reasonable assurance of proper recording of

financial transactions. The District's internal controls include but are not limited to positive pay, fraud protection checks, timely bank reconciliations, segregation of duties wherever possible, dual approvals on wires and investment purchases, an anonymous fraud hotline, and financial system security.

### **Budgetary Controls**

Budgetary controls are maintained by the District to ensure compliance with the annual budget adopted by the Board of Directors. All financial activities for the fiscal year are included in the annual budget, along with a twenty-year capital improvement projects plan. Budgetary control is maintained at the Work Group (department) level for administrative and operating budgets, and at the project level for capital improvements. Monthly budget reports are provided to the Executive Team and Board of Directors, and the Executive Team conducts a detailed quarterly review, as well.

### **Rate Structure**

The District receives its revenue from four primary sources: sewer service charges; capacity fees; other minor operating revenues such as permits, inspections and outside work that is performed in cooperation with other municipalities; and interest earnings on reserve funds.

### **Sewer Service Charge**

The sewer service charge has historically been collected on the annual property tax bill. Sewer service charges to be collected are provided to the County of Alameda in August of each fiscal year. The District receives its primary payments of funds in December (50%) and April (45%), and the remainder in September, and receives all amounts billed as part of the County's "Teeter" plan.

The sewer service charge is divided into four primary categories of customers: residential, commercial, institutional, and industrial. The calculation of the sewer service charge for the commercial, institutional, and industrial customers is based upon their average flow, as well as contribution of their projected suspended solids (SS) and chemical oxygen demand (COD). The District has a sampling program to periodically test the effluent from its industrial customers. Flow for industrial users is based on water use records from the Alameda County Water District. The annual residential fee for 2018 was \$393.35 for a single-family dwelling and \$341.03 for a multi-family dwelling.

### **Connection Fees**

In 2018 the District charged a sewer connection fee of \$7,246.69 for an equivalent dwelling unit (EDU). The charges for commercial, industrial, and office use are based on factors such as square footage, flow, COD, and suspended solids. Revenues from capacity fees are used to fund capital projects and upgrades that preserve or increase the system's capacity. Thus, the collected revenues may not fund operating costs.

### **Interest Income**

The District earns interest on its portfolio of investments, including the Local Agency Investment Fund (LAIF), and the California Asset Management Program (CAMP), which is allocated to the major funds (Capacity and Sewer Service) monthly by percentage of fund balance.

## **Other Information**

**Independent Financial Audit** – California state statutes require an annual independent audit of the books of accounts and financial records of the District. The firm of Lance, Soll & Lunghard, LLP was contracted to conduct this year's audit (second year). The Board Audit Committee receives and reviews the audited financial statements. The audit opinion is included in the Financial Section of this report.

**Financial Policies** – In fiscal year 2018, the District reviewed and/or updated the following important financial policies:

Investment, Capital Assets, Surplus Property Disposal, Financial Audit, Project Expenditures, Budget, and Accounts Receivable Write-off policies.

**East Bay Dischargers Authority** – USD is a member of EBDA. Founded in 1974, EBDA is a five-member Joint Powers Agency formed to plan, design, construct, and operate regional facilities to collect, transport and discharge treated effluent to deep waters of San Francisco Bay. Treated effluent from the District’s Alvarado Wastewater Treatment Plant is pumped to the EBDA System and discharged into the Bay southwest of Oakland International Airport. Frequent testing of the treated wastewater confirms compliance with regional permit requirements. The other member agencies are Castro Valley Sanitary District, Oro Loma Sanitary District, City of Hayward, and City of San Leandro.

**District Financing Authority** – The District is a member of the Alameda County Water District Financing Authority. The Authority was organized to aid the water district in anticipation of financing capital projects over the next several years. The District has one Board member on the governing body of the Authority.

### **Awards Received**

**During the past year, the District received the following awards:**

- ❖ National Association of Clean Water Agencies (NACWA) - Peak Performance Awards 1993 – 2017; USD's Alvarado Treatment Plant in Union City has been recognized for 25 consecutive years by NACWA (and its predecessor, AMSA) for outstanding performance.
- ❖ National Institute for Government Purchasing (NIGP) – Achievement of Excellence in Procurement
- ❖ Government Finance Officers Association (GFOA) – Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Union Sanitary District for its comprehensive financial report for the fiscal year ended June 30, 2017. To be awarded the Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program’s requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

Respectfully submitted,

Business Services Work Group



## VISION/MISSION STATEMENT

April 10, 2017 revision

To safely and responsibly collect and treat wastewater, and to recover resources from process waste streams, while protecting human health and improving the environment in a way that benefits the Tri-Cities and all USD stakeholders.

How we continue to accomplish our Vision:

Commitment to safety:

- Continually reviewing our safety program for opportunities to improve
- Focusing on protecting employees and the community in all our activities
- Allocating resources to ensure safe operations (equipment, training, staff)
- Collaboratively promoting a safe work environment

Responsibility:

- Being accountable for our actions and decisions
- Being fiscally prudent
- Maintaining and upgrading infrastructure
- Anticipating and meeting future District and stakeholder needs
- Compliance with laws and regulations (local, state, federal)
- Effective asset management
- Effective use of technology
- Looking for innovative ways to reduce or reuse our waste streams

Collect, treat, and recover/reuse wastewater:

- Providing capacity in the collection system and plant
- Regulating connections
- Increasing efforts for resource recovery (biogas, biosolids, etc.)
- Exploring ways to maximize water reclamation and reuse potential

Human health and environmental stewardship

- Preventing sewer spills and back-ups
- Limiting health risks through treatment of wastewater
- Responding to emergencies
- Enhancing water quality in the San Francisco Bay estuary
- Meeting or exceeding all water and air quality standards
- Promoting pollution prevention and pretreatment through outreach and educational programs
- Maximizing use of green energy sources when feasible
- Working towards energy neutrality



## VISION/MISSION STATEMENT

April 10, 2017 revision

We benefit our stakeholders by:

- Community

  - Complying with all local, state, and federal regulations, protecting the environment and controlling odors
  - Communicating with the public and bringing awareness about wastewater issues
  - Responding to emergencies and providing mutual aid
  - Participating in community outreach activities
  - Contributing to the wastewater treatment profession by participating in professional associations, partnering with other agencies and organizations, and sharing best practices
  - Working cooperatively with cities and other government agencies
  
- Customer

  - Providing award-winning, reliable service
  - Being fiscally responsible and cost effective, and providing value
  - Promptly responding to customers' needs
  - Being professional and courteous
  - Proactively and creatively meeting customer needs
  - Supporting businesses through permitting, education and by providing capacity
  
- Employees

  - Providing a safe work environment
  - Recognizing employee contributions
  - Encouraging cooperation and collaboration
  - Demonstrating equality and fairness
  - Valuing employee input, and offering opportunities for involvement and creativity
  - Providing training and resources
  - Providing competitive wages and benefits in a stable work environment
  - Communicating and sharing information openly and honestly

Board of Directors



Anjali Lathi



Manny Fernandez



Jennifer Toy



Pat Kite



Tom Handley



# Principal Officials

As of June 30, 2018

		<b>City Represented</b>	<b>Year Elected</b>	<b>Term Expires</b>
Anjali Lathi	President	Fremont (Ward 3)	2002	2020
Manny Fernandez	Vice President	Union City (Ward 1)	2011 (Appointed)	2020
Jennifer Toy	Secretary	Fremont (Ward 3)	1998	2022
Pat Kite	Board Member	Newark (Ward 2)	1991	2020
Tom Handley	Board Member	Fremont (Ward 3)	2007	2022

Karen W. Murphy

General Counsel

**Staff**

Paul Eldredge

General Manager/District Engineer

Armando Lopez

Treatment & Disposal Services Manager

Robert Simonich

Fabrication Maintenance & Construction Manager

Vacant/TBD

Business Services Manager/Chief Financial Officer

Sami Ghossain

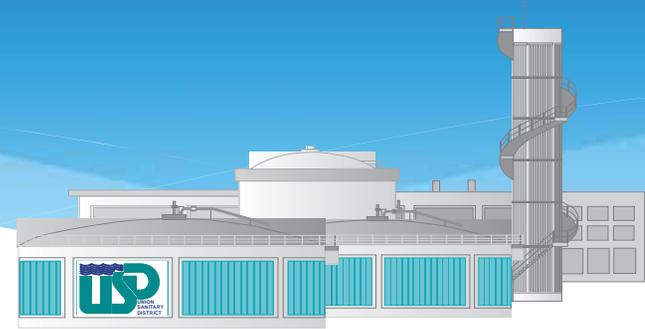
Technical Services Manager

James Schofield

Collection Services Manager



UNION  
SANITARY  
DISTRICT



**Board of Directors**  
(5)

**General Manager**  
(141)

**Technical Services Manager**  
(35)

**Collection Services Manager**  
(32)

**Treatment & Disposal Services Manager**  
(27)

**Fabrication, Maintenance, and Construction Manager**  
(28)

**Business Services Manager/CFO**  
(18)

Coach

Coach

Coach

Coach

Coach

Coach

Coach (Day)

Coach (Night)

Coach

Coach

Coach /HR Mgr

Coach

Capital Improvements Projects Team (8)

Customer Service Team (12)

Environmental Compliance Team (11)

Maintenance/TV Team (10)

Support Team (8)

Construction Team (11)

Research & Support Team (6)

Total Productive Operations (10)

Total Productive Operations (7)

Electrical/Support Team (8)

Information Technology Team (5)

Mechanical Team (12)

Organizational Support Team (5)

Finance & Acquisition Services Team (10)

- Administrative Specialist I (1)
- Assistant Engineer (2)
- Associate Engineer (3)
- Engineering Technician III (1)
- Assistant/Associate Engineer (1)**
- As-needed Receptionist (1)
- Engineer Technician I (1)
- Exec. Assistant to the GM/Board Clerk(1)
- Associate Engineer (1)
- C&IG Coordinator (1)
- Construction Inspector II (2)
- Customer Service Fee Analyst (2)
- Engineer Technician II (1)
- Receptionist (1)
- Limited-term Construction Inspector I (1)

- Administrative Specialist II (1)
- Administrative Specialist I (1)
- EC Inspector II (2)
- EC Inspector III (4)
- EC Inspector IV (1)
- EC Outreach Rep (1)
- Environmental Program Coordinator (1)

- Collection System Worker I (2)
- Collection System Worker II (5)
- Lead Collection System Worker (3)

- Administrative Specialist II (1)
- Fleet Mechanic II (2)
- Janitor (2)
- Maintenance Assistant (1)
- Mechanic II (1)
- Planner /Scheduler II (1)

- Collection Services Trainer (1)
- Collection System Worker II (7)
- Lead Collection System Worker (3)

- Administrative Specialist II (1)
- Chemist II (3)
- Lab Director(1)
- Sr. Process Engineer (1)

- Plant Operator III (5)
- POIII Trainee (3)**
- Plant Operations Trainer (1)
- Technical Writer Intern (1)

- Plant Operator III (5)
- Plant Operator III Trainee (2)

- Adm. Specialist I (1)
- Instrument Technician/ Electrician (4)
- Painter (2)
- Planner/ Scheduler II (1)

- Sr. GIS DBA(1)
- IT Administrat or (1)
- Sr. Network Administrat or (1)
- Sr. Developer/ DBA (1)
- Sr. IT Analyst (1)

- Mechanic I (3)
- Mechanic II (9)

- Administrative Specialist II (1)
- Environmental Health & Safety Program Manager (1)
- Human Resources Analyst II (1)
- Training & Emergency Response Programs Manager(1)
- Org Performance Program Mgr (1)**

- Accounting & Financial Analyst II (2)
- Accounting Technical Specialist (2)
- Accounting Technician II (1)
- Administrative Specialist I (1)
- Buyer I(1)
- Purchasing Agent (1)
- Storekeeper I (1)
- Storekeeper II (1)

**Vacancy**

\*141 positions allocated in FY 2018  
Full Time Equivalent positions in FY 2018 is 136.45.



District  
Administration  
& Alvarado  
Wastewater  
Treatment Plant

**Union City**

**Newark**

**Fremont**

**Milpitas**

San Francisco Bay



**Union Sanitary District  
Service Area Location Map**



Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

**Union Sanitary District  
California**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2017**

*Christopher P. Morrill*

Executive Director/CEO

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# Financial Section



In Loving Memory of Paul Johnson, 1981-2018

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## INDEPENDENT AUDITORS' REPORT

To the Board of Directors  
Union Sanitary District  
City of Union City, California

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Union Sanitary District, (the District) as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the State Controller's Minimum Audit Requirements for California Special District. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

### ***Opinions***

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the District, as of June 30, 2018, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.



To the Board of Directors  
Union Sanitary District  
City of Union City, California

### ***Change in Accounting Principle***

As described in Note 1 to the financial statements, the district adopted new accounting guidance, *GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that management's discussion and analysis, schedule of changes in net pension liability and related ratios, schedule of plan contributions, schedule of changes in net OPEB liability and related ratios and schedule of contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### *Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the District's basic financial statements. The introductory section, supplementary schedule of operating expenses before depreciation, schedule of insurance coverage, and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplementary schedule of operating expenses before depreciation and schedule of insurance coverage is the responsibility of management and were derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary schedule of operative expenses before depreciation and schedule of insurance coverage is fairly stated in all material respects in relation to the basic financial statements as a whole.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.



To the Board of Directors  
Union Sanitary District  
City of Union City, California

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated November 2, 2018 on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control over financial reporting and compliance.

A handwritten signature in black ink that reads "Lance, Soll &amp; Lughard, LLP". The signature is written in a cursive, flowing style.

Brea, California  
November 2, 2018

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# UNION SANITARY DISTRICT

## MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018

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This section of the District's annual financial report presents an analysis of the District's financial performance during the fiscal year ended June 30, 2018. This information is presented in conjunction with the audited financial statements, which follow this section.

The District, which was established in 1918 and subsequently reorganized in 1923, is empowered to own and operate wastewater facilities and the Board of Directors may prescribe, revise and collect fees or charges for services and facilities of the District in connection with its wastewater system.

### FINANCIAL HIGHLIGHTS

- The assets and deferred outflows of resources of the District exceeded its liabilities and deferred inflows of resources at June 30, 2018, by \$371.5 million (net position). Net position consists of \$296.4 million invested in capital assets, \$55.4 million restricted net position, and \$19.7 million in unrestricted net position.
- The District's total net position increased by \$28.9 million during the fiscal year ended June 30, 2018. Contributing factors include an increase of \$11 million in connection fees, \$3.8 million in contributed capital, marginal rate increases, inspections and other area development.
- Long-term liabilities increased on the Statement of Net Position by \$10.7 million during the current fiscal year, compared to a \$8.4 million increase last year, largely due to changes in reporting mandated by the existing GASB 68 and new GASB 75 pronouncements.
- The District placed \$11.6 million in capital assets into service compared to \$14.1 million last year.

### USING THIS ANNUAL REPORT

This annual report consists of a series of financial statements. The District's financial statements include the Statement of Net Position, the Statement of Revenues, Expenses and Changes in Net Position, and the Statement of Cash Flows. These provide information about the activities of the District as a whole and present a longer-term view of the District's property, debt obligations and other financial matters. They reflect the flow of total economic resources in a manner similar to the financial reports of a business enterprise.

The notes to the financial statements provide narrative explanations or additional data needed for full disclosure.

- **Statement of Net Position** – Includes all District assets, liabilities, deferred outflows of resources, and deferred inflows of resources and provides information about the nature and amounts of investments in resources (assets) and obligations to creditors (liabilities). It also provides the basis for computing rate of return; evaluating the capital structure of the District; and assessing the liquidity and financial flexibility of the District.
- **Statement of Revenues, Expenses and Changes in Net Position** – All of the current year revenues and expenses are accounted for in the Statement of Revenues, Expenses and Changes in Net Position. This statement measures the success of District operations over the past year and can be used to determine whether the District has successfully recovered all its costs through its user fees and other charges, profitability, and credit worthiness.
- **Statement of Cash Flows** – The primary purpose of this statement is to provide information about District cash receipts, cash disbursements and net changes in cash resulting from operations, investments, and capital and non-capital financing activities. It illustrates the source of revenue, purposes for which it was used, and change in cash balance during the reporting period.

# UNION SANITARY DISTRICT

## MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018

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### Reporting the District as a Whole

#### *The Statement of Net Position and the Statement of Revenues, Expenses, and Changes in Net Position*

### DISTRICT-WIDE FINANCIAL ANALYSIS

Our analysis focuses on the net position (Table 1) and changes in net position (Table 2) of the District's activities.

The largest portion of the District's Net Position (79.8%) reflects its investment in capital assets (net of accumulated depreciation) less any related outstanding debt that was used to acquire those assets. The District uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending.

Table 1 – Condensed Statement of Net Position

	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Dollar Change FY18 to FY17	Percent Change FY18 to FY17
Current and other assets	\$ 125,839,386	\$ 94,382,924	\$ 77,881,176	\$ 31,456,462	33.3%
Capital Assets	338,368,202	339,178,722	338,426,172	(810,520)	-0.2%
Total Assets	464,207,588	433,561,646	416,307,348	30,645,942	7.1%
Deferred outflows of resources	11,884,867	8,937,492	7,549,687	2,947,375	33.0%
Current liabilities	11,074,799	8,622,149	10,533,131	2,452,650	28.4%
Long-term liabilities	92,046,419	81,337,732	72,916,067	10,708,687	13.2%
Total liabilities	103,121,218	89,959,881	83,449,198	13,161,337	14.6%
Deferred inflows of resources	1,463,120	804,328	5,962,106	658,792	81.9%
Net Position:					
Net investment in capital assets	296,442,688	294,906,308	295,355,262	1,536,380	0.5%
Restricted	55,373,688	34,360,257	25,075,327	21,013,431	61.2%
Unrestricted	19,691,741	22,468,364	14,015,142	(2,776,623)	-12.4%
Total net position	\$ 371,508,117	\$351,734,929	\$ 334,445,731	\$ 19,773,188	5.6%

Net position of the District's business type activities increased 5.6% to \$371.5 million, of which \$296.4 million is invested in capital assets such as equipment, buildings and infrastructure. Of the remaining total, \$55.4 million is restricted to specifically stipulated spending agreements originated by law, contract or other agreements with external parties. The remaining \$19.7 million is subject to designation for specific purposes as approved by the District Board of Directors and may be used to meet the District's ongoing obligations.

# UNION SANITARY DISTRICT

## MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018

Table 2 – Condensed Statement of Revenues, Expenses, and Changes in Net Position

	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016	Dollar Change FY18 to FY17	Percent Change FY18 to FY17
Operating Revenues:					
Sewer service charges (SSC)	\$ 54,260,096	\$ 52,384,709	\$ 50,112,564	\$ 1,875,387	3.6%
Other revenues	1,631,870	2,154,364	1,791,782	(522,494)	-24.3%
Total operating revenues	55,891,966	54,539,073	51,904,346	1,352,893	2.5%
Operating Expenses:					
Depreciation	17,003,398	17,036,880	17,379,112	(33,482)	-0.2%
Sewage treatment	18,657,355	16,252,881	15,464,775	2,404,474	14.8%
Sewage collection and engineering	14,173,382	12,462,391	11,296,680	1,710,991	13.7%
General and administration	7,611,460	7,195,269	6,848,244	416,191	5.8%
Total operating expenses	57,445,595	52,947,421	50,988,811	4,498,174	8.5%
Non-operating Revenues (Expenses):					
Investment income and net gains	700,856	482,342	496,439	218,514	45.3%
Loss on retirement of capital assets	-	(432,674)	(30,472)	432,674	-100.0%
East Bay Dischargers Authority loss	(90,325)	(52,458)	(160,540)	(37,867)	72.2%
Interest	(1,479,413)	(860,316)	(916,968)	(619,097)	72.0%
Total Net non-operating revenues (expenses)	(868,882)	(863,106)	(611,541)	(5,776)	0.7%
Income Before Contributed Capital	(2,422,511)	728,546	303,994	(3,151,057)	-432.5%
Capital Contributions					
Connection fees	23,623,947	12,595,637	7,233,338	11,028,310	87.6%
Contributed capital	7,714,351	3,965,015	1,863,035	3,749,336	94.6%
Total Net Capital Contributions	31,338,298	16,560,652	9,096,373	14,777,646	89.2%
Change in Net Position	28,915,787	17,289,198	9,400,367	11,626,589	67.2%
Beginning Net Position	351,734,929	334,445,731	325,045,364	17,289,198	5.2%
Prior period adjustment	(9,142,599)	-	-	(9,142,599)	100.0%
Restated Net Position, Beginning of Year (2018)	342,592,330	334,445,731	325,045,364	8,146,599	2.4%
Ending Net Position	\$ 371,508,117	\$ 351,734,929	\$ 334,445,731	\$ 19,773,188	5.6%

The District's increase in net position of \$19.8 million (net of prior period adjustment) is primarily due to the following:

- A marginal rate increase in sewer service charges and the increase in other revenues such as permit fees.
- An increase of \$14.7 million in connection fees and contributed capital. The District received \$23.6 million in connection fees and \$7.7 million in contributed capital due to ongoing increase in residential development within the service area.

# UNION SANITARY DISTRICT

## MANAGEMENT’S DISCUSSION AND ANALYSIS

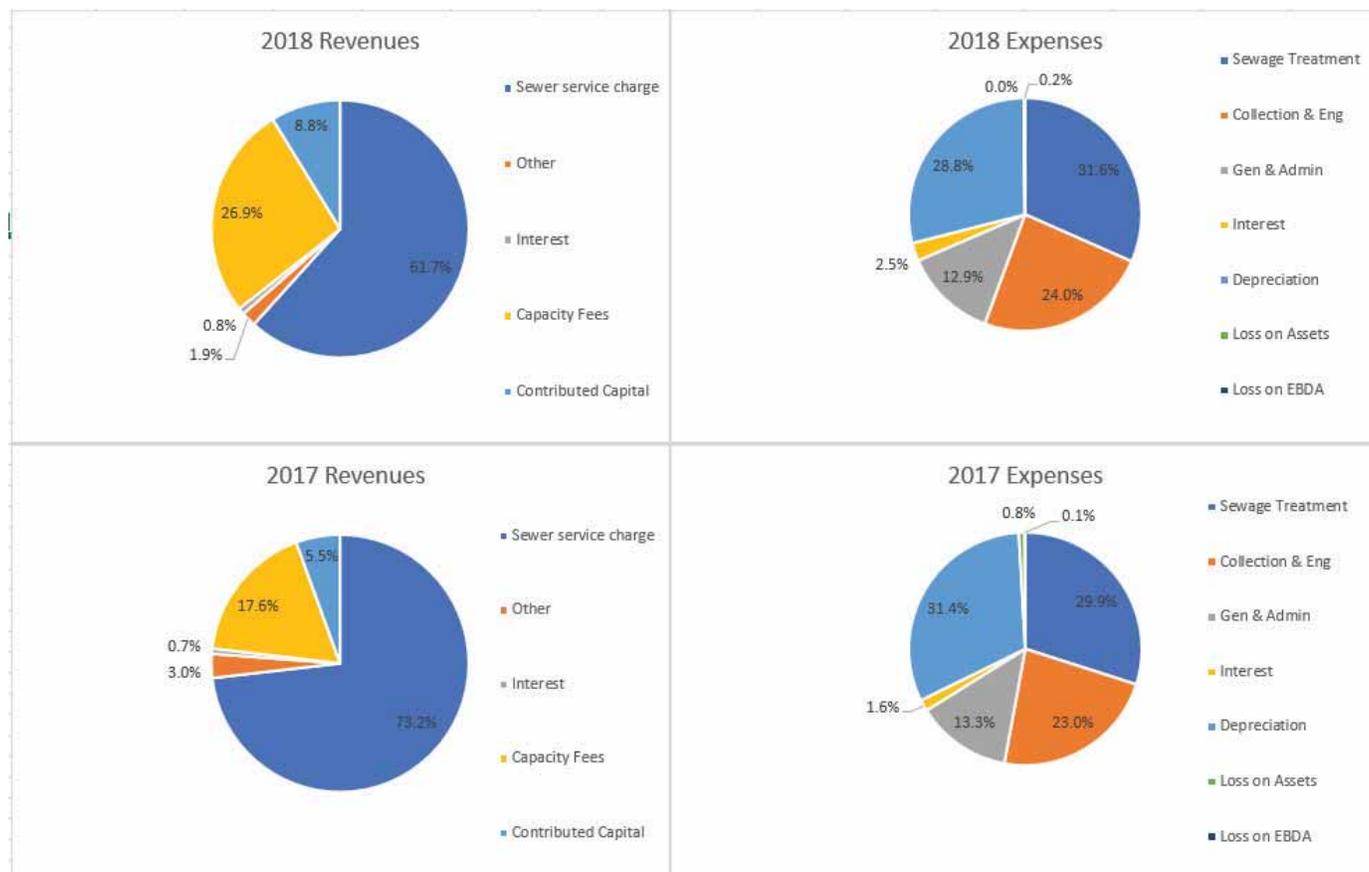
**JUNE 30, 2018**

Overall the District’s revenues increased 2.5% or \$1.4 million from fiscal year FY 2017. The District’s sewer service charge rate increased 3.5%. Sewer service revenues for the year increased by 3.6% or \$1.9 million overall. Other operating revenues decreased by (24.3%) or \$0.5 million from prior year as the result of a decrease in permits and compliance fees received from the service area. Due to continued growth in both commercial and residential development, connection fee revenues increased 87.6%, or \$11 million from prior year. Contributed Capital increased 94.6% or \$3.8 million.

Investment income increased by \$0.218 million to \$0.701 million. There was no offset from retirement of assets. The loss on equity investment in East Bay Dischargers Authority (EBDA) was \$0.093 million. Despite instruments in our diversified portfolio maturing and absent new acquisitions, our investment income remained strong in FY 2018. High returns from LAIF and remaining portfolio investments resulted in a higher weighted investment yield at June 30, 2018, of 1.804%, with a weighted average portfolio life of 280 days compared to a weighted investment yield at June 20, 2017, of 1.418%, with a weighted average portfolio life of 649 days. These factors resulted in a net increase in investment income of \$0.061 million in FY 2018 over FY 2017.

The District’s operating expenses increased from prior year \$4.5 million or 8.5%. The increase is primarily due to increases in the contribution percentage for employee retirement plans; cost of living salary adjustments; and an increase in expenses for treatment plant chemicals and other services.

In FY 2017, the District's total operating revenues increased by \$2.6 million, or 5.1%. The increase was mainly due to a 1.0% increase in the sewer service charge rate. Contributed capital was \$3.9 million, an increase of \$2.1 million over FY 2016. Most major cost categories increased from FY 2016 resulting in an increase of 3.8% in the total cost of all programs and services, including depreciation.



# UNION SANITARY DISTRICT

## MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018

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### CAPITAL ASSET AND DEBT ADMINISTRATION

#### Capital Assets

At the end of FY 2018, the District had approximately \$338.4 million invested in a broad range of capital assets, including facilities and equipment for the plant, collections, and administrative facilities. This amount represents a net decrease of \$0.811 million compared to last year. Additions to CIP were \$7.6 million in FY 2018 versus \$13.9 million in FY 2017.

Total CIP placed into service was \$3.03 million in FY 2018 versus \$9.8 million in FY 2017.

The District has outstanding construction contract commitments on capital projects approximating \$51.3 million at June 30, 2018. Major projects and related activity included:

Table 3 – Additions to CIP, Net

Digester No. 3 Insp & Rehab	\$	1,180,690
Primary Digester No. 7		1,114,610
Force Main Corrosion Repairs - West		871,205
Hypo Tanks and Piping Replacement		803,092
3rd Sludge Degritter System		779,921
Newark PS Mod Valve & Boost Line Mods		684,880
Force Main Corrosion Repairs - Plant		653,261
Thickener Control Building Improvements, Phase 2		653,086
Fremont & Paseo Padre LS Improvements		374,850
Headworks Knife Gate Valves Replacement		248,228
Others		210,992
Total	\$	<u>7,574,816</u>

# UNION SANITARY DISTRICT

## MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018

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This year's additions (placed into service) included:

Table 4 – Total CIP Placed into Service

High Speed Aeration Blower	\$ 1,227,563.92
Force Main Corrosion Repairs - West	1,015,374
Headworks Knife Gate Valves Replacement	516,219
ECMS Implementation	188,307
CS GIS Web Application Replacement	40,824
Mobile Project Year 3 FY16	39,178
MCC & PLC Replacement - Phase 3	360
Upper Hetch Hetchy SS Rehabilitation	15
Total	<u>\$ 3,027,841</u>

More detailed information about the District's capital assets is presented in Note 2 to the financial statements.

### Debt Administration

At year-end, the District had \$41.9 million in loans outstanding versus \$44.3 million last year. This debt consists of nine State Revolving Fund loans.

Other obligations include accrued vacation pay and sick leave. More detailed information about the District's long-term liabilities is presented in Note 6 to the financial statements.

### New Significant Accounting Standards Implemented

In FY 2018, the following Governmental Accounting Standards Board (GASB) pronouncements impacted the District:

GASB Statement No. 75 – In June 2015, GASB issued statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. Statement No. 75 establishes new accounting and financial reporting requirements for governments whose employees are provided with OPEB, as well as for certain non-employer governments that have legal obligation to provide financial support for OPEB provided to the employees of other entities. The provisions in statement 75 are effective for fiscal years beginning after June 15, 2017. This statement was implemented by the District as of July 1, 2017.

## UNION SANITARY DISTRICT

### MANAGEMENT'S DISCUSSION AND ANALYSIS JUNE 30, 2018

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#### NEXT YEAR'S BUDGET AND RATES

The Board of Directors adopted the FY 2019 Budget with total appropriations of \$56.4 million. Of that amount, \$9.29 million is appropriated for capital projects (both for design and construction) such as the Digester No. 7, Stand-by Power Generation System Upgrade, Headworks 3<sup>rd</sup> Bar Screen, and Force Main Corrosion Repairs (phase 2). The budget also includes \$1.4 million in special projects such as the Financial Master Plan, Treatment Plant Master Plan, Newark Basin Master Plan, and the IT Master Plan. This budget includes the third year of a five-year sewer service charge rate increase that became effective on July 1, 2016. The FY 2018 rate increase for residential sewer service charges was 3.5%. Total estimated revenues for FY 2019 are \$75.4 million which includes \$57 million in sewer service charges. Connection fee revenues are estimated at \$16.2 million. To stay competitive with the market, the appropriations include a cost of living increase of 3.5% for union employees and an overall cost of living increase for exempt employees of 4.2%. All other appropriations are consistent with FY 2018.

#### CONTACTING THE DISTRICT'S FINANCIAL MANAGEMENT

This financial report is designed to provide our citizens, taxpayers, customers, and investors and creditors with a general overview of the District's finances and to show the District's accountability for the money it receives. If you have questions about this report or need additional financial information, contact the District at (510) 477- 7500.

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UNION SANITARY DISTRICT

STATEMENT OF NET POSITION  
JUNE 30, 2018

**Assets:**

Current Assets:

Cash, cash equivalents	\$ 7,223,399
Investments	104,340,800
Receivables:	
Accounts, net	3,179,550
Accrued interest	405,866
Inventories	753,419
Other	33,979

**Total Current Assets**

**115,937,013**

Noncurrent Assets:

Capital assets

Non depreciable capital assets	
Land and improvements	5,395,903
Construction in progress	41,610,079
Capacity permits and easements	6,415,898
Depreciable capital assets	
Utility plant in service	680,731,835
Less: Accumulated depreciation	(395,785,513)
Net capital assets	<u>338,368,202</u>

Other Assets

Restricted investments	3,912,080
Investment in East Bay Dischargers Authority	5,990,293
Total other assets	<u>9,902,373</u>

**Total Noncurrent Assets**

**348,270,575**

**Total Assets**

**\$ 464,207,588**

**Deferred Outflows of Resources:**

Deferred outflows related to pensions	\$ 11,176,830
Deferred outflows related to OPEB	708,037

**Total Deferred Outflows of Resources**

**\$ 11,884,867**

**Liabilities:**

Current liabilities:

Accounts payable and accrued expenses	\$ 2,567,168
Accrued payroll and related expenses	697,807
Interest payable	504,689
Customer deposits	3,428,951
Accrued compensated absences	1,006,178
Bonds, notes, and capital leases	2,870,006

**Total Current Liabilities**

**11,074,799**

Long-term liabilities:

Bonds, notes, and capital leases	39,055,508
Net pension liability	46,751,259
Net OPEB liability	6,239,652

**Total Long-Term Liabilities**

**92,046,419**

**Total Liabilities**

**\$ 103,121,218**

**Deferred Inflows of Resources:**

Deferred inflows related to pensions	\$ 185,614
Deferred inflows related to OPEB	1,277,506

**Total Deferred Inflows of Resources**

**\$ 1,463,120**

**Net Position:**

Net investment in capital assets	\$ 296,442,688
Restricted for:	
Capacity purposes	51,471,608
SRF loan contingency reserve	3,902,080
Unrestricted	19,691,741

**Total Net Position**

**\$ 371,508,117**

**UNION SANITARY DISTRICT**

**STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION  
FOR THE YEAR ENDED JUNE 30, 2018**

<b>Operating Revenues:</b>	
Sewer service charges (SSC)	\$ 54,260,096
Other operating revenues	1,631,870
	<hr/>
<b>Total Operating Revenues</b>	<b>55,891,966</b>
<b>Operating Expenses:</b>	
Sewage treatment	18,657,355
Sewage collection and engineering	14,173,382
General and administration	7,611,460
	<hr/>
<b>Total Operating Expenses Before Depreciation</b>	<b>40,442,197</b>
Depreciation	17,003,398
	<hr/>
<b>Total Operating Expenses</b>	<b>57,445,595</b>
	<hr/>
Operating (Loss)	(1,553,629)
<b>Nonoperating Revenues (Expenses):</b>	
Net investment income and net realized gains and losses	700,856
Interest expense	(1,479,413)
Loss on equity investment in East Bay Dischargers Authority	(90,325)
	<hr/>
<b>Net Nonoperating Revenues (Expenses)</b>	<b>(868,882)</b>
	<hr/>
(Loss) Before Contributed Capital	(2,422,511)
Connection fees and other contributed capital	31,338,298
	<hr/>
Changes in Net Position	28,915,787
<b>Net Position:</b>	
Beginning of Fiscal Year	351,734,929
Restatements	(9,142,599)
	<hr/>
Beginning of Fiscal Year, as restated	342,592,330
	<hr/>
<b>End of Fiscal Year</b>	<b>\$ 371,508,117</b>
	<hr/> <hr/>

**UNION SANITARY DISTRICT**

**STATEMENT OF CASH FLOWS  
FOR THE YEAR ENDED JUNE 30, 2018**

<b>Cash Flows from Operating Activities:</b>	
Receipts from customers and users	\$ 56,113,703
Payments to suppliers for goods and services	(19,428,342)
Payments to employees for services	(16,926,210)
Receipts from (payments to) customer deposits	<u>2,087,695</u>
<b>Net Cash Provided by Operating Activities</b>	<b><u>21,846,846</u></b>
<b>Cash Flows from Capital and Related Financing Activities:</b>	
Proceeds from capital debt	455,642
Capital contributions	23,623,947
Acquisition and construction of capital assets	(9,467,412)
Principal paid on capital debt	(2,802,542)
Interest paid on capital debt	<u>(1,451,941)</u>
<b>Net Cash Provided by Capital and Related Financing Activities</b>	<b><u>10,357,694</u></b>
<b>Cash Flows from Investing Activities:</b>	
Purchase of investments	(30,294,476)
Interest received	<u>540,288</u>
<b>Net Cash (Used) in Investing Activities</b>	<b><u>(29,754,188)</u></b>
<b>Net Increase in Cash and Cash Equivalents</b>	<b>2,450,352</b>
Cash and Cash Equivalents at Beginning of Year	<u>4,773,047</u>
<b>Cash and Cash Equivalents at End of Year</b>	<b><u>\$ 7,223,399</u></b>
<b>Reconciliation of Operating Income to Net Cash (Used) by Operating Activities:</b>	
Operating (loss)	<u>\$ (1,553,629)</u>
<b>Adjustments to reconcile operating income (loss) net cash provided (used) by operating activities:</b>	
Depreciation	17,003,398
Increase (decrease) in Pension related items	4,036,743
Increase (decrease) in OPEB related items	(193,230)
(Increase) decrease in accounts receivable	221,737
(Increase) decrease in inventories and other	(14,492)
Increase (decrease) in accounts payable and accrued expenses	40,133
Increase (decrease) in accrued liabilities	114,218
Increase (decrease) in customer deposits	2,087,695
Increase (decrease) in compensated absences	<u>104,273</u>
<b>Total Adjustments</b>	<b><u>23,400,475</u></b>
<b>Net Cash Provided (Used) by Operating Activities</b>	<b><u>\$ 21,846,846</u></b>
<b>Non-Cash Investing, Capital, and Financing Activities:</b>	
Contributions of capital assets	\$ 7,714,351
Increase/(Decrease) in equity in East Bay Dischargers Authority	(90,325)

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## UNION SANITARY DISTRICT

### NOTES TO FINANCIAL STATEMENTS JUNE 30, 2018

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#### Note 1: **Organization and Summary of Significant Accounting Policies**

##### **The Organization**

Union Sanitary District (the "District") operates pursuant to Division 6 of the Health and Safety Code of the State of California (Sanitary District Act of 1923, as amended). The District, which was established in 1918 and subsequently reorganized in 1923, is empowered to own and operate wastewater facilities, and the Board of Directors may prescribe, revise and collect fees or charges for services and facilities of the District in connection with its wastewater system.

The District is governed by a five-member Board of Directors elected by wards for four-year overlapping terms. The election is at-large and non-partisan. The Board appoints the General Manager to manage and oversee the day-to-day operations.

The accounting policies of the District conform to accounting principles generally accepted in the United States of America as applicable to enterprise governments. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for governmental accounting and financial reporting principles. The GASB establishes standards for external financial reporting for all state and local governmental entities, which require a management and discussion and analysis section, a statement of net position, a statement of revenues, expenses, and changes in net position, and a statement of cash flows. It requires the classification of net position into three components: invested in capital assets, restricted, and unrestricted.

##### **The Financial Reporting Entity**

For financial reporting purposes component units are defined as legally separate organizations for which the elected officials of the primary government are financially accountable, and other organizations for which the nature and significance of their relationship with a primary government are such that exclusion would cause the reporting entity's financial statements to be misleading or incomplete. The District considered all potential component units in determining what organizations should be included in the financial statements. The District has determined that there are no component units that meet these criteria as of, and for the year ended June 30, 2018. The District includes all funds that are controlled by, or dependent upon the Board of Directors of the District.

In addition, the District's share of a Joint Powers Authority (East Bay Dischargers Authority) is reflected based upon the District's proportionate share of its investment in the discharge facilities in the Authority (see Note 5).

##### **a. Basis of Accounting and Measurement Focus**

The financial statements of the District are presented as those of an enterprise fund under the broad category of funds called proprietary funds, which also include internal service funds. All proprietary funds utilize the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned, and expenses are recorded when the liability is incurred or economic asset utilized.

**Note 1: Organization and Summary of Significant Accounting Policies (Continued)**

Enterprise funds account for business-like activities provided to the general public. These activities are financed primarily by user charges, and the measurement of financial activity focuses on net income measurement similar to the private sector. The acquisition and capital improvement of the physical plant facilities requires that these goods and services be financed from existing cash resources, cash flow from operations, the issuance of debt, and contributed capital.

Certain amounts presented in the prior year data have been reclassified in order to be consistent with the current year's presentation.

**b. Cash and Cash Equivalents**

The District considers all highly liquid investments, which are readily convertible into known amounts of cash and have a maturity of three months or less when acquired, to be cash equivalents. As of June 30, 2018, cash equivalents consist of U.S. Treasury funds in a sweep account and money market funds.

Certain cash and cash equivalents have been placed into escrow according to the requirements of ongoing construction contracts. Accordingly, such cash and cash equivalents have been classified as restricted in the accompanying financial statements.

**c. Investments**

Investments, which consist of short-term, fixed-income securities at June 30, 2018, are recorded at fair value using quoted market prices. The related net realized and unrealized gains (losses) on investments are recognized in the accompanying statement of revenues expenses, and changes in net position.

**d. Inventory**

Inventory is held for consumption and is recorded at cost using the first-in-first-out (FIFO) basis.

**e. Capital Assets**

Capital assets, including costs of addition to utility plant and major replacements of property, are capitalized and stated at cost. The District's capitalization threshold is \$10,000. Such capital costs include materials, direct labor, transportation, and such indirect costs as interest and contracted engineering. Contributed property is recorded at acquisition value as of the date of donation. Repairs, maintenance, and minor replacements of property are charges to expense.

**Note 1: Organization and Summary of Significant Accounting Policies (Continued)**

**f. Depreciation**

The purpose of depreciation is to spread the cost of capital assets equitably among all customers over the life of those assets. The amount charged to depreciation expense each year represents that year's pro rata share of capital asset costs.

Depreciation of all capital assets in service is charged as an expense against operations each year. Accumulated depreciation, the total amount of depreciation taken over the years, is reported on the statement of net position as a reduction in the gross value of the capital assets.

Depreciation of capital assets in service is calculated using the straight line method, dividing the cost of the asset by its expected useful life in years. The result is charged to expense each year until the asset is fully depreciated. It is the District's policy to utilize the half-year convention when calculating depreciation. The District has assigned the following useful lives to capital assets:

Useful Lives

Wastewater collection facilities	50 – 115 years
Wastewater treatment facilities	10 – 50 years
District facilities	10 – 35 years
General equipment	3 – 35 years

The aggregate provision for depreciation was 2.97 percent of average depreciable plant during the year ended June 30, 2018.

**g. Compensated Absences**

Compensated absences, including accumulated unpaid vacation, sick pay and other employee benefits, are accounted for as expenses in the year earned. The liability for compensated absences includes the vested portions of vacation, sick leave, and compensated time off. The liability for compensated absences is determined annually.

**h. New Accounting Pronouncements**

*GASB Statement No.75 Accounting and Financial Reporting For Postemployment Benefits Other Than Pensions* - improves the accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). This Statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources and expense/expenditures. This Statement replaces GASB 45 and GASB 57.

**Note 1: Organization and Summary of Significant Accounting Policies (Continued)**

**i. Net Position**

Net position is measured on the full accrual basis and is the excess of all the District's assets and deferred outflows over all its liabilities and deferred inflows. Net position is classified into the following components: net investment in capital assets, restricted and unrestricted. Restricted net position describes the portion of net position which is restricted as to use by the terms and conditions of agreement with outside parties, governmental regulations, laws, enabling legislation or other restrictions which the District cannot unilaterally alter. It is the District's policy to apply restricted resources first when an expense is incurred for purposes for which both restricted and unrestricted resources are available.

The following categories of restricted net position are described as follows:

- Net Position Restricted for Capacity Purposes – restricted for activities related to increases in the capacity of the collection and/or treatment systems.
- Net Position Restricted for Debt Purposes – the State requires a contingency reserve for State Revolving Fund loan balances.

**j. Classification of Revenues and Expenses**

Operating revenues consist primarily of sewer service charges to customers, which are billed and collected on behalf of the District by Alameda County (the County) as a separate component of semiannual property tax billings. Property taxes are levied on March 1 and are due in equal installments on November 1 and February 1. The County remits to the District those charges which are placed on the property tax roll and handles all delinquencies, retaining interest and penalties.

Non-operating revenues consist of investment income and special charges that can be used for either operating or capital purposes.

Capital contributions consist of contributed capital assets, connection, and capacity fees that are legally restricted for capital expenditures by State law or by Board actions that established those charges. Connection and capacity fees represent a one-time contribution of resources to the District, imposed on contractors and developers for the purpose of financing capital improvements.

Operating expenses are those expenses that are essential to the primary operations of the District. Operating expenses include costs related to wastewater collection and treatment, as well as engineering and general and administrative expenses. Other expenses such as investment losses, interest expense, and loss on retirement of capital assets are reported as non-operating expenses.

**k. Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Note 1: Organization and Summary of Significant Accounting Policies (Continued)**

**I. Deferred Outflows/Inflows of Resources**

Deferred outflows of resources are a consumption of net position that is applicable to a future reporting period and deferred inflows of resources are an acquisition of net position that is applicable to a future reporting period. A deferred outflows of resources has a positive effect on net position, similar to assets, and a deferred inflows of resources has a negative effect on net position, similar to liabilities. The District has certain items, which qualify for reporting as deferred outflows of resources and deferred inflows of resources.

**m. Pensions**

For purposes of measuring the net pension liability and deferred outflows/inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Miscellaneous Plan of Union Sanitary District (the "Plan") and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by California Public Employees Retirement System (CalPERS). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

**n. Other Post-Employment Benefit (OPEB)**

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the District's plan ("OPEB Plan"), the assets of which are held by CalPERS, and additions to/deductions from the OPEB Plan's fiduciary net position have been determined by an independent actuary. For this purpose, benefit payments are recognized when currently due and payable in accordance with the benefit terms. Investments are reported at fair value.

Generally accepted accounting principles require that the reported results must pertain to liability and asset information within certain defined timeframes. For this report, the following timeframes are used:

Valuation Date	June 30, 2017
Measurement Date	June 30, 2017
Measurement Period	June 30, 2016 to June 30, 2017

**Recognition of Deferred Outflows and Deferred Inflows of Resources**

Gains and losses related to changes in total OPEB liability and fiduciary net position are recognized in OPEB expense systematically over time. Amounts are first recognized in OPEB expense for the year the gain or loss occurs. The remaining amounts are categorized as deferred outflows and deferred inflows of resources related to OPEB and are to be recognized in future OPEB expense.

The recognition period differs depending on the source of the gain or loss:

Net difference between projected and actual earning on OPEB plan investments	5 years
All other Amounts	Expected average remaining service lifetime (EARSL) (6.42 years at June 30, 2017)

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018**

**Note 2: Capital Assets**

Capital asset activity for the year ended June 30, 2018, is summarized as follows:

	Balance June 30, 2017	Adjustments	Adjusted Balance	Additions	Deletions	Transfers	Balance June 30, 2018
Capital assets, not being depreciated:							
Land and improvements	\$ 5,395,903	\$ -	\$ 5,395,903	\$ -	\$ -	\$ -	\$ 5,395,903
Construction in progress	37,063,104	(689,755)	36,373,349	8,563,701	(299,130)	(3,027,841)	41,610,079
Capacity permits and easements	6,415,898	-	6,415,898	-	-	-	6,415,898
Total capital assets, not being depreciated	48,874,905	(689,755)	48,185,150	8,563,701	(299,130)	(3,027,841)	53,421,880
Capital assets, being depreciated:							
Sewage collection facilities	425,193,528	-	425,193,528	7,767,777	-	1,015,389	433,976,694
Sewage treatment facilities	156,386,809	-	156,386,809	166,196	-	1,744,143	158,297,148
District facilities	73,534,626	-	73,534,626	-	-	-	73,534,626
General equipment	7,322,021	-	7,322,021	142,868	(65,385)	268,309	7,667,813
Fleet	6,714,333	-	6,714,333	541,221	-	-	7,255,554
Total capital assets, being depreciated	669,151,317	-	669,151,317	8,618,062	(65,385)	3,027,841	680,731,835
Less accumulated depreciation for:							
Sewage collection facilities	(242,391,683)	-	(242,391,683)	(8,867,468)	-	-	(251,259,151)
Sewage treatment facilities	(89,083,638)	-	(89,083,638)	(5,026,684)	-	-	(94,110,322)
District facilities	(37,905,246)	-	(37,905,246)	(2,090,032)	-	-	(39,995,278)
General equipment	(5,416,075)	-	(5,416,075)	(536,629)	65,385	-	(5,887,319)
Fleet	(4,050,858)	-	(4,050,858)	(482,585)	-	-	(4,533,443)
Total accumulated depreciation	(378,847,500)	-	(378,847,500)	(17,003,398)	65,385	-	(395,785,513)
Total capital assets being depreciated, net	290,303,817	-	290,303,817	(8,385,336)	-	3,027,841	284,946,322
Total Capital Assets, net	\$ 339,178,722	\$ (689,755)	\$ 338,488,967	\$ 178,365	\$ (299,130)	\$ -	\$ 338,368,202

Construction work in progress consists primarily of the direct construction costs associated with numerous District projects plus related construction overhead. The District has outstanding construction contract commitments on capital projects approximating \$51.3 million at June 30, 2018.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018**

**Note 3: Cash and Investments**

**a. Summary of Cash and Cash Equivalents and Investments**

Cash and cash equivalents and investments at June 30, 2018, are detailed as follows:

Cash and cash equivalents	\$ 7,223,399
Restricted investments	3,912,080
Investments	<u>104,340,800</u>
Total cash and cash equivalents and investments	<u>\$ 115,476,279</u>

**b. Authorized Investments by the District**

The District's investment policy and the California Government Code allow the District to invest in the following investments, with certain limiting provisions that address interest rate, risk, credit risk, and concentration of credit risk.

Authorized Investment Type	Maximum Remaining Maturity	Minimum Credit Quality	Maximum Percentage of Portfolio	Maximum Investment in One Issuer
U.S. Treasury Obligations	5 years	N/A	None	None
U.S. Agency Obligations (a)	5 years	N/A	None	None
Banker's Acceptances (b)	180 days	A1/P1 (ST) A (LT)	40%	10%
Certificates of Deposit	180 days	N/A	30%	10%
Negotiable Certificates of Deposit	5 years	A1 (ST) A (LT)	30%	10%
Repurchase Agreements (c)	90 days	N/A	10%	10%
Commercial Paper	270 days	"Prime" quality	25%	10%
Local Agency Investment Fund (LAIF)	N/A	N/A	70%	None
Corporate Notes (d)	5 years	A	30%	10%
Mortgage Pass-through and Asset Backed Securities	N/A	AAA or Aaa	20%	10%
Money Market Funds	N/A	AAA or Aaa	20%	10%

- a) Securities issued by agencies sponsored by the federal government such as the Federal Farm Credit Bank (FFCB), the Federal Home Loan Bank (FHLB), the Federal National Mortgage Association (FNMA), and the Federal Home Loan Mortgage Corporation (FHLMC).
- b) Bankers Acceptances issued by institutions the short term obligations of which are rated at a minimum of "P1" by Moody's Investor Services (Moody's) and A1 by Standard & Poor's, Inc. (S&P); or if the short term obligations are unrated, the long-term obligations of which are rated a minimum of "A" by S&P.
- c) Repurchase agreements must be collateralized with U.S. Treasury Obligation or U.S. Agency Securities, which must maintain a market value of at least 102% of the principal of the repurchase agreement.
- d) Securities shall be issued by corporations rated a minimum of "A" by S&P.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

**Note 3: Cash and Investments (Continued)**

**c. Interest Rate Risk**

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates.

Information about the sensitivity of the fair values of the District's investments to market interest rate fluctuations is provided by the following table that shows the distribution of the District's investments by maturity as of June 30, 2018:

	Maturities of			Total
	12 Months Or Less	12 to 24 Months	25 to 60 Months	
U.S. Treasury Obligations	\$ 2,986,840	\$ -	\$ -	\$ 2,986,840
U.S. Agency Obligations:				
FFCB	2,976,800	1,966,410	969,730	5,912,940
FHLB	1,988,830	-	5,877,670	7,866,500
FHLMC	3,975,370	2,952,810	4,395,500	11,323,680
FNMA	-	-	961,410	961,410
Corporate Notes	999,700	2,473,810	7,920,740	11,394,250
Certificates of Deposit	245,339	1,219,505	2,172,989	3,637,833
LAIF	61,109,474	-	-	61,109,474
Local Government Investment Pool (CAMP)	3,059,953	-	-	3,059,953
Total Investments	<u>77,342,306</u>	<u>8,612,535</u>	<u>22,298,039</u>	<u>108,252,880</u>
Cash in bank	7,223,399	-	-	7,223,399
Total Cash and Investments	<u>\$ 84,565,705</u>	<u>\$ 8,612,535</u>	<u>\$ 22,298,039</u>	<u>\$ 115,476,279</u>

**d. LAIF Pool**

The District is a voluntary participant in the Local Agency Investment Fund (LAIF). LAIF is regulated by California Government Code Section 16429 under the oversight of the Treasurer of the State of California. The District reports its investment in LAIF at the fair value amount provided by LAIF, which is the same as the value of the pool share. The balance is available for withdrawal on demand, and is based in the accounting records maintained by LAIF, which are recorded on an amortized cost basis. Included in LAIF's investment portfolio are collateralized mortgage obligations, mortgage-backed securities, other asset-backed securities, loans to certain state funds, and floating rate securities issued by federal agencies, government-sponsored enterprises, United States Treasury Notes and Bills and corporations. The carrying value of LAIF approximates fair value. At June 30, 2018, these investments mature in an average of 193 days.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018**

**Note 3: Cash and Investments (Continued)**

**e. Credit Risk**

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization.

Presented below is the actual rating as of June 30, 2018, for each investment type:

Investment Type	Aaa	Aa3	Aa2	A1	A2	WR	Total
U.S. Agency Obligations							
FFCB	\$ 5,912,940	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,912,940
FHLB	7,866,500	-	-	-	-	-	7,866,500
FHLMC	10,324,860	-	-	-	-	998,820	11,323,680
FNMA	961,410	-	-	-	-	-	961,410
Corporate Notes	1,807,513	973,910	2,612,177	2,061,320	2,939,630	999,700	11,394,250
<b>Totals</b>	<b>\$ 26,873,223</b>	<b>\$ 973,910</b>	<b>\$ 2,612,177</b>	<b>\$ 2,061,320</b>	<b>\$ 2,939,630</b>	<b>\$ 1,998,520</b>	<b>37,458,780</b>
Exempt from credit rate disclosure							
U.S. Treasury Obligations							2,986,840
Not rated							
Certificates of deposit							3,637,833
California Local Agency Investment Fund							61,109,474
Local Government Investment Pool (CAMP)							3,059,953
Cash and cash equivalents							7,223,399
<b>Total Cash, Cash Equivalents and Investments</b>							<b>\$ 115,476,279</b>

**f. Concentration of Credit Risk**

Concentration of credit risk is the risk of a loss attributed to the magnitude of a government's investment in a single issuer.

As of fiscal year ended June 30, 2018, more than 5 percent of the District's investments were in FFCB, FHLB, and FHLMC. These investments were 5.5 percent, 7.3 percent, and 10.5 percent, respectively, of the District's total investments.

**g. Custodial Credit Risk**

**Deposits**

This is the risk that in the event of a bank failure, the District's deposits may not be returned to it. The District's policy, as well as the California Government Code, requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit). The fair value of the pledged securities in the collateral pool must equal at least 110 percent of the total amount deposited by the public agencies. California law also allows financial institutions to secure public deposits by pledging first trust deed mortgage notes having a value of 150 percent of the secured public deposits and letters of credit issued by the Federal Home Loan Bank of San Francisco having a value of 105 percent of the secured deposits. As of June 30, 2018, the District's total bank balance of \$8,210,117 was either collateralized or insured by the Federal Deposit Insurance Corporation (FDIC). Certificates of Deposit were also collateralized.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

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**Note 3: Cash and Investments (Continued)**

Investments

This is the risk that, in the event of the failure of the counterparty, the District will not be able to recover the value of its investments or collateral securities that are in possession of an outside party. The California Government Code does not contain legal or policy requirements that would limit the exposure to custodial credit risk for investments. However, the District's policy states that all security transactions entered into by the District shall be conducted on delivery-versus-payment (DVP) basis. All securities purchased or acquired shall be delivered to the District by book entry, physical delivery, or by third party custodial agreement as required by CGC Section 53601. The collateralization on repurchase and reverse repurchase agreements will adhere to the amount required under CGC Section 53601(i) (2).

**Note 4: Fair Value Measurements**

The District categorizes the fair value measurements of its investments based on the hierarchy established by generally accepted accounting principles. The fair value hierarchy, which has three levels, is based on the valuation inputs used to measure an asset's fair value. The following provides a summary of the hierarchy used to measure fair value:

Level 1 - Quoted prices in active markets for identical assets that the District has the ability to access at the measurement date. Level 1 assets may include debt and equity securities that are traded in an active exchange market and that are highly liquid and are actively traded in over-the-counter markets.

Level 2 - Observable inputs other than Level 1 prices such as quoted prices for similar assets in active markets, quoted prices for identical or similar assets in markets that are not active, or other inputs that are observable, such as interest rates and curves observable at commonly quoted intervals, implied volatilities, and credit spreads. For financial reporting purposes, if an asset has a specified term, a Level 2 input is required to be observable for substantially the full term of the asset.

Level 3 - Unobservable inputs should be developed using the best information available under the circumstances, which might include the District's own data. The District should adjust that data if reasonable available information indicates that other market participants would use different data or certain circumstances specific to the District are not available to other market participants.

Uncategorized - Investments in the Local Agency Investment Funds/State Investment Pools are not measured using the input levels above because the District's transactions are based on a stable net asset value per share. All contributions and redemptions are transacted at \$1.00 net asset value per share.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

**Note 4: Fair Value Measurements (Continued)**

The District's fair value measurements are as follows at June 30, 2018:

Investment Type	Fair Value	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Uncategorized
U.S. Agency Obligations					
FFCB	\$ 5,912,940	\$ -	\$ 5,912,940	\$ -	\$ -
FHLB	7,866,500	-	7,866,500	-	-
FHLMC	11,323,680	-	11,323,680	-	-
FNMA	961,410	-	961,410	-	-
Corporate Notes	11,394,250	-	11,394,250	-	-
Local Government Investment Pool (CAMP)	3,059,953	-	-	-	3,059,953
U.S. Treasury Obligations	2,986,840	-	2,986,840	-	-
Certificates of Deposits	3,637,833	-	3,637,833	-	-
California Local Agency Investment Fund (LAIF)	61,109,474	-	-	-	61,109,474
Totals	\$ 108,252,880	\$ -	\$ 44,083,453	\$ -	\$ 64,169,427

**Note 5: Joint Ventures**

***Alameda County Water District Financing Authority***

The Alameda County Water District Financing Authority, a Joint Powers Authority, was established through Joint Exercise of Powers Agreement between the Alameda County Water District (ACWD) and Union Sanitary District (USD) on November 14, 2011 for the purpose of assisting in the financing and refinancing of capital improvement projects of the ACWD and to finance working capital for the ACWD. The assets, debts, liabilities, and obligations of the Authority do not constitute assets, debts, liabilities, and obligations of Union Sanitary District. The Authority is administered by the Board, which consists of one member from Union Sanitary District and five members from the Alameda County Water District.

***Investment in East Bay Dischargers Authority***

The District has an 18.7 percent interest in East Bay Discharges Authority (EBDA), a Joint Powers Authority established under the Joint Exercise of Powers Act of the State of California. As a separate legal entity, EBDA exercises full power and authority within the scope of the related Joint Powers Agreement, including the preparation of annual budgets, accountability for all funds, the power to make and execute contracts and the right to sue and be sued. Obligations and liabilities of EBDA are not those of the District and the other participating entities.

EBDA constructed and operates an export pumping facility through which all treated wastewater in the area is discharged. The other participants (and their ownership percentages) are the City of Hayward (33 percent), the City of San Leandro (18.6 percent), and the Oro Loma and Castro Valley Sanitary Districts (collectively, 29.7 percent). The District has rights to 18.7 percent of EBDA's capacity.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

**Note 5: Joint Ventures (Continued)**

EBDA is governed by a board of directors consisting of representatives from each member agency. The board controls the operations of EBDA, including selection of management and approval of operating budgets, independent of any influence by member agencies beyond their representation on the Board.

Because the District has the ability to exercise influence over operating and financial policies of the EBDA, the District's proportionate share of EBDA's net position, excluding sole use of facilities, and the District's share of its undivided ownership (18.7 percent) in EBDA's total net equity, has been recorded as an investment in EBDA accounted for under the equity method.

Summary financial information for EBDA, as of June 30, 2017, and for the years then ended, the most recent audited information available, is as follows:

	<u>2017</u>
Total assets and deferred outflows	\$ 33,317,359
Total liabilities and deferred inflows	<u>1,283,709</u>
Net position value of EBDA	<u>\$ 32,033,650</u>
District's share at 18.7%	<u>\$ 5,990,293</u>
Net loss on equity investment in EBDA	<u>\$ 52,458</u>

EBDA has no outstanding debt.

During fiscal year ended June 30, 2018, the District was charged \$1,512,573 by EBDA primarily for operating costs. Such costs are included in the wastewater treatment expenses by the District for financial reporting purposes.

The financial statement for EBDA may be obtained from the EBDA, 2651 Grant Avenue, San Lorenzo, CA 94580-1841.

**Note 6: Long-Term Obligations**

Long-term obligations at June 30, 2018, are summarized as below:

	Maturity Date	Interest Rate	Balance			Balance		Current Portion
			July 1, 2017	Additions	Retirements	June 30, 2018		
2003 State Revolving Fund Loan - Irvington	08/30/23	2.4%	\$ 5,788,299	\$ -	\$ 769,245	\$ 5,019,054	\$ 787,707	
2008 State Revolving Fund Loan - Willow	11/16/27	2.4%	1,037,007	-	83,496	953,511	85,500	
2008 State Revolving Fund Loan - Newark	01/26/30	2.7%	7,431,098	-	484,766	6,946,332	497,854	
2008 State Revolving Fund Loan - Hetch Hetchy	11/17/28	2.7%	1,415,137	-	101,424	1,313,713	104,163	
2009 State Revolving Fund Loan - Cedar Blvd.	02/26/30	2.5%	1,398,699	-	92,382	1,306,317	94,690	
2011 State Revolving Fund Loan - Primary Cl.	01/15/33	2.7%	7,581,124	-	385,093	7,196,031	395,490	
2011 State Revolving Fund Loan - Substation 1	02/28/32	2.6%	1,933,675	-	107,052	1,826,623	109,835	
2011 State Revolving Fund Loan - Boyce Rd. Lift Station	03/31/33	2.6%	5,590,616	-	265,708	5,324,908	272,616	
2014 State Revolving Fund Loan - Thickner Improvement	03/31/37	2.1%	12,096,759	455,642	513,376	12,039,025	522,151	
			<u>44,272,414</u>	<u>455,642</u>	<u>2,802,542</u>	<u>41,925,514</u>	<u>2,870,006</u>	
Compensated Absences	N/A	N/A	901,905	1,124,778	1,020,505	1,006,178	1,006,178	
			<u>\$ 45,174,319</u>	<u>\$ 1,580,420</u>	<u>\$ 3,823,047</u>	<u>\$ 42,931,692</u>	<u>\$ 3,876,184</u>	

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018

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**Note 6: Long-Term Obligations (Continued)**

***2003 State Revolving Fund Loan – Irvington***

During 2003, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. As of March 26, 2004, \$14,301,057, the maximum loan amount, had been drawn. The interest rate on the loan is 2.4 percent and is payable in twenty annual installments, beginning on year after initial loan disbursement. The purpose of this loan was to finance the Irvington Equalization Storage Facilities project.

***2008 State Revolving Fund Loan – Willow***

During 2008, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.4 percent and is payable in twenty annual installments, beginning one year after initial loan disbursement. The purpose of this loan was to finance the Willow/Central Avenue sanitary sewer rehabilitation project. The maximum amount of this agreement is \$1,749,329 based upon projected costs to be incurred. As of June 30, 2018, \$1,710,471 has been advanced under this agreement.

***2008 State Revolving Fund Loan – Newark Pump Station***

During 2008, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.7 percent and is payable in twenty annual installments, beginning in 2011. The purpose of this loan was to finance the Newark Pump Station project. The maximum amount of this agreement is \$10,283,322 based upon projected costs to be incurred. As of June 30, 2018, \$10,283,322, the maximum loan amount, has been advanced under this agreement.

***2008 State Revolving Fund Loan – Hetch Hetchy***

During 2008, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.7 percent and will be payable in twenty annual installments beginning one year after initial loan disbursements. The purpose of this loan is to finance the lower Hetch Hetchy sewer rehabilitation project. The maximum amount of this agreement is \$2,212,432 based upon projected costs to be incurred. As of June 30, 2018, \$2,113,379 has been advanced under this agreement.

***2009 State Revolving Fund Loan – Cedar Boulevard***

During 2009, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.5 percent and will be payable in twenty annual installments beginning one year after the initial loan disbursements. The purpose of this loan is to finance the Cedar Boulevard Sanitary Sewer Rehabilitation Project. The maximum amount of this agreement is \$2,052,841 based upon projected costs to be incurred. As of June 30, 2018, \$1,998,384 has been advanced under this agreement.

**Note 6: Long-Term Obligations (Continued)**

***2011 State Revolving Fund Loan – Primary Clarifier***

During 2011, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.7 percent and will be payable in twenty annual installments beginning one year after the initial loan disbursements. The purpose of this loan is to finance the rehabilitation of primary clarifiers (Nos. 1 through 4) at the Alvarado Wastewater Treatment Plant. The maximum amount of this agreement is \$8,821,860 based upon projected costs to be incurred. As of June 30, 2018, \$8,821,860, the maximum loan amount, has been advanced under this agreement.

***2011 State Revolving Fund Loan – Substation 1***

During 2011, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.6 percent and will be payable in twenty annual installments beginning one year after the initial loan disbursements. The purpose of this loan is to finance the replacement of Substation 1 to ensure its continual operation. The maximum amount of this agreement is \$2,676,485 based upon projected costs to be incurred. As of June 30, 2018, \$2,412,908 has been advanced under this agreement.

***2011 State Revolving Fund Loan – Boyce Rd. Lift Station***

During 2011, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.6 percent and will be payable in twenty annual installments beginning one year after the initial loan disbursements. The purpose of this loan is to finance the replacement of Boyce Road Lift Station to ensure its continual operation. The maximum amount of this agreement is \$6,196,671 based upon projected costs to be incurred. As of June 30, 2018, \$6,196,671, the maximum loan amount, has been advanced under this agreement.

***2014 State Revolving Fund Loan –Thickener Control Building***

During December 2013, the District entered into a loan agreement with the California State Water Resources Control Board in accordance with the State Revolving Fund Loan Program. The interest rate on the loan is 2.1 percent and will be payable in twenty annual installments beginning March 2018. The purpose of this loan is to finance the Thickener Control Building Improvements Project to ensure its continual operation. The maximum amount of this agreement is \$12.2 million based upon projected costs to be incurred. As of June 30, 2018, \$12.2 million, the maximum loan amount, has been advanced under this agreement.

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
 JUNE 30, 2018

**Note 6: Long-Term Obligations (Continued)**

***Debt Service Requirements***

Future annual repayment requirements as of June 30, 2018, are as follows:

Year Ended June 30,	Principal	Interest	Total
2019	\$ 2,870,006	\$ 1,032,073	\$ 3,902,079
2020	2,941,174	960,907	3,902,081
2021	3,014,117	887,963	3,902,080
2022	3,088,884	813,196	3,902,080
2023	3,165,519	736,560	3,902,079
2024-2028	13,280,361	2,597,383	15,877,744
2029-2033	10,221,076	1,052,457	11,273,533
2034-2037	3,344,377	166,568	3,510,945
Totals	\$ 41,925,514	\$ 8,247,107	\$ 50,172,621

**Note 7: Pension Plan**

**General Information about the Pension Plans**

**Plan Descriptions**

All qualified permanent employees are eligible to participate in the District's separate Miscellaneous Plan, agent multiple employer defined benefit pension plan administered by the California Public Employees Retirement System (CalPERS), which acts as a common investment and administrative agent for its participating member employers. Benefit provisions under the Plans are established by State statute and District resolution. CalPERS issues publicly available reports that include a full description of the pension plans regarding benefit provisions, assumptions and membership information that can be found on the CalPERS website at <https://www.calpers.ca.gov/page/employers/actuarial-services/employer-contributions/public-agency-actuarial-valuation-reports>

**Benefits Provided**

CalPERS provides retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full time employment. Members with five years of total service are eligible to retire at age 50 with statutorily reduced benefits. All members are eligible for non-duty disability benefits after 10 years of service. The death benefit is one of the following: the Basic Death benefit, the 1957 Survivor Benefit, or the Optional Settlement 2W Death Benefit. The cost of living adjustments for each plan are applied as specified by the Public Employees' Retirement Law.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018**

**Note 7: Pension Plan**

The Plan's provisions and benefits in effect at June 30, 2018, are summarized as follows:

	<b>Miscellaneous</b>	
	Prior to January 1, 2013	On or After January 1, 2013
Hire Date		
Benefit formula	2.5% @ 55	2.0% @ 62
Benefit vesting schedule	5 years of service	5 years of service
Benefit payments	monthly for life	monthly for life
Retirement age	50+	52+
Monthly benefits, as a % of annual salary	2.0% to 2.5%	1.0% to 2.5%
Required employee contribution rates	8%	6.25%
Required employer contribution rates	22.299%	11.835%

**Employees Covered**

At June 30, 2018, the following employees were covered by the benefit terms of the Plan:

	<b>Miscellaneous</b>
Inactive employees or beneficiaries currently receiving benefits	172
Inactive employees entitled to but not yet receiving benefits	68
Active employees	137
<b>Totals</b>	<b>377</b>

**Contributions**

Section 20814(c) of the California Public Employees' Retirement Law (PERL) requires that the employer contribution rates for all public employers are determined on an annual basis by the actuary and shall be effective on the July 1 following notice of a change in the rate. The total plan contributions are determined through CalPERS' annual actuarial valuation process. The actuarially determined rate is the estimated amount necessary to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. The employer is required to contribute the difference between the actuarially determined rate and the contribution rate of employees. Employer contribution rates may change if plan contracts are amended. Payments made by the employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contribution requirements are classified as plan member contributions.

For the year ended June 30, 2018 the average employee contribution rate was 8.0 percent of annual payroll, and the District's average rate was 22.299 percent of annual payroll. The total contribution to the plan was \$3,572,132 for the year ended June 30, 2018.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

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**Note 7: Pension Plan (Continued)**

**Net Pension Liability**

The District's net pension liability for the Plan is measured as the total pension liability, less the pension plan's fiduciary net position. The net pension liability of each of the Plan is measured as of June 30, 2017, using an annual actuarial valuation as of June 30, 2016 rolled forward to June 30, 2017.

A summary of principal assumptions used to determine the net pension liability is shown as follows:

**Actuarial Assumptions**

The total pension liabilities in the June 30, 2016, actuarial valuation were determined using the following actuarial assumptions.

	<u>Miscellaneous</u>
Valuation date	June 30, 2016
Measurement date	June 30, 2017
Actuarial cost method	Entry age normal cost method
Actuarial assumptions:	
Discount rate	7.15%
Inflation	2.75%
Projected Salary increases	Varies by Entry Age and Service
Mortality rate table*	Derived using CalPERS' membership data for all funds
Post retirement benefit increase	Contract COLA up to 2.75% until Purchasing Power Protection Allowance Floor on Purchasing Power applies, 2.75% thereafter

The mortality table used for Miscellaneous Plan was developed based on CalPERS' specific data. The table includes 20 years of mortality improvements using Society of Actuaries Scale BB. For more details on this table, please refer to the CalPERS 2014 Experience Study Report available on CalPERS website.

The underlying mortality assumptions and all other actuarial assumptions used in the June 30, 2016 valuation were based on the results of a December 2017 actuarial experience study for the period of 1997 to 2011. Further details of the Experience Study can be found on the CalPERS website at: <https://www.calpers.ca.gov/docs/forms-publications/calpers-experience-study-2017.pdf>

**Change in Assumptions**

In 2017, the accounting discount rate reduced from 7.65 percent to 7.15 percent.

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
 JUNE 30, 2018

**Note 7: Pension Plan (Continued)**

**Discount Rate**

The discount rate used to measure the total pension liability was 7.15 percent. To determine whether the municipal bond rate should be used in the calculation of the discount rate for each plan, CalPERS stress tested plans that would most likely result in a discount rate that would be different from the actuarially assumed discount rate. The tests revealed the assets would not run out. Therefore, the current 7.15 percent discount rate is appropriate, and the use of the municipal bond rate calculation is not deemed necessary. The long-term expected discount rate of 7.15 percent is applied to all plans in the Public Employees' Retirement Fund (PERF). The cash flows used in the testing were developed assuming that both members and employers will make their required contributions on time and as scheduled in all future years. The stress test results are presented in a detailed report called "GASB Crossover Testing Report" that can be obtained at CalPERS website under the GASB 68 section.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class.

In determining the long-term expected rate of return, staff took into account both short-term and long-term market return expectations as well as the expected pension fund (PERF) cash flows. Taking into account historical returns of all the Public Employees Retirement Funds' asset classes (which includes the agent plan and two cost-sharing plans or PERF A, B, and C funds), expected compound (geometric) returns were calculated over the short-term (first 10 years) and the long-term (11-60 years) using a building-block approach. Using the expected nominal returns for both short-term and long-term, the present value of benefits was calculated for each PERF fund. The expected rate of return was set by calculating the single equivalent expected return that arrived at the same present value of benefits for cash flows as the one calculated using both short-term and long-term returns. The expected rate of return was then set equal to the single equivalent rate calculated above and rounded down to the nearest one quarter of one percent.

The table below reflects long-term expected real rate of return by asset class. The rate of return was calculated using the capital market assumptions applied to determine the discount rate and asset allocation. The target allocation shown was adopted by the Board effective on July 1, 2014.

<u>Asset Class</u>	<u>Target Allocation</u>		<u>Real Return</u>
	<u>2016</u>	<u>Years 1-10*</u>	<u>Years 11+ **</u>
Global Equity	47.0%	4.90%	5.38%
Global Fixed Income	19.0%	0.80%	2.27%
Inflation Sensitive	6.0%	0.60%	1.39%
Private Equity	12.0%	6.60%	6.63%
Real Estate	11.0%	2.80%	5.21%
Infrastructure and Forestland	3.0%	3.90%	5.36%
Liquidity	2.0%	-0.40%	-0.90%

\* An expected inflation of 2.5% used for this period

\*\*An expected inflation of 3.0% used for this period

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
 JUNE 30, 2018

Note 7: Pension Plan (Continued)

Changes in the Net Pension Liability

The changes in the Net Pension Liability for the District are as follows:

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability (Asset)
<b>Balance at June 30, 2016</b>	<b>\$ 127,008,243</b>	<b>\$ 87,151,779</b>	<b>\$ 39,856,464</b>
<b>Change in the year:</b>			
Service Cost	2,818,370	-	2,818,370
Interest on total pension liability	9,548,343	-	9,548,343
Differences between expected and actual experience	900,525	-	900,525
Changes in assumptions	7,589,483	-	7,589,483
Plan to plan resource movement	-	-	-
Contribution-employer	-	3,203,124	(3,203,124)
Contribution-employee	-	1,256,350	(1,256,350)
Net investment income	-	9,631,126	(9,631,126)
Administrative Expenses	-	(128,674)	128,674
Benefit payments, including refunds of employee contributions	(6,728,358)	(6,728,358)	-
<b>Net changes</b>	<b>14,128,363</b>	<b>7,233,568</b>	<b>6,894,795</b>
<b>Balance at June 30, 2017</b>	<b>\$ 141,136,606</b>	<b>\$ 94,385,347</b>	<b>\$ 46,751,259</b>

Change in Assumption

The accounting discount rate reduced from 7.65% to 7.15%. The changes in assumption are reflected in the deferred outflows of resources.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the District for the Plan, calculated using the discount rate, as well as what the District's net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1- percentage point higher than the current rate:

	Miscellaneous
1% Decrease	6.15%
Net Pension Liability	\$ 64,924,450
Current Discount Rate	7.15%
Net Pension Liability	46,751,259
1% Increase	8.15%
Net Pension Liability	31,618,627

Pension Plan Fiduciary Net Position

Detailed information about each pension plans' fiduciary net position is available in the separately issued CalPERS financial reports.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018**

**Note 7: Pension Plan (Continued)**

**Pension Expense and Deferred Outflows/Inflows of Resources Related to Pensions**

For the year ended June 30, 2018, the District recognized pension expense of \$7,478,110. At June 30, 2018, the District reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Pension contributions subsequent to measurement date	\$ 3,572,132	\$ -
Differences between actual and expected experience	993,175	-
Changes in assumptions	5,357,282	(185,614)
Net differences between projected and actual earnings on plan investments	1,254,241	-
<b>Totals</b>	<b>\$ 11,176,830</b>	<b>\$ (185,614)</b>

The amount of \$3,572,132 reported as deferred outflows of resources related to contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2018. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as follows:

Year ended June 30,	
2018	\$ 2,550,947
2019	4,038,269
2020	1,532,896
2021	(703,028)

**Payable to the Pension Plan**

At June 30, 2018, the District reported a payable of \$105,721 for the outstanding amount of contributions to the pension plan.

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
JUNE 30, 2018

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**Note 8: Other Retirement Benefits**

**a. Post-employment Healthcare Benefit (OPEB)**

**Plan Description**

The District's defined benefit postemployment healthcare plan provides medical benefits to employees who satisfy the requirements for retirement under CalPERS (attained age 50 with five years of service or satisfaction of the requirements for a disability retirement.) The amount of the retiree's medical benefit is dependent upon both years of service with the District and the year the employee retires.

The District contracts with CalPERS to administer its retiree health benefit plan (an agent multiple-employer plan) and to provide an investment vehicle, the California Employers' Retiree Benefit Trust Fund, to prefund future OPEB costs. A menu of benefit provisions as well as other requirements is established by State statute within the Public Employees' Retirement Law. The District chooses among the menu of benefit provisions and adopts certain benefit provisions by Board resolution. CalPERS issues a separate Comprehensive Annual Financial Report. Copies of the CalPERS annual financial report may be obtained from the CalPERS Executive Office at 400 P Street, Sacramento, CA, 95814.

**Employees Covered**

As of the June 30, 2018 actuarial valuation, the following current and former employees were covered by the benefit terms under the Plan:

Active employees	137
Inactive employees or beneficiaries currently receiving benefits	100
<b>Totals</b>	<u><u>237</u></u>

**Contributions**

The Plan and its contribution requirements are established by Memoranda of Understanding with the applicable employee bargaining units and may be amended by agreements between the District and the bargaining units. The annual contribution is based on the actuarially determined contribution. For the measurement date ended June 30, 2017, the District's cash contributions were \$797,866 in total payments, which were recognized as a reduction to the OPEB liability.

**Net OPEB Liability**

The District's net OPEB liability was measured as of June 30, 2017 and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation dated June 30, 2017 that was used to determine the June 30, 2018 total OPEB liability, based on the following actuarial methods and assumptions:

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
 JUNE 30, 2018

**Note 8: Other Retirement Benefits (Continued)**

Actuarial funding method	Entry age normal cost, level percent of pay
Asset Valuation Method	Market value of assets
Actuarial assumptions:	
Discount rate	6.73%
Inflation	2.75%
Salary increases	3.25% per year, used only to allocated to cost of benefits between service years
Investment rate of return	6.73%
Mortality Rate*	Derived using CalPERS' membership data for all funds
Pre-Retirement Turnover**	Derived using CalPERS' membership data for all funds
Healthcare Trend Rate	Medical plan premiums are assumed to increase at somewhat higher rates than assumed in the prior valuation, with the assumed medical inflation of 7.5% and ultimate trend of 5.0% per year

Notes:

\* Pre-retirement mortality information was derived from data collected during 1997 to 2011 CalPERS Experience Study dated January 2014 and post-retirement mortality information was derived from the 2007 to 2011 CalPERS Experience Study. The Experience Study Reports may be accessed on the CalPERS website [www.calpers.ca.gov](http://www.calpers.ca.gov) under Forms and Publications.

\*\* The pre-retirement turnover information was developed based on CalPERS' specific data. For more details, please refer to the 2007 to 2011 Experience Study Report. The Experience Study Report may be accessed on the CalPERS website [www.calpers.ca.gov](http://www.calpers.ca.gov) under Forms and Publications.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-term expected real rate of return</u>
Global Equity	57.00%	11.10%
Global Debt Securities	27.00%	3.90%
Inflation Assets	5.00%	0.20%
REITs	8.00%	7.60%
Commodities	3.00%	-14.00%
<b>Total</b>	<b>100.00%</b>	

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
 JUNE 30, 2018

**Note 8: Other Retirement Benefits (Continued)**

**Change in Assumptions**

Mortality improvements were utilized for future rates, healthcare trend increase changed from 4.5% per year to 5.0% per year. Spouse Coverage assumption decrease from 75% to 70% for new married retirees who will cover their spouse and Participation Rate assumption changed from an assumed elect benefit of 70% and 100% to 50% and 90% for MEC only and MOD Benefit, respectively.

**Discount Rate**

The discount rate used to measure the total OPEB liability was 6.73 percent. The projection of cash flows used to determine the discount rate assumed that District contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected OPEB payments for current active and inactive employees and beneficiaries. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

**Changes in the OPEB Liability**

The changes in the net OPEB liability for the Plan are as follows:

	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability (Asset)
<b>Balance at June 30, 2016</b>	\$ 12,247,713	\$ 4,661,591	\$ 7,586,122
<b>Change in the year:</b>			
Service Cost	420,836	-	420,836
Interest on total OPEB liability	832,649	-	832,649
Plan experience	(716,909)	-	(716,909)
Expected investment income		319,533	(319,533)
Changes in assumptions	(761,859)	-	(761,859)
Contribution-employer	-	767,866	(767,866)
Investment experience	-	36,345	(36,345)
Administrative Expenses	-	(2,557)	2,557
Benefit payments, including refunds of employee contributions	(592,698)	(592,698)	-
<b>Net changes</b>	<b>(817,981)</b>	<b>528,489</b>	<b>(1,346,470)</b>
<b>Balance at June 30, 2017</b>	<b>\$ 11,429,732</b>	<b>\$ 5,190,080</b>	<b>\$ 6,239,652</b>

**Sensitivity of the Net OPEB Liability to Changes in the Discount Rate**

The following presents the net OPEB liability of the District if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate, for measurement period ended June 30, 2018:

	1% Decrease (5.73%)	Current Discount Rate (6.73%)	1% Increase (7.73%)
Net OPEB Liability	\$ 7,590,797	\$ 6,239,652	\$ 5,104,839

UNION SANITARY DISTRICT

NOTES TO FINANCIAL STATEMENTS (CONTINUED)  
 JUNE 30, 2018

Note 8: Other Retirement Benefits (Continued)

**Sensitivity of the Net OPEB Liability to Changes in the Health Care Cost Trend Rates**

The following presents the net OPEB liability of the District if it were calculated using health care cost trend rates that are one percentage point lower or one percentage point higher than the current rate, for measurement period ended June 30, 2018:

	<b>1% Decrease</b> (6.00%HMO/6.50%PPO decreasing to 3.50%HMO/3.50%PPO)	<b>Current Healthcare Cost Trend Rates</b> (7.00%HMO/7.50%PPO decreasing to 4.50%HMO/4.50%PPO)	<b>1% Increase</b> (8.00%HMO/8.50%PPO decreasing to 5.50%/5.50%PPO)
Net OPEB Liability	\$ 5,454,796	\$ 6,239,652	\$ 7,375,425

**OPEB Plan Fiduciary Net Position**

CalPERS issues a separate Comprehensive Annual Financial Report. Copies of the CalPERS annual financial report may be obtained from the CalPERS Executive Office at 400 P Street, Sacramento, California, 95814.

**OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB**

For the fiscal year ended June 30, 2018, the District recognized OPEB expense of \$698,902. As of fiscal year ended June 30, 2018, the District reported deferred outflows of resources related to OPEB from the following sources:

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
OPEB contributions subsequent to measurement date	\$ 708,037	\$ -
Changes of assumptions	-	(643,189)
Differences between expected and actual experience	-	(605,241)
Net difference between projected and actual earnings on OPEB plan investments	-	(29,076)
<b>Total</b>	<b>\$ 708,037</b>	<b>\$ (1,277,506)</b>

The \$708,037 reported as deferred outflows of resources related to contributions subsequent to the June 30, 2018 measurement date will be recognized as a reduction of the net OPEB liability during the fiscal year ending June 30, 2019. Other amounts reported as deferred outflows of resources related to OPEB will be recognized as expense as follows:

<b>Fiscal Year Ended June 30:</b>	<b>Deferred Outflows/Inflows of Resources</b>
2019	\$ (237,607)
2020	(237,607)
2021	(237,607)
2022	(237,607)
2023	(230,338)
Thereafter	(96,740)
<b>Total</b>	<b>\$ (1,277,506)</b>

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

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**Note 8: Other Retirement Benefits (Continued)**

**b. 401(a) Plans**

The District sponsors two internal Revenue Code Section 401(a) money purchase retirement plans for unclassified employees through the ICMA Retirement Corporation. The plans were established and can be amended by Board resolution and, for certain terms, by participant agreement. Eligibility for participation in a particular plan is dependent on job classification. Within each plan, participating employees contribute the same dollar amount of \$3,000 per year for employees under the management plan, and \$1,850 for employees under the professional plan, and the District makes matching contributions on their behalf. The District and the participants each contributed a total of \$15,807 and \$15,807 to the plans for the year ended June 30, 2018.

**c. Deferred Compensation Plan**

District employees may defer a portion of their compensation under a District sponsored deferred compensation plan created in accordance with Internal Revenue Code Section 457. Under this plan, participants are not taxed on the deferred portion of their compensation until distribution. Distributions may be made only at termination, retirement, death, or, in an emergency, as defined by the plan.

The laws governing deferred compensation plan assets require plan assets to be held by a trust for the exclusive benefit of plan participants and their beneficiaries. Since the assets held under these plans are not the District assets and are not subject to District control, they have been excluded from these general purpose financial statements.

**Note 9: Risk Management**

The District is a member of the California Sanitation Risk Management Authority (CSRMA). CSRMA covers general liability and workers' compensation claims. In addition, commercial insurance is purchased for excess liability, property, and employee dishonesty coverage. The District has a \$500,000 deductible for general liability coverage, and no deductible for workers' compensation coverage.

Claims and judgments, including a provision for claims incurred but not reported, are recorded when a loss is deemed probable of assertion and the amount of the loss is reasonably determinable. As discussed above, the District has coverage for such claims, but it has retained the risk for the deductible or uninsured portion of these claims. The District's liability for uninsured claims is limited to general liability claims, as discussed above. Settled claims have not exceeded coverage in any of the past three years.

**UNION SANITARY DISTRICT**

**NOTES TO FINANCIAL STATEMENTS (CONTINUED)**  
**JUNE 30, 2018**

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**Note 10: Commitments and Contingent Liabilities**

The District is contingently liable in connection with claims and contracts arising in the normal course of its activities. District management is of the opinion that the ultimate outcome of such matters will not have a significant effect on the financial position of the District.

The following material construction commitments existed at June 30, 2018:

Project Name	Total Committed Amount	Expenses to Date as of June 30, 2018	Remaining Commitment
Cogeneration Project	\$ 15,080,010	\$ 12,542,469	\$ 2,537,541
Standby Power System Upgrade	2,180,841	402,613	1,778,228
Digester No. 3 Insp & Rehab	2,266,373	1,300,685	965,688
Force Main Corrosion Repairs - Phase 2	1,139,132	653,261	485,871
Primary Digester No. 7	1,657,468	1,184,635	472,833

**Note 11: Restatement of Prior Year Balances**

The various restatements of beginning net position and the reasons for each are as follows:

Beginning Net Position, as Previously Reported	\$ 351,734,929
Restatement (1)- GASB 75	(8,452,843)
Restatement (2)- CIP Deletions	(689,756)
Beginning Net Position, as Restated	<u>\$ 342,592,330</u>

- (1) Beginning net position of the District was restated due to conformance with GASB Statements 75. The District is required to present the accounting results of the District's other post-employment benefit (OPEB) programs required by the Statement.
- (2) Beginning net position of the District was restated due to the removal of prior year additions to construction-in-progress (CIP). These costs have been determined not capitalizable and an adjustment was necessary to properly state capital assets.

**REQUIRED SUPPLEMENTARY INFORMATION**

UNION SANITARY DISTRICT

REQUIRED SUPPLEMENTARY INFORMATION  
FOR THE YEAR ENDED JUNE 30, 2018

**Miscellaneous Plan**  
**Agent Multiple-Employer Defined Benefit Pension Plan**  
**Last 10 Years\*\***  
**Schedule of Changes in the Net Pension Liability and Related Ratios**  
**During the Measurement Period**

Measurement Period	2018 June 30, 2017	2017 June 30, 2016	2016 June 30, 2015	2015 June 30, 2014
<b>Total Pension Liability</b>				
Service Cost	\$ 2,818,370	\$ 2,413,856	\$ 2,285,511	\$ 2,338,837
Interest on total pension liability	9,548,343	9,157,444	8,707,550	8,205,194
Changes in benefit terms	-	-	-	-
Differences between expected and actual experience	900,525	621,331	1,118,325	-
Changes in assumptions	7,589,483	-	(2,041,756)	-
Benefit payments, including refunds of employee contributions	(6,728,358)	(6,122,564)	(5,472,643)	(4,871,998)
<b>Net change in total pension liability</b>	<b>14,128,363</b>	<b>6,070,067</b>	<b>4,596,987</b>	<b>5,672,033</b>
<b>Total Pension Liability-beginning</b>	<b>127,008,243</b>	<b>120,938,176</b>	<b>116,341,189</b>	<b>110,669,156</b>
<b>Total Pension Liability-ending (a)</b>	<b>\$ 141,136,606</b>	<b>\$ 127,008,243</b>	<b>\$ 120,938,176</b>	<b>\$ 116,341,189</b>
<b>Plan Fiduciary Net Position</b>				
Contributions-employer	\$ 3,203,124	\$ 2,770,226	\$ 2,536,676	\$ 2,428,874
Contributions-employee	1,256,350	1,206,505	1,187,621	1,356,767
Net investment income	9,631,126	490,693	2,002,533	13,223,974
Benefit payments	(6,728,358)	(6,122,564)	(5,472,643)	(4,871,998)
Plan to plan resource movement	-	-	(8,501)	-
Administrative expense	(128,674)	(54,156)	(100,081)	-
<b>Net change in plan fiduciary net position</b>	<b>7,233,568</b>	<b>(1,709,296)</b>	<b>145,605</b>	<b>12,137,617</b>
<b>Plan Fiduciary Net Position-beginning</b>	<b>87,151,779</b>	<b>88,861,075</b>	<b>88,715,470</b>	<b>76,577,853</b>
<b>Plan Fiduciary Net Position-ending (b)</b>	<b>\$ 94,385,347</b>	<b>\$ 87,151,779</b>	<b>\$ 88,861,075</b>	<b>\$ 88,715,470</b>
<b>Net pension liability-ending (a) - (b)</b>	<b>\$ 46,751,259</b>	<b>\$ 39,856,464</b>	<b>\$ 32,077,101</b>	<b>\$ 27,625,719</b>
Plan fiduciary net position as a percentage of the total pension liability	66.88%	68.62%	73.48%	76.25%
Covered payroll	\$ 15,017,486	\$ 14,229,298	\$ 13,896,353	\$ 13,453,476
Net pension liability as a percentage of covered payroll	311.31%	280.10%	230.83%	205.34%

**Notes to Schedule:**

Benefit Changes: The figures above do not include any liability impact that may have resulted from plan changes which occurred after June 30, 2016. This applies for voluntary benefit changes as well as any offers of Two Years Additional Service Credit (a.k.a. Golden Handshakes).

Changes of Assumptions: In 2017, the accounting discount rate reduced from 7.65 percent to 7.15 percent. In 2016, there were no changes. In 2015, amounts reported reflect an adjustment of the discount rate from 7.5 percent (net of administrative expense) to 7.65 percent (without a reduction for pension plan administrative expense.) In 2014, amount reported were based on the 7.5 percent discount rate.

\*\*Historical information is required only for measurement periods for which GASB 68 is applicable. Fiscal Year 2015 was the first year of implementation, therefore only four years are shown.

UNION SANITARY DISTRICT

REQUIRED SUPPLEMENTARY INFORMATION (CONTINUED)  
FOR THE YEAR ENDED JUNE 30, 2018

Miscellaneous Plan  
Agent Multiple-Employer Defined Benefit Pension Plan  
Last 10 Years\*\*  
Schedule of Plan Contributions

	2018	2017	2016	2015
<b>Actuarial Determined Contribution</b>	\$ 3,572,132	\$ 3,333,889	\$ 3,034,082	\$ 2,973,280
Contribution in relation to the Actuarially Determined Contribution	(3,572,132)	(3,333,889)	(3,034,082)	(2,973,280)
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 15,174,379	\$ 15,017,486	\$ 14,229,298	\$ 13,896,353
Contributions as a percentage of covered payroll	23.54%	22.20%	21.32%	21.40%
<b>Notes to Schedule</b>				
Valuation date	6/30/2015	6/30/2014	6/30/2013	6/30/2012

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry age normal cost method
Amortization method	Direct rate smoothing
Asset valuation method	Market Value
Inflation	2.75%
Salary increases	Varies by Entry Age and Service
Payroll growth	3.00%
Investment rate of return	7.5%, net of pension plan investment expenses, including inflation.
Retirement age	The probabilities of Retirement are based on the 2014 CalPERS Experience Study for the period from 1997 to 2011.
Mortality	The probabilities of Mortality are based on the 2014 CalPERS Experience Study for the period from 1997 to 2011. Pre-retirement and Post-retirement mortality rates include 5 years of projected mortality improvement using scale AA published by the Society of Actuaries.

\*\*Historical information is required only for measurement periods for which GASB 68 is applicable. Fiscal Year 2015 was the first year of implementation, therefore only four years are shown.

UNION SANITARY DISTRICT

REQUIRED SUPPLEMENTARY INFORMATION (CONTINUED)  
AS OF JUNE 30, FOR THE LAST TEN FISCAL YEARS (1)

SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY AND RELATED RATIOS

	<u>2018</u>
<b>Total OPEB Liability</b>	
Service cost	\$ 420,836
Interest on the total OPEB liability	832,649
Differences between expected and actual experiences	(716,909)
Changes in assumptions	(761,859)
Changes in benefit terms	-
Benefit payments	(592,698)
<b>Net change in total OPEB liability</b>	<b>(817,981)</b>
<b>Total OPEB liability - beginning</b>	<b>12,247,713</b>
<b>Total OPEB liability - ending (a)</b>	<b>\$ 11,429,732</b>
<b>Plan Fiduciary Net Position</b>	
Contribution - employer	\$ 767,866
Net investment income	355,878
Benefit payments	(592,698)
Administrative expense	(2,557)
<b>Net change in plan fiduciary net position</b>	<b>528,489</b>
<b>Plan fiduciary net position - beginning</b>	<b>4,661,591</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 5,190,080</b>
<b>Net OPEB Liability/(Assets) - ending (a) - (b)</b>	<b>\$ 6,239,652</b>
<b>Plan fiduciary net position as a percentage of the total OPEB liability</b>	45.41%
<b>Covered-employee payroll</b>	\$ 15,715,654
<b>Net OPEB liability as a percentage of covered-employee payroll</b>	39.70%

(1) Historical information is required only for the measurement periods for which GASB 75 is applicable. Fiscal Year 2018 was the first year of implementation. Future years' information will be displayed up to 10 years as information becomes available.

**UNION SANITARY DISTRICT**

**REQUIRED SUPPLEMENTARY INFORMATION (CONTINUED)  
AS OF JUNE 30, FOR THE LAST TEN FISCAL YEARS (1)**

**SCHEDULE OF CONTRIBUTIONS**

	<u>2018</u>
Actuarially Determined Contribution	\$ 708,037
Contribution in Relation to the Actuarially Determined Contributions	(324,982)
Contribution Deficiency (Excess)	<u>\$ 383,055</u>
Covered-employee payroll	\$ 16,011,213
Contributions as a percentage of covered-employee payroll	4.42%

(1) Historical information is required only for the measurement periods for which GASB 75 is applicable. Fiscal Year 2018 was the first year of implementation. Future years' information will be displayed up to 10 years as information becomes available.

**Notes to Schedule:**

\*Actuarial methods and assumptions used to set the actuarially determined contribution for Fiscal Year 2018 were from the June 30, 2016 actuarial valuation.

**Methods and assumptions used to determine contributions:**

Actuarial Cost Method	Entry Age Normal, level percent of pay
Asset Valuation Method	Market value of assets
Discount rate	6.73%
Inflation	2.75%
Salary increases	3.25% per year, used only to allocated to cost of benefits between service years
Investment rate of return	6.73%
Mortality Rate*	Derived using CalPERS' membership data for all funds
Pre-Retirement Turnover**	Derived using CalPERS' membership data for all funds
Healthcare Trend Rate	Medical plan premiums are assumed to increase at somewhat higher rates than assumed in the prior valuation, with the ultimate trend of 5.0% per year.

**SUPPLEMENTARY INFORMATION**

UNION SANITARY DISTRICT

SCHEDULE OF OPERATING EXPENSES BEFORE DEPRECIATION  
FOR THE YEAR ENDED JUNE 30, 2018

	Sewage Treatment	Sewage Collection & Engineering	General & Administrative	Total
Salaries and wages	\$ 6,172,860	\$ 7,292,247	\$ 3,013,980	\$ 16,479,087
Employee benefits	4,055,102	4,854,233	2,507,127	11,416,462
Recruitment and development	109,557	92,203	250,294	452,054
Temporary help	37,857	118,606	83,915	240,378
Repairs and maintenance	1,451,687	704,060	11,219	2,166,966
Operating supplies	1,742,199	159,999	-	1,902,198
Office and safety supplies	191,210	314,262	287,085	792,557
Insurance	-	-	226,995	226,995
Contractual services	1,073,512	92,879	-	1,166,391
Professional services	544,275	63,838	764,719	1,372,832
Utilities	1,384,961	81,455	125,285	1,591,701
East Bay Dischargers Authority	1,512,572	-	-	1,512,572
Non-capital projects	318,250	318,250	304,981	941,481
Sewer Service charge administrative fee	35,860	35,860	35,860	107,580
Rents/Leases	27,453	45,490	-	72,943
<b>Total</b>	<b>\$ 18,657,355</b>	<b>\$ 14,173,382</b>	<b>\$ 7,611,460</b>	<b>\$ 40,442,197</b>

**UNION SANITARY DISTRICT**

**SCHEDULE OF INSURANCE COVERAGE  
FOR THE YEAR ENDED JUNE 30, 2018**

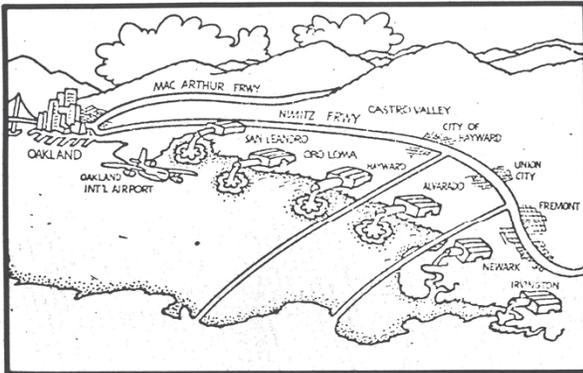
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The District's insurance policies and coverages in effect at June 30, 2018, are as follows:

General liability (pooled liability program)		
Bodily injury, property damage, and personal injury	\$	25,500,000
Public entity errors and omissions and other related practices		25,500,000
Employment related practices		25,500,000
		<b><u>Insured Value</u></b>
Auto physical damage (primary insurance program)	\$	3,873,644
Workers' Compensation		1,750,000
Group Health and Life		Contract
Employee Disability and Salary Continuance		Contract
Property insurance, all property	\$	252,293,393
Accounts receivable		No sublimit
Employee Dishonesty Bond Coverages:		
Public Employee Dishonesty Bond	\$	2,000,000
Forgery and alteration		2,000,000
Computer Fraud		2,000,000

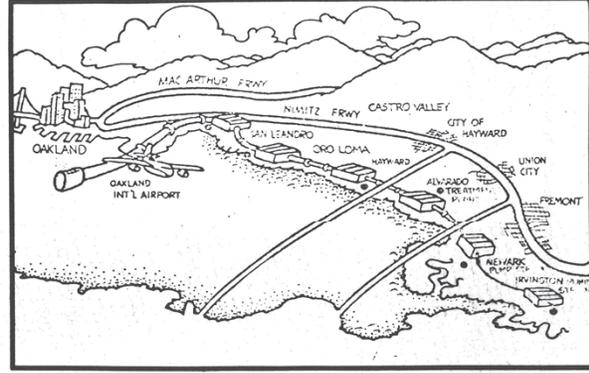
# Statistical Section

**X YES ON W**



**BEFORE**

The East Bay Dischargers Authority (EBDA) covers a 180 square mile area, 450,000 people and is composed of two incorporated cities and three sanitary districts. During wet weather, these joint powers currently discharge up to 175 million gallons of treated wastewater a day, directly onto the Bay shoreline.



**AFTER**

The proposed project for a "Super Sewer" would essentially connect current facilities and pump treated wastewater three miles off the Oakland Airport. Discharge would be in deep waters of the Bay, providing better natural action for purification.

**A MASSIVE INTERCEPTOR PIPELINE**

## 'SUPER SEWER'...NAME FOR WASTE PROPOSAL

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# Table of Contents

The Statistical Section of Union Sanitary District’s comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the District’s overall financial health.

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**Sources:** Unless otherwise noted, the information in these schedules is derived from the comprehensive annual financial reports for the relevant year.

**UNION SANITARY DISTRICT**

Changes in Net Position and Statement of Net Position by Component  
Last Ten Years

	<b>Fiscal Year</b>									
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Changes in Net Position</b>										
Operating Revenues										
Sewer Service Charges	\$35,103,885	\$37,217,073	\$38,486,824	\$40,630,578	\$42,339,311	\$45,139,420	\$48,379,254	\$50,112,564	\$52,384,709	\$54,260,096
Other Operating Revenues	809,171	968,475	987,948	1,027,357	1,163,802	1,370,017	1,581,031	1,791,782	2,154,364	1,631,870
Total Operating Revenues	<u>35,913,056</u>	<u>38,185,548</u>	<u>39,474,772</u>	<u>41,657,935</u>	<u>43,503,113</u>	<u>46,509,437</u>	<u>49,960,285</u>	<u>51,904,346</u>	<u>54,539,073</u>	<u>55,891,966</u>
Operating Expenses										
Treatment	12,938,404	13,995,781	14,342,352	14,255,266	16,088,929	15,410,523	14,956,369	15,464,775	16,964,901	18,657,355
Collection and Engineering	8,658,679	9,338,919	10,532,692	9,712,645	11,954,345	10,869,755	10,763,530	11,296,680	12,101,081	14,173,382
General and Administration	5,200,792	5,322,085	5,574,251	5,951,818	6,111,468	6,634,688	6,910,857	6,848,244	6,844,559	7,611,460
Total Operating Expenses Before Depr.	<u>26,797,875</u>	<u>28,656,785</u>	<u>30,449,295</u>	<u>29,919,729</u>	<u>34,154,742</u>	<u>32,914,966</u>	<u>32,630,756</u>	<u>33,609,699</u>	<u>35,910,541</u>	<u>40,442,197</u>
Depreciation	16,380,510	16,243,535	16,323,858	16,790,277	16,776,307	17,219,109	17,899,765	17,379,112	17,036,880	17,003,398
Total Operating Expenses	<u>43,178,385</u>	<u>44,900,320</u>	<u>46,773,153</u>	<u>46,710,006</u>	<u>50,931,049</u>	<u>50,134,075</u>	<u>50,530,521</u>	<u>50,988,811</u>	<u>52,947,421</u>	<u>57,445,595</u>
Operating Loss	<u>(7,265,329)</u>	<u>(6,714,772)</u>	<u>(7,298,381)</u>	<u>(5,052,071)</u>	<u>(7,427,936)</u>	<u>(3,624,638)</u>	<u>(570,236)</u>	<u>915,535</u>	<u>1,591,652</u>	<u>(1,553,629)</u>
Non-operating Revenues (Expenses)										
Investment Income	1,136,138	349,012	274,328	248,337	178,690	180,041	160,790	496,439	482,342	700,856
Interest Expense	(647,171)	(867,781)	(1,114,313)	(858,162)	(1,138,677)	(1,106,609)	(971,695)	(916,968)	(860,316)	(1,479,413)
Loss on Retirement of Utility in Capital Assets	(134,787)	(95,110)	(751,601)	(127,430)	(1,479,254)	(796,735)	(1,165,160)	(30,472)	(52,458)	0
Gain (loss) on Equity Investment in EBDA	(12,946)	(76,498)	(95,011)	(100,827)	(89,170)	(92,180)	(86,652)	(160,540)	(432,674)	(90,325)
Other Non-operating Expenses	0	0	0	0	0	0	0	0	0	0
Net Non-operating Revenues	<u>341,234</u>	<u>(690,377)</u>	<u>(1,686,597)</u>	<u>(838,082)</u>	<u>(2,528,411)</u>	<u>(1,815,483)</u>	<u>(2,062,717)</u>	<u>(611,541)</u>	<u>(863,106)</u>	<u>(868,882)</u>
Loss Before Contributions	(6,924,095)	(7,405,149)	(8,984,978)	(5,890,153)	(9,956,347)	(5,440,121)	(2,632,953)	303,994	728,546	(2,422,511)
Connection Fees and Other Contrib. Capital	2,648,784	3,196,347	7,850,769	4,386,772	7,072,821	4,201,932	9,595,219	9,096,373	16,560,652	31,338,298
Change in Net Position	(4,275,311)	(4,208,802)	(1,134,209)	(1,503,381)	(2,883,526)	(1,238,189)	6,962,266	9,400,367	17,289,198	28,915,787
Net Position, Beginning of Year	364,988,951	360,713,640	356,504,838	355,370,629	353,867,248	350,983,722	349,745,533	325,045,364	334,445,731	351,734,929
Prior period adjustment	0	0	0	0	0	0	(31,662,435)	0	0	(9,142,599) *
Net Position, End of Year	<u>\$360,713,640</u>	<u>\$356,504,838</u>	<u>\$355,370,629</u>	<u>\$353,867,248</u>	<u>\$350,983,722</u>	<u>\$349,745,533</u>	<u>\$325,045,364</u>	<u>\$334,445,731</u>	<u>\$351,734,929</u>	<u>\$371,508,117</u>
<b>Statement of Net Position by Component</b>										
Net investment in capital assets	\$308,753,429	\$302,407,235	\$300,489,831	\$296,939,157	\$294,393,392	\$299,269,526	\$297,462,404	\$295,355,262	\$294,906,308	\$296,442,688
Restricted	14,290,870	14,840,623	16,877,836	19,346,378	20,297,820	17,622,778	19,808,500	25,075,327	34,360,257	55,373,688
Unrestricted	37,669,341	39,256,980	38,002,962	37,581,713	36,292,510	32,853,229	7,774,460	14,015,142	22,468,364	19,691,741
Restricted-Retiree medical benefit plan	0	0	0	0	0	0	0	0	0	0
Unrestricted	0	0	0	0	0	0	0	0	0	0
Total USD net position	<u>\$360,713,640</u>	<u>\$356,504,838</u>	<u>\$355,370,629</u>	<u>\$353,867,248</u>	<u>\$350,983,722</u>	<u>\$349,745,533</u>	<u>\$325,045,364</u>	<u>\$334,445,731</u>	<u>\$351,734,929</u>	<u>\$371,508,117</u>

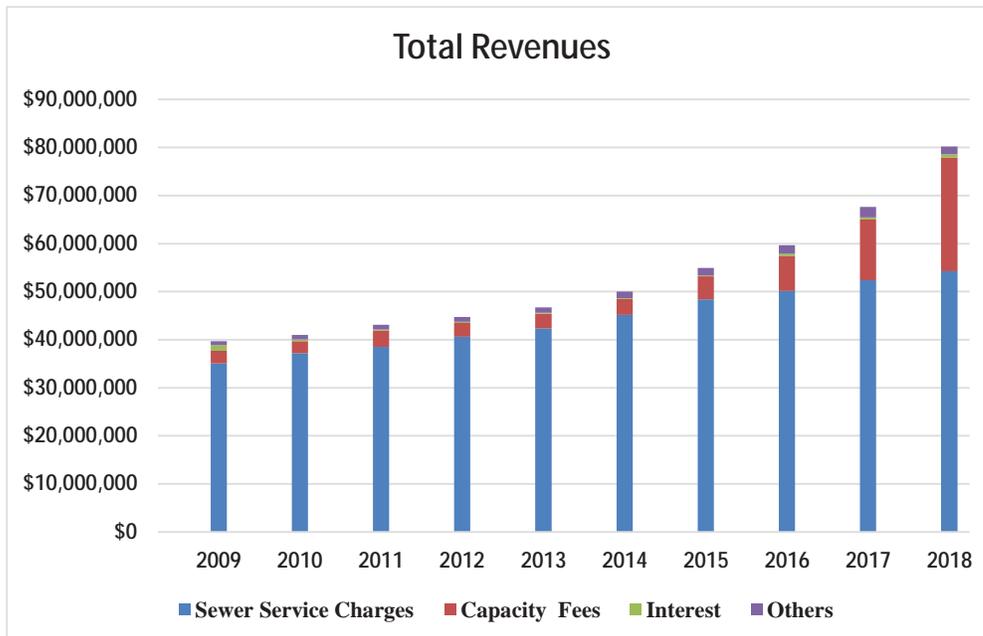
\*GASB 75 and Non-CIP Project Cost Adjustments

## UNION SANITARY DISTRICT

### District-Wide Revenues and Other Financing Sources

<u>Fiscal Year</u>	<u>Sewer Service Charges</u>	<u>Capacity Fees</u>	<u>Interest</u>	<u>Others*</u>	<u>Total Revenues</u>
2018	\$54,260,096	\$23,623,947	\$700,856	\$1,631,870	\$80,216,769
2017	52,384,709	12,595,637	482,342	2,154,364	67,617,052
2016	50,112,564	7,233,338	496,439	1,791,782	59,634,123
2015	48,379,254	4,820,637	160,790	1,581,031	54,941,712
2014	45,139,420	3,315,007	180,071	1,370,017	50,004,515
2013	42,339,311	3,062,836	178,690	1,163,802	46,744,639
2012	40,630,578	2,848,488	248,337	1,027,357	44,754,760
2011	38,486,824	3,381,963	274,328	987,948	43,131,063
2010	37,217,073	2,467,083	349,012	968,475	41,001,643
2009	35,103,885	2,621,801	1,136,138	809,171	39,670,995

\*Others includes inspection fees, permits, external work orders, discounts, and misc.

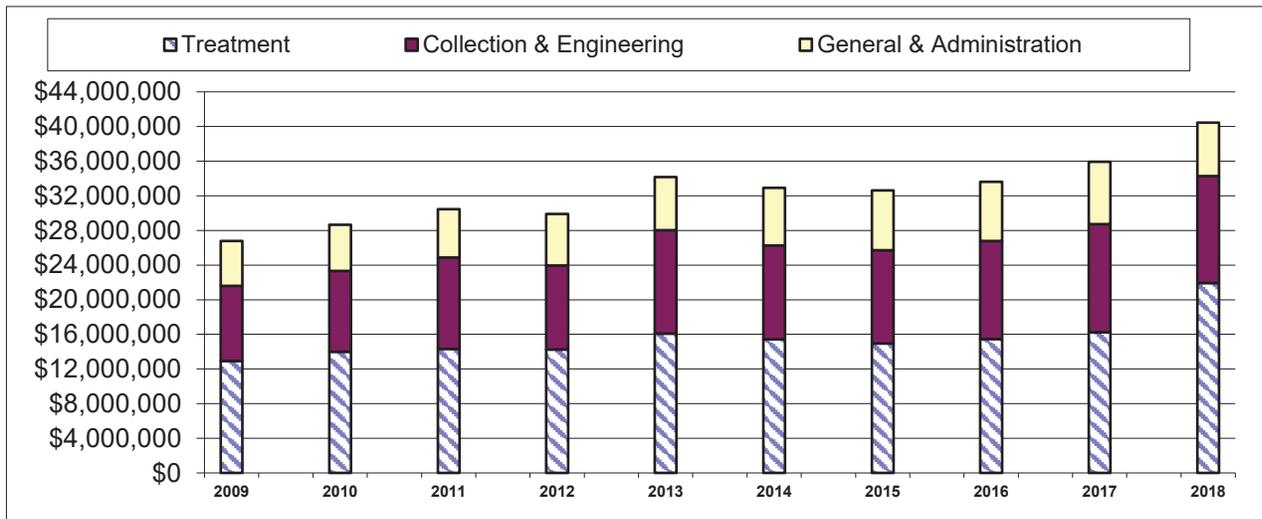


The District's main source of revenue is sewer service charges, which are collected on behalf of the District by Alameda County, on the tax rolls as part of the Teeter Plan.

## UNION SANITARY DISTRICT

### Operating Expenses By Major Function

<u>Fiscal Year</u>	<u>Treatment</u>	<u>Collection &amp; Engineering</u>	<u>General &amp; Administration</u>	<u>Total Operating Expenses</u>
2018	\$18,657,355	\$14,173,382	\$7,611,460	\$40,442,197
2017	16,252,881	12,462,391	7,195,269	35,910,541
2016	15,464,775	11,296,680	6,848,244	33,609,699
2015	14,956,369	10,763,530	6,910,857	32,630,756
2014	15,410,523	10,869,755	6,634,688	32,914,966
2013	16,088,929	11,954,345	6,111,468	34,154,742
2012	14,255,266	9,712,645	5,951,818	29,919,729
2011	14,342,352	10,532,692	5,574,251	30,449,295
2010	13,995,781	9,338,919	5,322,085	28,656,785
2009	12,938,404	8,658,679	5,200,792	26,797,875



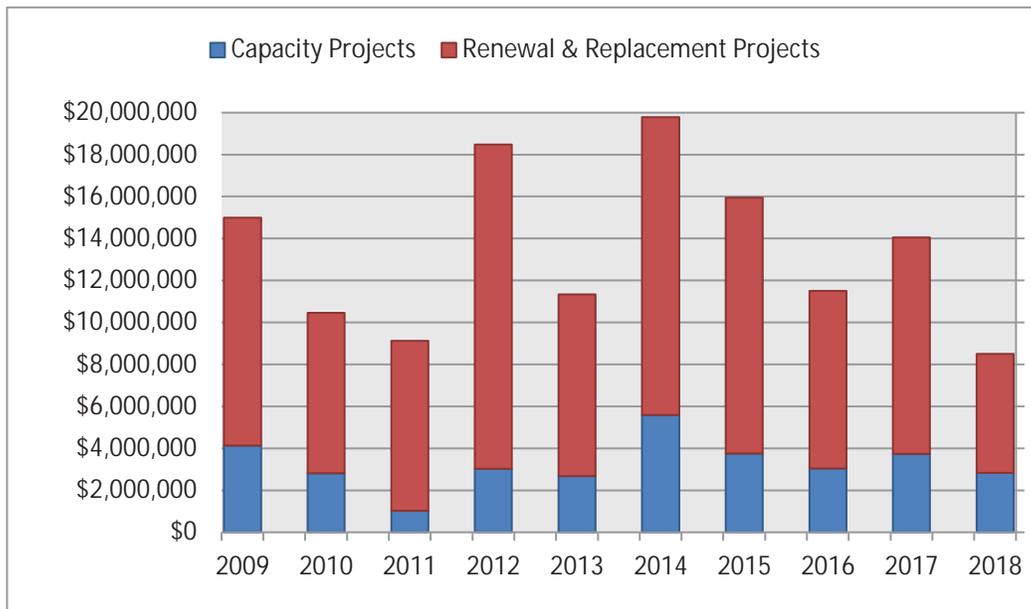
Operating expenses are the day-to-day expenses to run the District, including labor, benefits, chemicals, utilities, parts and materials, and other supplies. Depreciation, a non-cash operating expense, is not included here. Capital expenditures are not included in operating expenses.

General & Administration includes Business Services, Information System Renewal and Replacement, and retiree medical benefits.

# UNION SANITARY DISTRICT

## Capital Expenditures

<u>Fiscal Year</u>	<u>Capacity Projects</u>	<u>Renewal &amp; Replacement Projects</u>	<u>Total Capital Expenditures</u>
2018	\$2,828,376	\$5,666,366	\$8,494,742 *
2017	3,734,780	10,310,989	14,045,769
2016	3,037,012	8,466,899	11,503,911
2015	3,755,472	12,194,927	15,950,399
2014	5,592,023	14,195,068	19,787,091
2013	2,673,173	8,663,485	11,336,658
2012	3,032,556	15,453,790	18,486,346
2011	1,030,689	8,099,110	9,129,799
2010	2,809,723	7,641,018	10,450,741
2009	4,134,515	10,861,404	14,995,919



Capacity projects provide new or expanded facilities (equipment, processes, buildings, pipelines, etc.) to accommodate increased wastewater flows or to provide reliability in the collection, treatment and disposal systems.

Structural renewal & replacement projects provide rehabilitation, replacement, or upgrade of existing facilities to prolong the useful life of the assets and to maintain the current service level of the facilities.

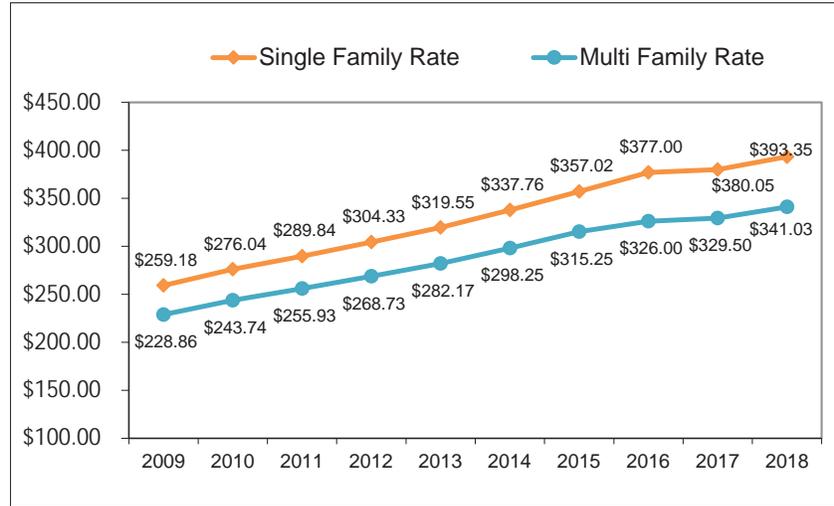
\*Does not include Self Generation Incentive Program (SGIP) credit of \$302,970 for the Co-generation project.

UNION SANITARY DISTRICT

**Current and Historical Fees**  
As of June 30, 2018  
Last Ten Years

**Sewer Service Charge Rates**

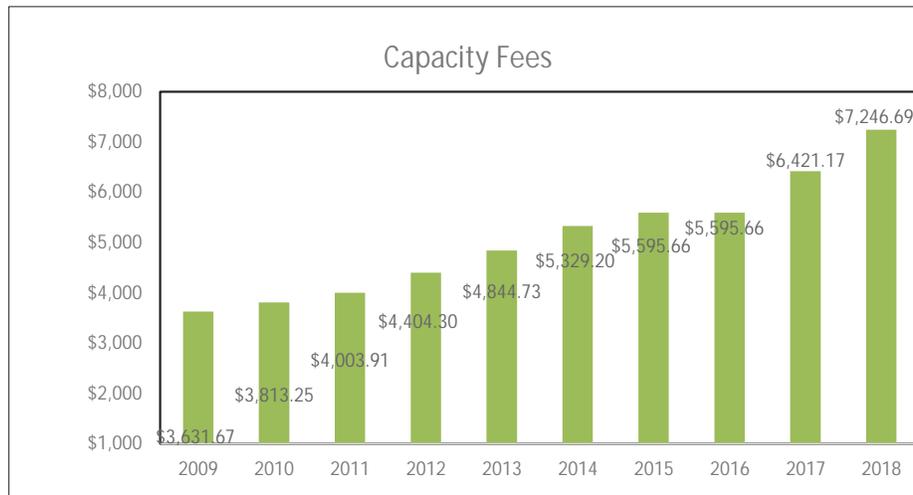
	Single Family Rate	Multi - Family Rate	Single Family Rate Percentage Change
2018	\$393.35	\$341.03	3.5%
2017	380.05	329.50	1.0%
2016	377.00	326.00	5.6%
2015	357.02	315.25	5.7%
2014	337.76	298.25	5.7%
2013	319.55	282.17	5.0%
2012	304.33	268.73	5.0%
2011	289.84	255.93	5.0%
2010	276.04	243.74	6.5%
2009	259.18	228.86	6.5%



The fees above are for residential units. A property with multiple housing units such as an apartment complex is charged \$341.03 for each dwelling unit on the property. Fees for commercial and industrial customers are based on the volume and strength of the wastewater being treated.

**Capacity Fee Rates**

		Percentage Change
2018	\$7,246.69	12.9%
2017	6,421.17	14.8%
2016	5,595.66	0.0%
2015	5,595.66	5.0%
2014	5,329.20	10.0%
2013	4,844.73	10.0%
2012	4,404.30	10.0%
2011	4,003.91	5.0%
2010	3,813.25	5.0%
2009	3,631.67	5.0%



The capacity fees shown are per dwelling unit. Other categories such as restaurants, warehouses, and mixed-use commercial facilities are based on square footage and other factors as per the Capacity Fee Ordinance.

**UNION SANITARY DISTRICT**  
**Ten Principal Industrial Rate Payers by Levy**  
**June 30, 2018**

Rate Payer	2017-18			Rate Payer	2016-17			Rate Payer	2015-16		
	Total Annual Billing	Rank	% of Total Annual Billings		Total Annual Billing	Rank	% of Total Annual Billings		Total Annual Billing	Rank	% of Total Annual Billings
Tesla	\$817,848		1.51%	Tesla	\$1,141,868		2.18%	Tesla	\$469,466	1	0.94%
Western Digital	141,806		0.26%	Washington Hospital	206,132		0.39%	Western Digital	218,616	2	0.44%
Solar City	172,276		0.32%	Western Digital	176,435		0.34%	Seagate Technology #3	152,100	3	0.30%
US Pipe	135,774		0.25%	Ranch 99/Warm Springs Shoppin	161,772		0.31%	Washington Hospital	147,910	4	0.30%
Seagate Magnetics	156,718		0.29%	Marriott Hotel	142,229		0.27%	U S Pipe	123,218	5	0.25%
Lam Research	122,934		0.23%	Ranch 99/Newark	133,807		0.26%	Marriott Hotel	119,716	6	0.24%
Washington Hospital	173,057		0.32%	U S Pipe	130,685		0.25%	Kaiser Hospital	118,369	7	0.24%
Kaiser Hospital	106,337		0.20%	Kaiser Hospital	125,907		0.24%	Ranch 99/Warm Springs Shc	115,458	8	0.23%
Boehringer Ingeheim	87,678		0.16%	Gateway Plaza	124,269		0.24%	Pacific Commons (Area 4-As	112,498	9	0.22%
Seagate Technology #3	69,384		0.13%	Pacific Commons (Area 4-Asian F	119,920		0.23%	Pacific Commons (Kohls/Old	108,358	10	0.22%
Total annual billing largest ten:	<u>\$1,983,813</u>		<u>3.66%</u>	Total annual billing largest ten:	<u>\$2,463,022</u>		<u>4.70%</u>	Total annual billing largest ten:	<u>\$1,685,708</u>		<u>3.36%</u>
Total ALL annual billings	<u>\$54,260,096</u>			Total ALL annual billings	<u>\$52,384,709</u>			Total ALL annual billings	<u>\$50,112,564</u>		

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Rate Payer	2014-15			Rate Payer	2013-14			Rate Payer	2012-13		
	Total Annual Billing	Rank	% of Total Annual Billings		Total Annual Billing	Rank	% of Total Annual Billings		Total Annual Billing	Rank	% of Total Annual Billings
Tesla	\$324,934	1	0.67%	Western Digital	\$260,023	1	0.58%	Western Digital	\$216,919	1	0.51%
Western Digital	235,844	2	0.49%	Washington Hospital	148,743	2	0.33%	Seagate Technology	114,131	2	0.27%
Washington Hospital	153,645	3	0.32%	Seagate Technology	140,016	3	0.31%	Washington Hospital	105,407	3	0.25%
Seagate Technology	116,332	4	0.24%	Tesla	137,788	4	0.31%	Pacific Commons (Kohls/Old	95,188	4	0.22%
Lido Faire Shopping Center	114,536	5	0.24%	Ranch 99 Warm Springs Shoppi	112,329	5	0.25%	Ranch 99 Warm Springs Sh	90,954	5	0.21%
Pacific Commons (Kohls/Old Navy	113,472	6	0.23%	Gateway Plaza	101,416	6	0.22%	The Benton in Fremont	90,859	6	0.21%
Pacific Commons (Area 4-Asian P	108,292	7	0.22%	Kaiser Hospital	99,174	7	0.22%	U S Pipe	90,780	7	0.21%
Ranch 99/Warm Springs Shopping	108,163	8	0.22%	Pacific Commons (Area 4)	99,159	8	0.22%	Solyndra	89,164	8	0.21%
Full Bloom	105,805	9	0.22%	The Benton in Fremont	96,037	9	0.21%	Lam Research	88,904	9	0.21%
Kaiser Hospital	102,771	10	0.21%	Pacific Commons (Kohls/Old Nav	90,880	10	0.20%	Kaiser Hospital	83,879	10	0.20%
Total annual billing largest ten:	<u>\$1,483,794</u>		<u>3.07%</u>	Total annual billing largest ten:	<u>\$1,285,565</u>		<u>2.85%</u>	Total annual billing largest ten:	<u>\$1,066,186</u>		<u>2.52%</u>
Total ALL annual billings	<u>\$48,379,254</u>			Total ALL annual billings	<u>\$45,139,420</u>			Total ALL annual billings	<u>\$42,339,311</u>		

**UNION SANITARY DISTRICT**  
 Ten Principal Industrial Rate Payers by Levy (continued)  
 June 30, 2018

Rate Payer	2011-12			Rate Payer	2010-11			Rate Payer	2009-10		
	Total Annual Billing	Rank	% of Total Annual Billings		Total Annual Billing	Rank	% of Total Annual Billings		Total Annual Billing	Rank	% of Total Annual Billings
Western Digital	\$269,619	1	0.66%	NUMMI	\$391,105	1	0.96%	NUMMI	\$549,041	1	1.48%
Solyndra	210,366	2	0.52%	Western Digital	215,190	2	0.53%	Western Digital	227,410	2	0.61%
NUMMI/Tesla	148,978	3	0.37%	Washington Hospital	136,804	3	0.34%	Evergreen Oil	136,078	3	0.37%
Evergreen Oil	133,925	4	0.33%	Evergreen Oil	124,684	4	0.31%	Washington Hospital	128,056	4	0.34%
Washington Hospital	112,361	5	0.28%	Solyndra	120,712	5	0.30%	Full Bloom	122,577	5	0.33%
Caravan Trading Co. & Bakery	103,048	6	0.25%	Full Bloom	109,681	6	0.27%	The Benton in Fremont	78,484	6	0.21%
The Benton in Fremont	86,531	7	0.21%	The Benton in Fremont	82,409	7	0.20%	The Tropics Trailer Park	77,194	7	0.21%
Kaiser Hospital	84,813	8	0.21%	Seagate Technology	82,333	8	0.20%	Solyndra	73,694	8	0.20%
Gateway Plaza	81,681	9	0.20%	Kaiser Hospital	78,993	9	0.19%	Lam Research	73,316	9	0.20%
U S Pipe	76,091	10	0.19%	Amgen	75,741	10	0.19%	Union Square	71,960	10	0.19%
Total annual billing largest ten:	<u>\$1,307,413</u>		<u>3.22%</u>	Total annual billing largest ten:	<u>\$1,417,652</u>		<u>3.49%</u>	Total annual billing largest ten:	<u>\$1,537,810</u>		<u>4.13%</u>
Total ALL annual billings	<u>\$40,630,578</u>			Total ALL annual billings	<u>\$38,486,824</u>			Total ALL annual billings	<u>\$37,217,073</u>		

09

Rate Payer	2008-09		
	Total Annual Billing	Rank	% of Total Annual Billings
NUMMI	\$525,177	1	1.41%
Western Digital	273,113	2	0.73%
Washington Hospital	146,515	3	0.39%
Evergreen Oil	136,727	4	0.37%
Hilton Hotel	77,798	5	0.21%
Full Bloom	75,086	6	0.20%
The Benton in Fremont	73,693	7	0.20%
Union Square	73,546	8	0.20%
The Tropics Trailer Park	72,481	9	0.19%
Kaiser Hospital	67,334	10	0.18%
Total annual billing largest ten:	<u>\$1,521,470</u>		<u>4.09%</u>
Total ALL annual billings	<u>\$35,103,885</u>		

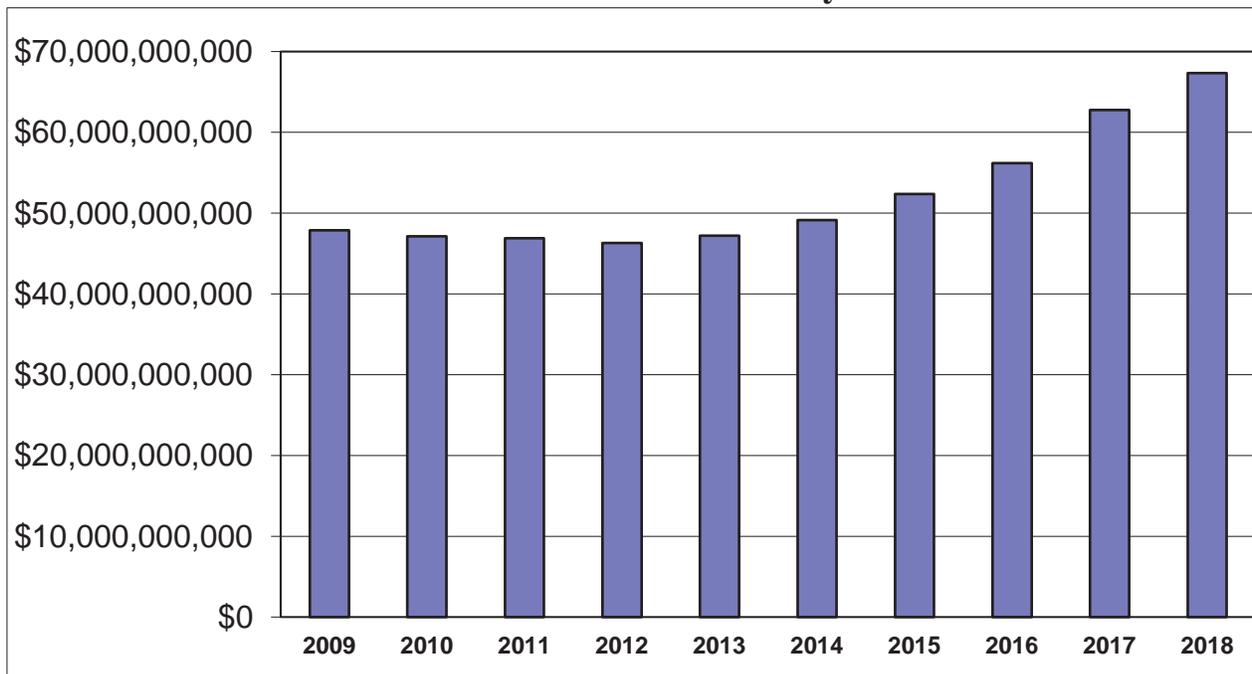
## UNION SANITARY DISTRICT

### Fiscal Year Assessed Valuation for All Properties in the Tri-City Area

Valuation of taxable property within Union Sanitary District

Fiscal Year	Assessed Values	% Change
2018	\$67,322,355,237	7.29%
2017	62,748,855,394	11.69%
2016	56,180,082,061	7.25%
2015	52,380,183,178	6.64%
2014	49,120,298,326	4.06%
2013	47,205,182,529	1.95%
2012	46,301,581,317	-1.22%
2011	46,871,083,762	-0.54%
2010	47,125,012,456	-1.57%
2009	47,878,943,360	4.55%

**Assessed Valuation for Tri-City Area**



Includes property in Fremont, Newark, and Union City.

**UNION SANITARY DISTRICT**

Ratios of Outstanding Debt by Type  
Last Ten Fiscal Years

Fiscal Year	Use Permit (1)	State Revolving Fund Loans	Principal Total	# of Parcels	Total Debt/ Parcel
2018	\$0	\$41,925,514	\$41,925,514	97,183	\$431
2017	0	44,272,413	44,272,413	95,997	461
2016	0	43,070,909	43,070,909	95,254	452
2015	0	41,861,476	41,861,476	94,768	442
2014	0	39,488,115	39,488,115	94,877	416
2013	0	40,648,328	40,648,328	94,640	430
2012	0	39,630,289	39,630,289	94,351	420
2011	471,698	31,985,449	32,457,147	94,231	344
2010	916,696	33,594,457	34,511,153	93,962	367
2009	1,336,506	29,499,150	30,835,656	93,666	329

(1) Union City Use Permit to increase capacity to maximum of 38 mg/d

## UNION SANITARY DISTRICT

### Pledged Revenue Coverage Last Ten Fiscal Years

Fiscal Year	Gross Revenues <sup>(1)</sup>	Operating Expenses <sup>(2)</sup>	Net Revenue Available for Debt Service	Debt Service Requirements	Debt Coverage % <sup>(3)</sup>
2018	\$80,216,769	\$40,442,197	\$39,774,572	\$3,902,080	1019%
2017	67,617,052	35,910,541	31,706,511	3,127,110	1014%
2016	59,634,122	33,609,699	26,024,423	3,127,110	832%
2015	54,941,712	32,630,756	22,310,956	3,127,110	713%
2014	50,004,485	32,914,966	17,089,519	4,086,647	418%
2013	46,744,639	34,154,742	12,589,897	4,429,320	284%
2012	44,754,760	29,919,730	14,835,030	4,429,320	335%
2011	43,131,063	30,449,295	12,681,768	3,584,000	354%
2010	41,001,643	28,656,785	12,344,858	3,476,933	355%
2009	39,670,995	26,797,875	12,873,120	3,368,548	382%

(1) Includes sewer service charges, connection fees, other operating revenues, and interest.

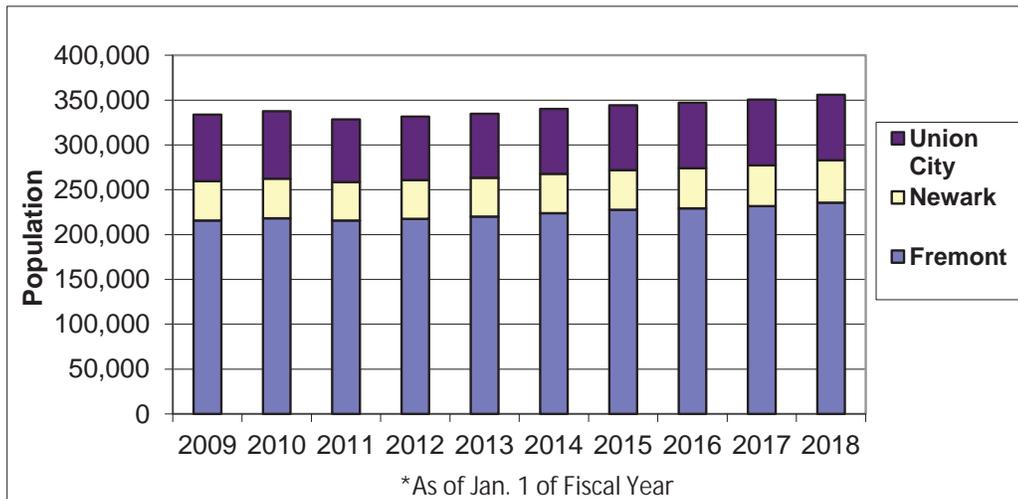
(2) Excludes depreciation; operating expenses do not include capital project expenditures.

(3) According to the District's Debt Management Policy, the targeted minimum debt service coverage ratio is 130%, which is higher than the standard 120% typically used to secure revenue bonds.

## UNION SANITARY DISTRICT

### Demographics Population of Service Area Served\*

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fremont	215,636	218,128	215,711	217,700	219,926	223,972	227,582	229,324	231,664	235,439
Newark	44,035	44,380	42,764	43,041	43,342	43,856	44,284	44,733	45,422	47,467
Union City	73,977	75,054	69,850	70,646	71,329	72,155	72,412	72,952	73,452	72,991
<b>Total</b>	<b>333,648</b>	<b>337,562</b>	<b>328,325</b>	<b>331,387</b>	<b>334,597</b>	<b>339,983</b>	<b>344,278</b>	<b>347,009</b>	<b>350,538</b>	<b>355,897</b>
Total % Change	0.87%	1.17%	-2.74%	0.93%	0.97%	1.61%	1.26%	0.79%	1.02%	1.53%



## UNION SANITARY DISTRICT

### Demographics Per Capita Income and Unemployment Rate (Calendar Year)

	Per Capita Income	Unemployment Rate
2017 Fremont	\$46,899	3.0%
Newark	N/A	3.6%
Union City	\$68,519	3.4%
2016 Fremont	\$46,899	3.3%
Newark	\$31,358	3.6%
Union City	\$65,884	4.3%
2015 Fremont	\$43,563	3.7%
Newark	\$31,043	4.1%
Union City	\$62,926	4.4%
2014 Fremont	\$40,562	4.5%
Newark	\$30,572	5.0%
Union City	\$58,175	5.9%
2013 Fremont	\$43,504	5.7%
Newark	\$29,390	5.3%
Union City	\$56,365	7.4%
2012 Fremont	\$38,095	6.9%
Newark	\$28,683	6.5%
Union City	\$55,224	9.0%
2011 Fremont	\$37,261	8.0%
Newark	\$28,466	9.7%
Union City	\$51,239	10.3%

County	Income Category	Number of Persons in Household							
		1	2	3	4	5	6	7	8
Alameda County	Extremely Low	24400	27900	31400	34850	37650	40450	43250	46050
4-Person	Very Low Income	40700	46500	52300	58100	62750	67400	72050	76700
Area Median Income:	Low Income	62750	71700	80650	89600	96800	103950	111150	118300
\$104,400	Median Income	73100	83500	93950	104400	112750	121100	129450	137800
	Moderate Income	87700	100250	112750	125300	135300	145350	155350	165400

Sources: CAFR Reports - Fremont, Newark, Union City; Employment Development Department State of California Department of Housing and Community Development ([www.hcd.ca.gov](http://www.hcd.ca.gov)).

**UNION SANITARY DISTRICT**

Demographics  
Major Employers in District Service Area

Employer Name	Type of Business	Percent of Total Employees as of fiscal year ended June 30,*										
		2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	
<b>Fremont</b>												
Tesla	Auto Manufacturer	N/A	3.12%	3.12%	2.68%	2.75%	2.81%	1.45%	N/A	N/A	N/A	
Fremont Unified School District	Education	N/A	2.61%	2.47%	2.38%	2.75%	2.81%	2.90%	3.27%	3.02%	1.52%	
Washington Hospital	Healthcare	N/A	2.68%	2.68%	2.68%	2.75%	1.70%	1.76%	1.98%	1.81%	2.18%	
Western Digital	Hard Drives and Electronics	N/A	2.68%	2.68%	2.68%	2.75%	1.22%	1.26%	1.20%	1.81%	0.91%	
Lam Research	Technology	N/A	2.68%	2.68%	2.68%	2.75%	1.41%	1.45%	1.00%	0.96%	0.84%	
<b>Newark</b>												
Newark Unified School District	Education	N/A	4.00%	4.20%	3.10%	3.20%	3.30%	3.40%	3.40%	3.40%	3.40%	
Logitech	Computer Accessories	N/A	2.70%	3.00%	3.00%	3.10%	3.20%	3.00%	N/A	N/A	N/A	
Risk Management Solutions	Catastrophe Risk Management	N/A	1.20%	1.40%	1.20%	1.20%	1.30%	1.30%	1.30%	1.30%	1.30%	
VM Services Inc	Technology	N/A	1.10%	1.00%	N/A							
Amazon Fulfillment Center	Fulfillment and Warehousing	N/A	1.10%	1.00%	N/A							
<b>Union City</b>												
New Haven Unified School District	Education	N/A	3.30%	3.10%	3.01%	3.01%	3.07%	3.22%	3.69%	3.76%	3.70%	
Southern Glazer's Wine & Spirits	Beverages	N/A	2.06%	3.67%	3.44%	3.44%	3.54%	3.71%	1.13%	1.16%	2.32%	
Masonic Home for Adults	Continuing Care Retirement Community	N/A	1.26%	N/A	0.94%							
Abaxis, Inc.	Biotech	N/A	1.10%	1.20%	1.11%	1.11%	1.14%	1.19%	N/A	N/A	N/A	
Wal Mart	Retailer	N/A	1.10%	1.20%	2.34%	2.34%	2.40%	2.52%	1.62%	1.65%	1.86%	

\* Some employers report as of December 31.

N/A = More statistics will be added as the data becomes available.

**UNION SANITARY DISTRICT**

Full-time Equivalent District Employees by Function/Program  
Last Ten Fiscal Years

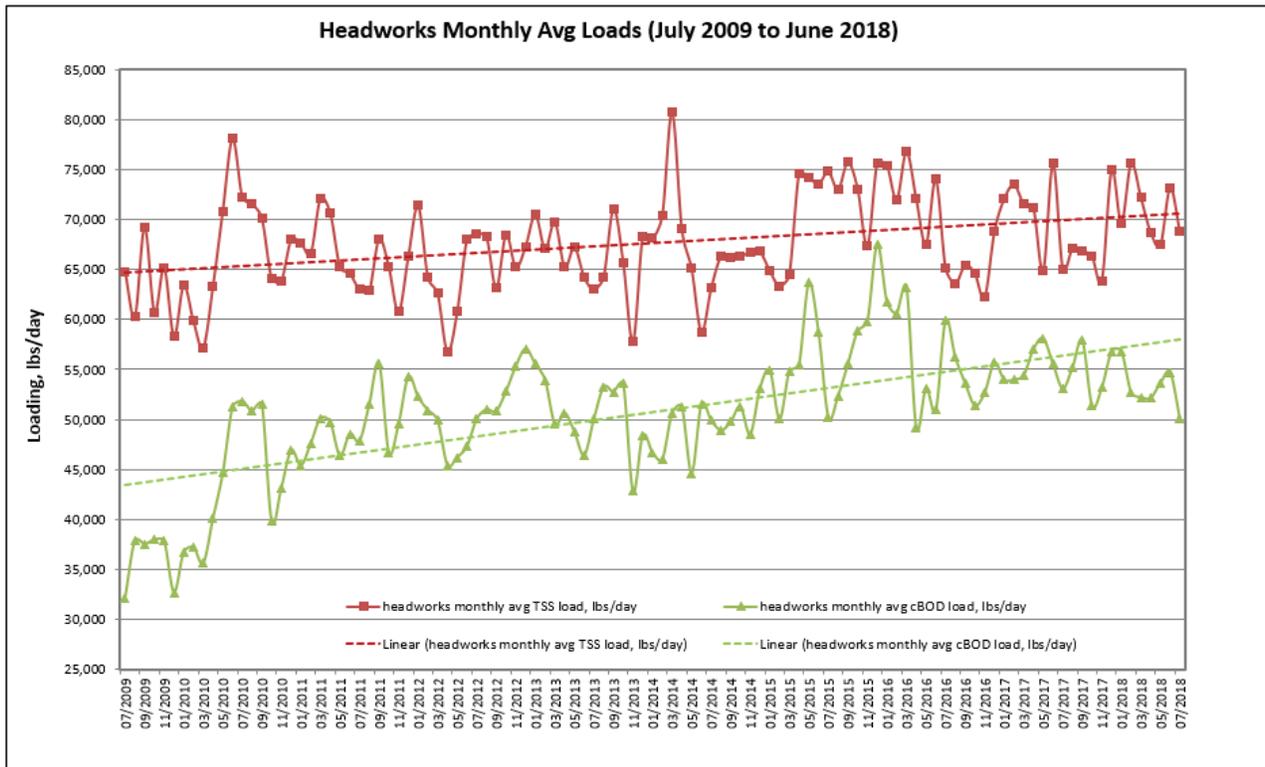
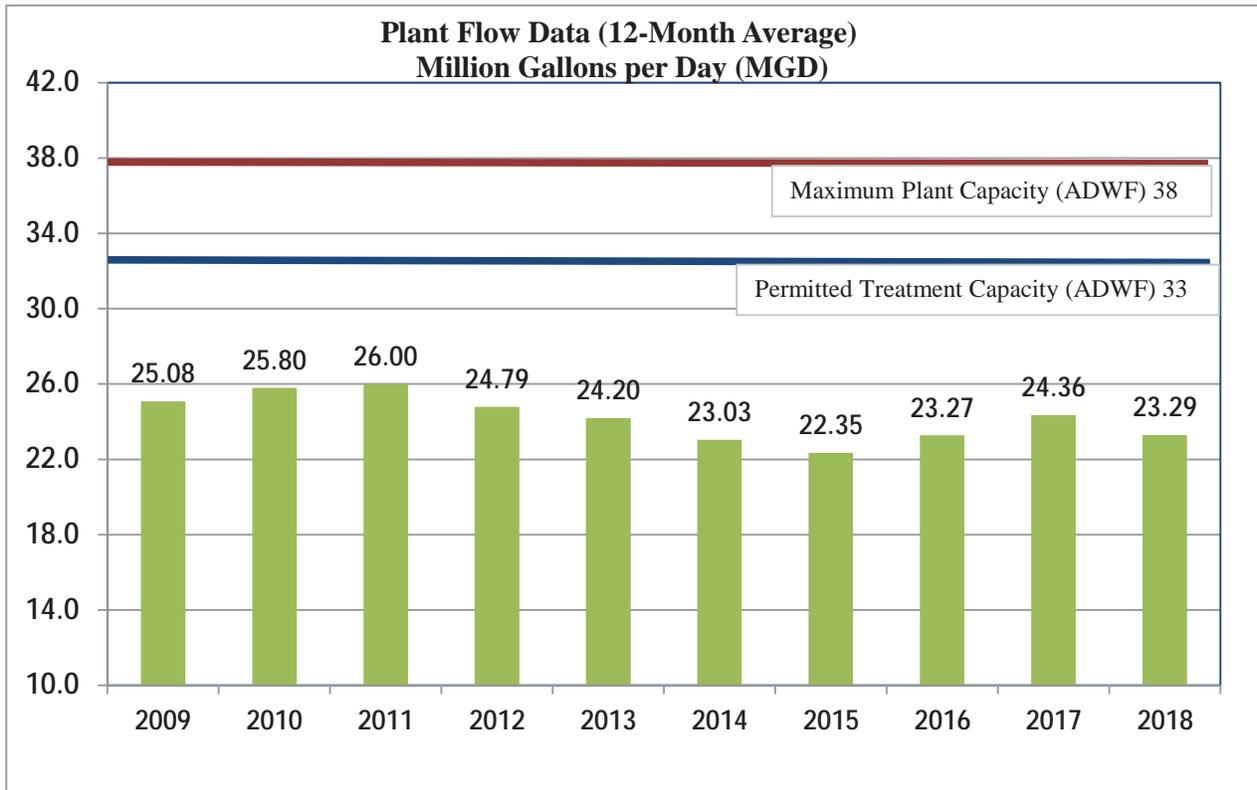
Function/Program	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
System operations and maintenance (CS Support, FMC, T&D, Warehouse)	55.45	52.45	53.45	53.45	50.45	51.45	13.45	11.45	8.45	6.00
Engineering and construction (CIP)	8.00	9.00	10.00	8.00	8.00	7.00	8.00	8.00	6.00	6.00
Collections System Maintenance (CS)	25.00	25.00	25.00	23.00	23.00	24.00	22.00	22.00	22.00	22.00
Office of the General Manager (GM)	2.00	2.00	2.00	3.00	1.00	2.00	3.00	2.00	2.00	2.00
Finance (FIST)	5.00	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Information systems (IT)	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.00	5.00	5.00
Administration department (Adm Specialist, MMT, non-HR OST)	13.00	13.00	14.00	13.00	14.00	15.00	14.00	16.00	15.00	15.50
Customer and community services (Rest of TS)	21.00	20.00	20.00	18.00	19.00	19.00	19.00	19.00	19.00	21.00
Human resources (HR)	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>Total # of Employees</b>	<b>136.45</b>	<b>131.45</b>	<b>136.45</b>	<b>131.45</b>	<b>128.45</b>	<b>131.45</b>	<b>92.45</b>	<b>90.45</b>	<b>85.45</b>	<b>85.50</b>
Average years of service of employees as of 6/30/18:	10.15	10.60	10.54	11.25	11.97	11.70	17.28	17.01	17.23	16.35

CIP = Capital Improvements Projects Team  
 FIST = Finance & Internal Support Team  
 FMC = Fabrication, Maintenance and Construction  
 MMT = Materials Management Team  
 OST = Organizational Support Team  
 T&D = Treatment & Disposal Work Group  
 TS = Technical Services Work Group

# UNION SANITARY DISTRICT

## Operating Indicators by Function/Program

### Average Daily Flow



Source: USD Treatment and Disposal Work Group

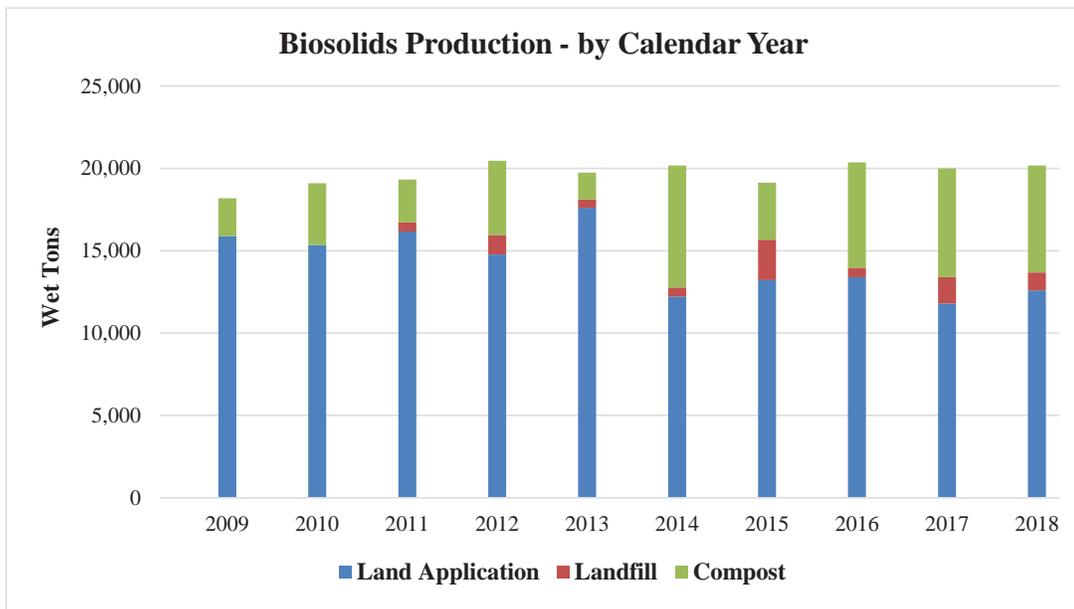
**UNION SANITARY DISTRICT**

Operating Indicators - Biosolids  
Last Ten Calendar Years

**Function/Program**

**Biosolids**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Land Application	15,891	15,348	16,160	14,770	17,597	12,212	13,212	13,395	11,784	12,590
Landfill	0	0	571	1,187	501	545	2,450	563	1,624	1,094
Compost	2,291	3,751	2,585	4,501	1,642	7,414	3,470	6,399	6,584	6,491
<b>Total (in Wet Tons)</b>	<b>18,182</b>	<b>19,099</b>	<b>19,315</b>	<b>20,458</b>	<b>19,741</b>	<b>20,171</b>	<b>19,132</b>	<b>20,357</b>	<b>19,992</b>	<b>20,175</b>



## UNION SANITARY DISTRICT

### Miscellaneous Statistics

6/30/2018

Governing Body:	Elected 5-Member Board of Directors Fremont - 3 Members Newark - 1 Member Union City - 1 Member
Governmental Structure:	Established in 1918 and reorganized in 1923 under the Sanitary District Act
Staff:	136.45 full-time equivalent employees
CEO:	General Manager
CFO:	Business Services Manager (Vacant)
Authority:	California Health and Safety Code Section 4700 et. Seq.
Services:	Wastewater collection, treatment and disposal
Service Area:	60.2 square miles (Annexed areas - Fremont, Newark and Union City)
Total Population Served:	355,897
Number of Parcels	97,183 (87,097 Residential; 3,121 Non-Residential; 6,965 Other (vacant land))
Operations:	Total miles of pipeline - 817, including the force main and all gravity sewers (including trunk mains) Number of pumping stations - 7 Larger: Irvington, Newark, Alvarado Smaller: Fremont, Boyce, Paseo Padre, Cherry Street
Permitted Plant Treatment Capacity (ADWF)	33 million gallons per day (mgd)
Type of Treatment:	Secondary
Sewer Service Charge:	\$393.35 annually per single family residential dwelling unit

Source: USD Treatment Disposal, Collections Work Groups, CA Dept. of Finance

November 2, 2018

To the Board of Directors  
Union Sanitary District  
Union City, California

We have audited the financial statements of the Union Sanitary District (the "District") for the year ended June 30, 2018. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards, *Government Auditing Standards* and the Uniform Guidance, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated June 12, 2018. Professional standards also require that we communicate to you the following information related to our audit.

### **Significant Audit Findings**

#### ***Qualitative Aspects of Accounting Practices***

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the District are described in the notes to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during fiscal year 2017-2018. We noted no transactions entered into by the District during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the District's financial statements were:

Management's estimate of its net pension liability is based on actuarial valuation specialist assumptions. We evaluated the key factors and assumptions used to develop the proportionate share of the net pension liability in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of its Other Post-Employment Benefit Annual Required Contribution is based on actuarial valuation specialist assumptions. We evaluated the key factors and assumptions used to develop the Other Post-Employment Benefit Annual Required Contribution in determining that it is reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The financial statement disclosures are neutral, consistent, and clear.

#### ***Difficulties Encountered in Performing the Audit***

We encountered no significant difficulties in dealing with management in performing and completing our audit.



To the Board of Directors  
Union Sanitary District  
Union City, California

### ***Corrected and Uncorrected Misstatements***

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. The following instance should be communicated:

Certain costs incurred in prior years were capitalized, however subsequently determined they should not be capitalized and rather expensed in period incurred. An adjustment was made during the fiscal year to correct beginning balances related to these items and are described in the financial statements in footnote 11.

### ***Disagreements with Management***

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

### ***Management Representations***

We have requested certain representations from management that are included in the management representation letter dated November 2, 2018.

### ***Management Consultations with Other Independent Accountants***

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to District's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

### ***Other Audit Findings or Issues***

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the District's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

### **Other Matters**

We applied certain limited procedures to management's discussion and analysis, schedule of changes in net pension liability and related ratios, schedule of plan contributions, schedule of changes in net OPEB liability and related ratios and schedule of contributions which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.



To the Board of Directors  
Union Sanitary District  
Union City, California

We were engaged to report on the schedule of expenses before depreciation and schedule of insurance coverage, which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

#### New Accounting Standards

The following new Governmental Accounting Standards Board (GASB) pronouncements were effective for fiscal year 2017-2018 audit:

GASB Statement No. 75, *Accounting and Financial Reporting for Post-Employment Benefits Other Than Pensions.*

GASB Statement No. 81, *Irrevocable Split Interest Agreements.*

GASB Statement No. 85, *Omnibus 2017.*

GASB Statement No. 86, *Certain Debt Extinguishment Issues.*

The following Governmental Accounting Standards Board (GASB) pronouncements are effective in the following fiscal year audit and should be reviewed for proper implementation by management:

Fiscal year 2018-2019

GASB Statement No. 83, *Certain Assets Retirement Obligations.*

GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowing and Direct Placements.*

Fiscal year 2019-2020

GASB Statement No. 84, *Fiduciary Activities.*

Fiscal year 2020-2021

GASB Statement No. 87, *Leases.*

#### Restriction on Use

This information is intended solely for the use of the Board of Directors and management of the District and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,

A handwritten signature in black ink that reads "Lance, Soll &amp; Luyhard, LLP". The signature is written in a cursive, flowing style.

Brea, California



INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL  
OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE  
WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Directors  
Union Sanitary District  
Union City, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Union Sanitary District (the "District"), as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Districts basic financial statements, and have issued our report thereon dated November 2, 2018.

#### **Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

#### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.





To the Board of Directors  
Union Sanitary District  
Union City, California

**Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Lance, Soll & Lingham, LLP*

Brea, California  
November 2, 2018



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

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

Karen W. Murphy  
*Attorney*

**DATE:** October 29, 2018

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

**FROM:** Paul R. Eldredge, General Manager/District Engineer  
Sami E. Ghossain, Manager of Technical Services  
Rollie Arbolante, Customer Service Team Coach

**SUBJECT:** Agenda Item No. 11 - Meeting of November 12, 2018  
**Consider Approving a Capacity Charge Refund for the Palmdale Estates - Phase 2 Development Located Near Mission Boulevard and Washington Boulevard in the City of Fremont**

### **Recommendation**

Staff recommends the Board consider approving a capacity charge refund in the amount of \$268,246.18 to Robson Homes, LLC. for the Palmdale Estates - Phase 2 Development located near Mission Boulevard and Washington Boulevard in the City of Fremont

### **Background**

Robson Homes, LLC owns the Palmdale Estates development located near the intersection of Mission Blvd. and Washington Blvd. in the City of Fremont. See attached location map. Phase 2 of the development includes the construction of 46 new single-family dwelling units and 18 multi-family dwelling units on the property previously owned by the Sisters of the Holy Family. The property had a main building, known as the Motherhouse, that provided housing and offices for Catholic nuns.

When Phase 2 was permitted by USD, Robson Homes requested a capacity charge credit for the Motherhouse, as it was scheduled to be demolished. However, the timing was such that the Motherhouse would not have been demolished until several months after sewer work would begin. Therefore, Robson Homes was required to pay capacity charges without receiving a capacity credit for the Motherhouse.

The Motherhouse has since been demolished and Robson Homes has requested the capacity credit. Robson Homes and District staff have agreed on the amount of the capacity credit, which is based on the FY17 rates; the rate that Phase 2 capacity charges were paid at.

<b>Category</b>	<b>Charge/unit</b>	<b>No. of Units</b>	<b>Capacity Credit</b>
Boarding Establishment (per capita design tenant)	\$2,141.41/unit	81 units	\$173,454.21
Commercial/Industrial/Office (per square foot of building floor area)	\$2.99/s.f.	31,703 s.f.	\$94,791.97
		<b>Total Credit</b>	<b>\$268,246.18</b>

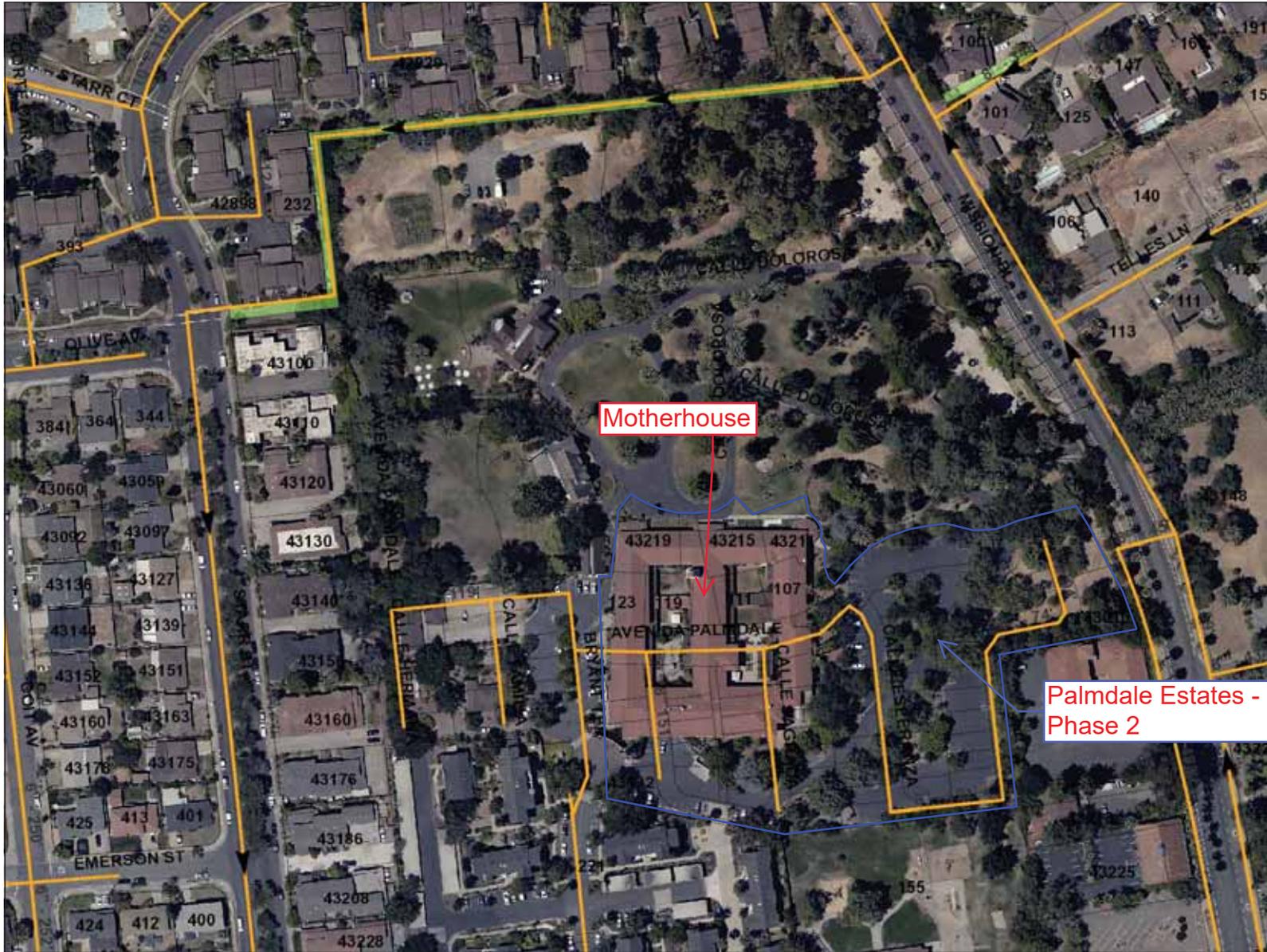
District staff recommends the Board approve a capacity charge refund in the amount of \$268,246.18 to Robson Homes, LLC.

PRE/SEG/RA;dl

Attachment: Location Map



# Palmdale Estates - Phase 2 Location Map



### Legend

- Sewer Sheet Pile History
- Sewer Mains**
  - <all other values>
  - EBDA outfall
  - Forcemain
  - Gravity main
  - Overflow main
  - Siphons
  - Trunk Main
- Railroad / BART**
  - <all other values>
  - BART
- Public Right of Way
- Private Right of Way
- Usage Area
- Sewer Easements
- Parcels**
  - <all other values>
  - Alameda Cnty Flood Cntrl
  - Bodies of Water

182.1 0 91.06 182.1 Feet



1: 2,185



Printed: 10/22/2018 11:01:23 AM

### For USD use only

The information on this map is provided by Union Sanitary District (USD) for internal use only. Such information is derived from multiple sources which may not be current, be outside the control of USD, and may be of indeterminate accuracy. The information provided hereon may be inaccurate or out of date and any person or entity who relies on said information for any purpose whatsoever does so solely at their own risk.

### Notes



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

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

Karen W. Murphy  
*Attorney*

**DATE:** November 6, 2018

**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. 12 - Meeting of November 12, 2018  
**Authorize the General Manager to Execute an Agreement and Task Order No. 1 with Carollo Engineers for the WAS Thickener Replacement Project**

### **Recommendation**

Staff recommends the Board authorize the General Manager to execute an Agreement and Task Order No. 1 with Carollo Engineers in the amount of \$284,233 for the WAS Thickener Replacement Project (Project).

Funds for the Project have been budgeted in the Renewal and Replacement Fund.

### **Background**

The Union Sanitary District's (District) Alvarado Wastewater Treatment Plant (WWTP) existing waste activated sludge (WAS) thickening system utilizes a two-step process. WAS from the secondary process is pumped to one of two existing gravity thickener tanks for both equalization and pre-thickening. Pre-thickened waste activated sludge (PWAS) from the gravity thickeners is then conveyed by gravity to the supply side of the gravity belt thickener (GBT) feed pumps located outside of the WAS Thickening Building. The GBTs produce thickened waste activated sludge (TWAS) that is approximately 5-6 percent solids before it is pumped to the anaerobic digesters.

The WAS Thickening Building was originally constructed during the 1978 Plant Construction Project. The building was initially referred to as the Sludge Dewatering Building and housed three belt presses that were later relocated to the Solids Handling Building during the 1985 Plant Expansion Project. The WAS Thickening Building was retrofitted to its present configuration (GBTs) during the 1993 Plant Upgrade Project.

Most of the equipment, instruments, and electrical components in the WAS Thickening Building are over 20 years old and are at the end of their useful lives. Accordingly, staff has been experiencing maintenance and operational challenges. The equipment has become obsolete, and the power and control systems are antiquated and need to be replaced.

### **Project Scope**

The scope of services for this project will include the following:

- Replacement of the existing GBT system.
- Improvements to the WAS, PWAS and TWAS conveyance systems.
- Improvements to the existing polymer storage, conveyance, and mixing systems.
- Improvements to the existing foul air/odor scrubbing system.
- Replacement of the existing electrical and control equipment.
- Seismic upgrades and other structural improvements to the existing building.

The attached Figure 1 includes a partial site plan of the plant showing the location of the existing WAS Thickener Building. The attached Figures 2 through 5 include photos of the existing GBTs.

### **Predesign Services**

Staff conducted a consultant selection process and invited six consultants, AECOM, Black and Veatch, Brown and Caldwell, Carollo Engineers, Hazen and Sawyer, and Woodard and Curran, to participate. AECOM and Hazen and Sawyer declined the invitation because of a lack of personnel available to work on the Project. Staff received proposals from the other four consultants on August 31, 2018, and selected Carollo Engineers due to the experience of their engineering staff, intimate knowledge of the Plant, and past experience with designing mechanical thickening projects.

The scope of services to be provided in Task Order No. 1 include the evaluation of 4 alternative thickening technologies. Some of the criteria that will be used to evaluate alternatives includes: capital and life cycle costs, footprint/layout, process and equipment reliability, ease of operation and automation, odor mitigation requirements, flexibility of equipment to adjust to variable flows and solids loads, maintenance requirements, redundancy requirements, and constructability/ sequencing requirements.

The WAS Thickener Replacement Project will also require an evaluation of the WAS conveyance, polymer dosing, odor control, and electrical/control systems. This includes the potential replacement of the various pumps, electrical and communication panels, and associated piping, valves, and instruments.

Carollo Engineers prepared a scope of services for the predesign phase of the Project and the cost of Task Order No. 1 is summarized below.

<b>Task No.</b>	<b>Task Description</b>	<b>Fee</b>
1.0	Project Management and Meetings	\$20,501
2.0	Alternative Development and Selection	\$91,604
3.0	Preliminary Design	\$143,286
4.0	CEQA – California Environmental Quality Act	\$8,275
5.0	3D Laser Scanning and Geotechnical Investigations	\$20,567
<b>Task Order Not-to-Exceed Fee (Tasks 1-5)</b>		<b>\$284,233</b>

Staff believes the total not-to-exceed fee of \$284,233 is reasonable given the effort needed to evaluate the various mechanical thickening technologies being considered to replace the existing GBT system.

Carollo Engineers will complete the predesign phase services by summer 2019. Staff anticipates final design will begin in summer 2019 and be complete in early 2020, and construction could begin by summer 2020.

Staff recommends the Board authorize the General Manager to execute an Agreement and Task Order No. 1 with Carollo Engineers in the amount of \$284,233 for the WAS Thickener Replacement Project.

PRE/SEG/RC/CB;dl

Attachment: Figure 1 – Plant Site Plan  
Figures 2 through 5 – Existing Gravity Belt Thickeners  
Agreement  
Task Order No. 1

FIGURE 1 – WAS THICKENER REPLACEMENT PROJECT



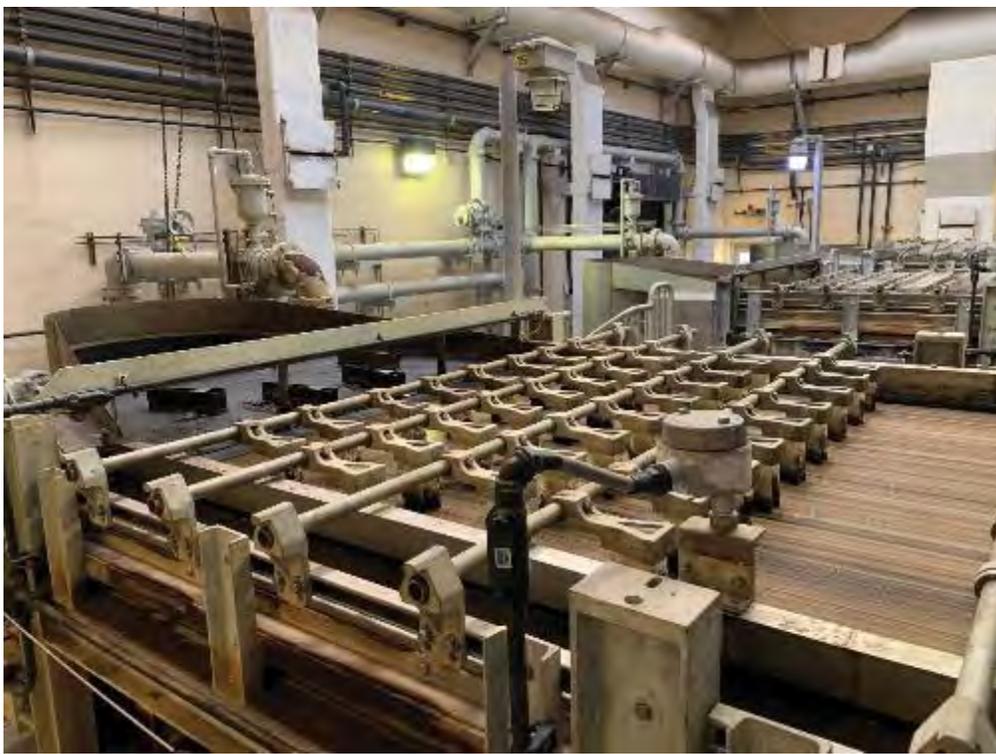


Figure 2 – Out of service gravity belt thickener (start of thickening process)



Figure 3 – Out of service gravity belt thickener (end of thickening process)



Figure 4 – In-service gravity belt thickener (start of thickening process)



Figure 5 – In-service gravity belt thickener (end of thickening process)

# WAS THICKENER REPLACEMENT PROJECT

AGREEMENT

BETWEEN

UNION SANITARY DISTRICT

AND

CAROLLO ENGINEERS, INC.

FOR

PROFESSIONAL SERVICES

THIS IS AN AGREEMENT MADE AS OF NOVEMBER \_\_\_\_, 2018, BETWEEN UNION SANITARY DISTRICT (hereinafter referred to as District), and CAROLLO ENGINEERS, INC. (hereinafter referred to as Engineer).

WITNESSETH:

WHEREAS, District intends to construct the WAS Thickener Replacement Project (hereinafter referred to as Project), and,

WHEREAS, District requires certain professional services in connection with the Project (hereinafter referred as Services); and

WHEREAS, Engineer is qualified and prepared to provide such Services;

NOW, THEREFORE, in consideration of the promises contained herein, the parties agree as follows:

## ARTICLE 1 - SERVICES TO BE PERFORMED BY ENGINEER

- 1.1 Specific Services and the associated scope of services, payment, schedule, and personnel will be defined in specific Task Order as mutually agreed by District and Engineer.
- 1.2 All Task Orders will by reference incorporate the terms and conditions of this Agreement, and become formal amendments hereto.

## ARTICLE 2 - COMPENSATION

2.1 Compensation for consulting services performed under this Agreement shall include:

- (1) Direct labor costs, multiplied by an agreed upon fixed factor (the Multiplier), to compensate for fringe benefits, indirect costs, and profit.
- (2) Non-labor direct project charge not included in the fixed factor and acceptable, without any markup.
- (3) Subconsultant costs, with a maximum markup of 5%.

Definitions are as follows:

- (a) Direct labor is salaries and wages paid to personnel for time directly chargeable to the project. Direct labor does not include the cost of Engineer's statutory and customary benefits, such as sick leave, holidays, vacations, and medical and retirement benefits nor the cost of the time of executive and administrative personnel and others whose time is not identifiable to the project.
- (b) Fringe benefits include Engineer's statutory and customary benefits, such as sick leave, holidays, vacations, medical and retirement benefits, incentive pay, tuition, and other costs classified as employee benefits.
- (c) Indirect costs are allocations of costs that are not directly chargeable to a specific engagement and are commonly referred to as Engineer's overhead. Indirect costs include provisions for such things as clerical support, office space, light and heat, insurance, statutory and customary employee benefits, and the time of executive and administrative personnel and others whose time is not identifiable to the Project or to any project costs be charged as direct labor and also appear at the same time as indirect costs, and vice versa.
- (d) The Multiplier is a multiplicative factor which is applied to direct labor costs, and compensates Engineer for fringe benefits and indirect costs (overhead) and profit.
- (e) Other non-labor direct project charges shall be included in the overhead and these charges include typical expenses as cost of transportation and subsistence, printing and reproduction,

computer time and programming costs, identifiable supplies, outside consultant's charges, subcontracts, and charges by reviewing authorities."

Alternatively, the District and the Engineer may agree to utilize the fully-encumbered hourly rates and fees for Services performed by the Engineer. These hourly rates and fees shall be based on the Engineer's rate schedule published at the time this Agreement or Task Order is executed and shall be attached to each applicable Task Order.

- 2.2 Reimbursement for mileage shall not exceed the prevailing Internal Revenue Service's standard mileage rate.
- 2.3 A *Cost Ceiling* will be established for each Task Order which is based upon estimated labor-hours and cost estimates. Costs as described above, comprising direct labor, overhead cost, and other direct costs, shall be payable up to a Cost Ceiling as specified in the Task Order. A *Maximum Fee Ceiling*, or *Task Order Firm Ceiling*, will also be established for each Task Order which includes the Cost Ceiling plus the Professional Fee.
- 2.4 Engineer shall invoice District monthly for the actual costs incurred, and a pro-rated portion of the Professional Fee for work performed during the previous month. If the Maximum Fee Ceiling is reached, the Engineer will complete the agreed-upon work for the Maximum Fee Ceiling. With District staff approval, labor hours may be reallocated within the tasks without renegotiation in such a manner so as not to exceed the Maximum Fee Ceiling.
- 2.5 The Engineer shall provide the District with a review of the budget amounts when 75 percent of the Cost Ceiling for any task has been expended. Engineer may request a revision in the Cost Ceiling for performance of this Agreement, and will relate the rationale for the revision to the specific basis of estimate as defined in the Scope of Services. Such notification will be submitted to the District at the earliest possible date. The authorized Cost Ceiling shall not be exceeded without written approval of the District.
- 2.6 The Professional Fee will not be changed except in the case of a written amendment to the Agreement which alters the Scope of Services. District and Engineer agree to negotiate an increase or decrease in Cost Ceiling and Professional Fee for any change in Scope of Services required at any time during the term of this Agreement. Engineer will not commence work on the altered Scope of Services until authorized by District.

- 2.7 Direct labor rates are subject to revision to coincide with Engineer's normal salary review schedule. Adjustments in direct labor rates shall not affect the firm ceiling without prior written authorization of the District.
- 2.8 District shall pay Engineer in accordance with each Task Order for Services.
- 2.9 Engineer shall submit monthly statements for Services rendered. District will make prompt monthly payments in response to Engineer's monthly statements.

### ARTICLE 3 - PERIOD OF SERVICE

- 3.1 Engineer's services will be performed and the specified services rendered and deliverables submitted within the time period or by the date stipulated in each Task Order.
- 3.2 Engineer's services under this Agreement will be considered complete when the services are rendered and/or final deliverable is submitted and accepted by District.
- 3.3 If any time period within or date by which any of the Engineer's services are to be completed is exceeded through no fault of Engineer, all rates, measures and amounts of compensation and the time for completion of performance shall be subject to equitable adjustment.

### ARTICLE 4 - DISTRICT'S RESPONSIBILITIES

District will do the following in a timely manner so as not to delay the services of Engineer.

- 4.1 Provide all criteria and full information as to District's requirements for the services assignment and designate in writing a person with authority to act on District's behalf on all matters concerning the Engineer's services.
- 4.2 Furnish to Engineer all existing studies, reports and other available data pertinent to the Engineer's services, obtain or authorize Engineer to obtain or provide additional reports and data as required, and furnish to Engineer services of others required for the performance of Engineer's services hereunder, and Engineer shall be entitled to use and rely upon all such information and services provided by District or others in performing Engineer's services under this Agreement.

- 4.3 Arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services hereunder.
- 4.4 Perform such other functions as are indicated in each Task Order related to duties of District.
- 4.5 Bear all costs incident to compliance with the requirements of this Section.

#### ARTICLE 5 - STANDARD OF CARE

- 5.1 Engineer shall exercise the same degree of care, skill, and diligence in the performance of the Services as is ordinarily provided by a professional Engineer under similar circumstance and Engineer shall, at no cost to District, re-perform services which fail to satisfy the foregoing standard of care.

#### ARTICLE 6 - OPINIONS OF COST AND SCHEDULE

- 6.1 Since Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over contractors', subcontractors', or vendors' methods of determining prices, or over competitive bidding or market conditions or economic conditions, Engineer's cost estimate and economic analysis shall be made on the basis of qualification and experience as a professional engineer.
- 6.2 Since Engineer has no control over the resources provided by others to meet contract schedules, Engineer's forecast schedules shall be made on the basis of qualification and experience as a professional Engineer.
- 6.3 Engineer cannot and does not guarantee that proposals, bids or actual project costs will not vary from his cost estimates or that actual schedules will not vary from his forecast schedules.

#### ARTICLE 7 - SUBCONTRACTING

- 7.1 No subcontract shall be awarded by Engineer until prior written approval is obtained from the District.

## ARTICLE 8 - ENGINEER-ASSIGNED PERSONNEL

- 8.1 Engineer shall designate in writing an individual to have immediate responsibility for the performance of the services and for all matters relating to performance under this Agreement. Key personnel to be assigned by Engineer will be stipulated in each Task Order. Substitution of any assigned person shall require the prior written approval of the District, which shall not be unreasonably withheld. If the District determines that a proposed substitution is not responsible or qualified to perform the services then, at the request of the District, Engineer shall substitute a qualified and responsible person.

## ARTICLE 9 - OWNERSHIP OF DOCUMENTS

- 9.1 All work products, drawings, data, reports, files, estimate and other such information and materials (except proprietary computer programs, including source codes purchased or developed with Engineer monies) as may be accumulated by Engineer to complete services under this Agreement shall be owned by the District.
- 9.2 Engineer shall retain custody of all project data and documents other than deliverables specified in each Task Order, but shall make access thereto available to the District at all reasonable times the District may request. District may make and retain copies for information and reference.
- 9.3 All deliverables and other information prepared by Engineer pursuant to this Agreement are instruments of service in respect to this project. They are not intended or represented to be suitable for reuse by District or others on extensions of this Project or on any other project. Any reuse without written verification or adaptation by Engineer for the specific purpose intended will be at District's sole risk and without liability or legal exposure to Engineer; and District shall indemnify and hold harmless Engineer against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from such reuse. Any such verification or adaptation will entitle Engineer to further compensation at rates to be agreed upon by District and Engineer.

## ARTICLE 10 - RECORDS OF LABOR AND COSTS

- 10.1 Engineer shall maintain for all Task Orders, records of all labor and costs used in claims for compensation under this Agreement. Records shall mean a contemporaneous record of time for personnel; a methodology and calculation of the Multiplier for fringe benefits and indirect costs; and

invoices, time sheets, or other factors used as a basis for determining other non-labor Project charges. These records must be made available to the District upon reasonable notice of no more than 48 hours during the period of the performance of this Agreement.

- 10.2 After delivery of Services (completion of Task Orders) under this Agreement, the Engineer's records of all costs used in claims for compensation under this Agreement shall be available to District's accountants and auditors for inspection and verification. These records will be maintained by Engineer and made reasonably accessible to the District for a period of three (3) years after completion of Task Orders under this Agreement.
- 10.3 Engineer agrees to cooperate and provide any and all information concerning the Project costs which are a factor in determining compensation under this Agreement as requested by the District or any public agency which has any part in providing financing for, or authority over, the Services which are provided under the Agreement.
- 10.4 Failure to provide documentation or substantiation of all Project costs used as a factor in compensation paid under Article 2 hereof will be grounds for District to refuse payment of any statement submitted by the Engineer and for a back charge for any District funds, including interest from payment; or grant, matching, or other funds from agencies assisting District in financing the Services specified in this Agreement.

## ARTICLE 11 - INSURANCE

Engineer shall provide and maintain at all times during the performance of the Agreement the following insurances:

- 11.1 Workers' Compensation and Employer's Liability Insurance for protection of Engineer's employees as required by law and as will protect Engineer from loss or damage because of personal injuries, including death to any of his employees.
- 11.2 Comprehensive Automobile Liability Insurance. Engineer agrees to carry a Comprehensive Automobile Liability Policy providing bodily injury liability. This policy shall protect Engineer against all liability arising out of the use of owned or leased automobiles both passenger and commercial. Automobiles, trucks, and other vehicles and equipment (owned, not owned, or hired, licensed or unlicensed for road use) shall be covered under this policy. Limits of liability for Comprehensive Automobile Liability Insurance shall not be less than \$1,000,000 Combined Single Limit.

- 11.3 Comprehensive General Liability Insurance as will protect Engineer and District from any and all claims for damages or personal injuries, including death, which may be suffered by persons, or for damages to or destruction to the property of others, which may arise from the Engineer's operations under this Agreement, which insurance shall name the District as additional insured. Said insurance shall provide a minimum of \$1,000,000 Combined Single Limit coverage for personal injury, bodily injury, and property damage for each occurrence and aggregate. Such insurance will insure Engineer and District from any and all claims arising from the following:
1. Personal injury;
  2. Bodily injury;
  3. Property damage;
  4. Broad form property damage;
  5. Independent contractors;
  6. Blanket contractual liability.
- 11.4 Engineer shall maintain a policy of professional liability insurance, protecting it against claims arising out of negligent acts, errors, or omissions of Engineer pursuant to this Agreement, in an amount of not less than \$1,000,000. The said policy shall cover the indemnity provisions under this Agreement.
- 11.5 Engineer agrees to maintain such insurance at Engineer's expense in full force and effect in a company or companies satisfactory to the District. All coverage shall remain in effect until completion of the Project.
- 11.6 Engineer will furnish the District with certificates of insurance and endorsements issued by Engineer's insurance carrier and countersigned by an authorized agent or representative of the insurance company. The certificates shall show that the insurance will not be cancelled without at least thirty (30) days' prior written notice to the District. The certificates for liability insurance will show that liability assumed under this Agreement is included. The endorsements will show the District as an additional insured on Engineer's insurance policies for the coverage required in Article 11 for services performed under this Agreement, except for workers' compensation and professional liability insurance.
- 11.7 Waiver of Subrogation: Engineer hereby agrees to waive subrogation which any insurer of Engineer may acquire from Engineer by virtue of the payment of any loss. Engineer agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the District for all work performed by the Engineer, its employees, agents and subconsultants.

## ARTICLE 12 - LIABILITY AND INDEMNIFICATION

- 12.1 Having considered the risks and potential liabilities that may exist during the performance of the Services, and in consideration of the promises included herein, District and Engineer agree to allocate such liabilities in accordance with this Article 12. Words and phrases used in this Article shall be interpreted in accordance with customary insurance industry usage and practice.
- 12.2 Engineer shall indemnify and save harmless the District and all of their agents, officers, and employees from and against all claims, demands, or causes of action of every name or nature to the extent caused by the negligent error, omission, or act of Engineer, its agents, servants, or employees in the performance of its services under this Agreement.
- 12.3 In the event an action for damages is filed in which negligence is alleged on the part of District and Engineer, Engineer agrees to defend District. In the event District accepts Engineer's defense, District agrees to indemnify and reimburse Engineer on a pro rata basis for all expenses of defense and any judgment or amount paid by Engineer in resolution of such claim. Such pro rata share shall be based upon a final judicial determination of negligence or, in the absence of such determination, by mutual agreement.
- 12.4 Engineer shall indemnify District against legal liability for damages arising out of claims by Engineer's employees. District shall indemnify Engineer against legal liability for damages arising out of claims by District's employees.
- 12.5 Indemnity provisions will be incorporated into all Project contractual arrangements entered into by District and will protect District and Engineer to the same extent.
- 12.6 Upon completion of all services, obligations and duties provided for in the Agreement, or in the event of termination of this Agreement for any reason, the terms and conditions of this Article shall survive.
- 12.7 To the maximum extent permitted by law, Engineer's liability for District's damage will not exceed the aggregate compensation received by Engineer under this Agreement or the maximum amount of professional

liability insurance available at the time of any settlement or judgment, which ever is greater.

### ARTICLE 13 - INDEPENDENT CONTRACTOR

Engineer undertakes performance of the Services as an independent contractor and shall be wholly responsible for the methods of performance. District will have no right to supervise the methods used, but District will have the right to observe such performance. Engineer shall work closely with District in performing Services under this Agreement.

### ARTICLE 14 - COMPLIANCE WITH LAWS

In performance of the Services, Engineer will comply with applicable regulatory requirements including federal, state, and local laws, rules, regulations, orders, codes, criteria and standards. Engineer shall procure the permits, certificates, and licenses necessary to allow Engineer to perform the Services. Engineer shall not be responsible for procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Engineer in Task Order.

### ARTICLE 15 - NONDISCLOSURE OF PROPRIETARY INFORMATION

Engineer shall consider all information provided by District and all drawings, reports, studies, design calculations, specifications, and other documents resulting from the Engineer's performance of the Services to be proprietary unless such information is available from public sources. Engineer shall not publish or disclose proprietary information for any purpose other than the performance of the Services without the prior written authorization of District or in response to legal process.

### ARTICLE 16 - TERMINATION OF CONTRACT

- 16.1 The obligation to continue Services under this Agreement may be terminated by either party upon seven days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.
- 16.2 District shall have the right to terminate this Agreement or suspend performance thereof for District's convenience upon written notice to Engineer, and Engineer shall terminate or suspend performance of Services on a schedule acceptable to District. In the event of termination or suspension for District's convenience, District will pay Engineer for all

services performed and costs incurred including termination or suspension expenses. Upon restart of a suspended project, equitable adjustment shall be made to Engineer's compensation.

#### ARTICLE 17 - UNCONTROLLABLE FORCES

17.1 Neither District nor Engineer shall be considered to be in default of this Agreement if delays in or failure of performance shall be due to uncontrollable forces, the effect of which, by the exercise of reasonable diligence, the nonperforming party could not avoid. The term "uncontrollable forces" shall mean any event which results in the prevention or delay of performance by a party of its obligations under this Agreement and which is beyond the control of the nonperforming party. It includes, but is not limited to, fire, flood, earthquake, storms, lightning, epidemic, war, riot, civil disturbance, sabotage, inability to procure permits, licenses, or authorizations from any state, local, or federal agency or person for any of the supplies, materials, accesses, or services required to be provided by either District or Engineer under this Agreement, strikes, work slowdowns or other labor disturbances, and judicial restraint.

17.2 Neither party shall, however, be excused from performance if nonperformance is due to uncontrollable forces which are removable or remediable, and which the nonperforming party could have, with the exercise of reasonable diligence, removed or remedied with reasonable dispatch. The provisions of this Article shall not be interpreted or construed to require Engineer or District to prevent, settle, or otherwise avoid a strike, work slowdown, or other labor action. The nonperforming party shall, within a reasonable time of being prevented or delayed from performance by an uncontrollable force, give written notice to the other party describing the circumstances and uncontrollable forces preventing continued performance of the obligations of this Agreement. The Engineer will be allowed reasonable negotiated extension of time or adjustments for District initiated temporary stoppage of services.

#### ARTICLE 18 - MISCELLANEOUS

18.1 A waiver by either District or Engineer of any breach of this Agreement shall not be binding upon the waiving party unless such waiver is in writing. In the event of a written waiver, such a waiver shall not affect the waiving party's rights with respect to any other or further breach.

18.2 The invalidity, illegality, or unenforceability of any provision of this Agreement, or the occurrence of any event rendering any portion or

provision of this Agreement void, shall in no way effect the validity or enforceability of any other portion or provision of the Agreement. Any void provision shall be deemed severed from the Agreement and the balance of the Agreement shall be construed and enforced as if the Agreement did not contain the particular portion or provision held to be void.

## ARTICLE 19 - INTEGRATION AND MODIFICATION

- 19.1 This Agreement (consisting of pages 1 to 14), together with all Task Orders executed by the undersigned, is adopted by District and Engineer as a complete and exclusive statement of the terms of the Agreement between District and Engineer. This Agreement supersedes all prior agreements, contracts, proposals, representations, negotiations, letters, or other communications between the District and Engineer pertaining to the Services, whether written or oral.
- 19.2 The Agreement may not be modified unless such modifications are evidenced in writing signed by both District and Engineer.

## ARTICLE 20 - SUCCESSORS AND ASSIGNS

- 20.1 District and Engineer each binds itself and its directors, officers, partners, successors, executors, administrators, assigns and legal representatives to the other party to this Agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party, in respect to all covenants, agreements, and obligations of this Agreement.
- 20.2 Neither District nor Engineer shall assign, sublet, or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Agreement without the written consent of the other, except to the extent that the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent Engineer from employing such independent engineers, associates, and subcontractors as he may deem appropriate to assist him/her in the performance of the Services hereunder and in accordance with Article 7.
- 20.3 Nothing herein shall be construed to give any rights or benefits to anyone other than District and Engineer.

## ARTICLE 21 – INFORMATION SYSTEM SECURITY

When the District determines this article is applicable, the Engineer shall obtain written approval from the District representative prior to accessing District internal systems through real-time computer connections. Upon approval, the Engineer will use only in-bound connections to accomplish a legitimate business need and a previously defined and approved task. As a condition of approval, the Engineer shall:

- a) Be running a current operating system supported by the District with up-to-date security patches applied as defined in the District COE/Non-COE document.
- b) Have anti-virus software installed on his/her personal computer with up-to-date virus signatures.
- c) Have personal firewall software installed and enabled on their computer.
- d) Understand and sign the District's Electronic Equipment Use Policy, number 2160.

The District reserves the right to audit the security measures in effect on Engineer's connected systems without prior notice. The District also reserves the right to terminate network connections immediately with all Engineer's systems not meeting the above requirements.

## ARTICLE 22 – EMPLOYEE BACKGROUND CHECK

Engineer, at no additional expense to the District, shall conduct a background check for each of its employees, as well as for the employees of its subconsultants (collectively "Consultant Employees") who will have access to District's computer systems, either through on-site or remote access, or whose contract work requires an extended presence on the District's premises. The minimum background check process for any District consultant shall include, but not be limited to:

1. California residents: Criminal Records (County and State Criminal Felony and Misdemeanor)
2. Out of State residents: Federal criminal search of the National Criminal Database,

The background check shall be conducted and the results submitted to the District prior to initial access by Consultant Employees. If at any time, it is discovered that a Consultant Employee has a criminal record that includes a felony or misdemeanor, the Engineer is required to inform the District immediately and the

District will assess the circumstances surrounding the conviction, time frame, nature, gravity, and relevancy of the conviction to the job duties, to determine whether the Consultant Employee will be placed or remain on a District assignment. The District may withhold consent at its sole discretion. The District may also conduct its own criminal background check of the Consultant Employees. Failure of the Engineer to comply with the terms of this paragraph may result in the termination of its contract with the District.

ARTICLE 23 - EXCEPTIONS

No exceptions.

IN WITNESS THEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

UNION SANITARY DISTRICT

CAROLLO ENGINEERS, INC.

By: \_\_\_\_\_  
Paul R. Eldredge, P.E.  
General Manager/District Engineer

By: \_\_\_\_\_  
Scott E. Parker, P.E.  
Senior Vice President

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

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

By: \_\_\_\_\_  
Christopher T. Cleveland, P.E.  
Senior Vice President

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

# WAS THICKENER REPLACEMENT PROJECT

TASK ORDER NO. 1

TO

AGREEMENT

BETWEEN

UNION SANITARY DISTRICT

AND

CAROLLO ENGINEERS, INC.

FOR

PROFESSIONAL SERVICES

Dated November \_\_\_\_, 2018

## 1. PURPOSE

The purpose of Task Order No. 1 is for Carollo Engineers, Inc. (Engineer) to provide preliminary design services for the WAS Thickener Replacement Project (Project).

## 2. PROJECT UNDERSTANDING

The Union Sanitary District's (District) Alvarado Wastewater Treatment Plant (WWTP) existing waste activated sludge (WAS) thickening system utilizes a two-step process. WAS from the secondary process is pumped to one of two existing gravity thickener tanks for both equalization and pre-thickening. Pre-thickened waste activated sludge (PWAS) from the gravity thickeners is then conveyed by gravity to the supply side of the gravity belt thickener (GBT) feed pumps located outside of the WAS Thickening Building. The GBTs produce thickened waste activated sludge (TWAS) that is approximately 5-6 percent solids before it is pumped to the anaerobic digesters.

The WAS Thickening Building was originally constructed during the 1978 Plant Construction Project. The building was initially referred to as the Sludge Dewatering Building and housed three belt presses that were later relocated to the

Solids Handling Building during the 1985 Plant Expansion Project. The WAS Thickening Building was retrofitted to its present configuration (GBTs) during the 1993 Plant Upgrade Project. Accordingly, most of the equipment, instruments and electrical components in this building are over 20 years old and have exceeded their useful life. The purpose of this Project is to replace the existing GBT system, including the replacement of the existing Motor Control Center (MCC-24), various variable frequency drives (VFDs), and Programmable Logic Controllers (PLCs 7 & 7A).

### 3. PROJECT COORDINATION

All work related to this task order shall be coordinated through the District's Project Manager, Curtis Bosick.

### 4. SCOPE OF SERVICES

The task numbers in this Scope of Services are associated with the cost data presented in Exhibit A.

#### **Task 1 – Project Management and Meetings**

##### Task 1.1 – Project Management

Engineer shall prepare a project management plan that covers key activities. The plan will define the personnel, project schedule, scope of services, quality assurance/quality control (QA/QC), communication protocol, and other procedures required to effectively conduct the project.

Engineer shall monitor and track the overall project scope, budget, and schedule, and update on a monthly basis. A log will be maintained throughout the project to record the decisions made by the project team. The log will contain decisions made during workshops and project meetings as well as during telephone conversations or emails.

Engineer shall prepare and submit a written monthly invoice to the District which will show the percentage of work completed and the percentage of contract billed, summarize the work completed during the month, and to be completed during the following month. Engineer shall conduct brief monthly conference calls with District's Project Manager to review progress and any deviations from the schedule and budget. It is assumed that these conference calls will last approximately 30 minutes each. The Project Manager shall maintain decision and action logs as well as a critical issue log that will be updated during these monthly calls.

### Task 1.2 – Kickoff Meeting

This meeting will address the overall approach to managing the project tasks, schedule, and budget, as well as communication and project team roles/responsibilities. The group will discuss the overall vision the District has for the project, the drivers, and goals. The group will discuss available information and identify key points of contact for necessary data. It is assumed that this meeting will last 4 hours and be attended by key team members.

## **Task 2 – Alternative Development and Selection**

### Task 2.1 – Alternatives Evaluation

Engineer shall review existing District data, drawings, reports and other pertinent information. Engineer shall conduct field investigations as needed to confirm existing features and dimensions related to suitability of equipment alternatives. Engineer shall meet with District staff to determine the constraints, deficiencies, and other operational and maintenance (O&M) issues with the current thickening system. From the flows and loads generated as part of the Plant Solids System / Capacity Assessment Project, Engineer shall develop appropriate design criteria for the evaluated alternatives, including unit and total capacity, redundancy, power demand, utility water demand, and polymer requirements. Criteria shall be established for conditions that include both pre-thickening of the WAS (PWAS) as well as directly thickened WAS ranging in concentrations from 3,000 to 12,000 mg/L.

Engineer proposes to initially screen the four (4) alternatives currently under consideration by the District – GBT's, volute thickeners, rotary drum thickeners, and disk thickeners, plus centrifuge thickening technology. Through this initial screening process, it is anticipated that one or more of the technologies may be discarded due to feasibility or footprint concerns. Remaining alternatives will be further evaluated based on a quantitative scoring system that considers the following factors:

- Capital and Life Cycle Costs
- Footprint/Layout
- Process and Equipment Reliability
- Ease of Operation and Automation
- Odor Mitigation Requirements
- Greenhouse Gas Emissions

- Flexibility of Equipment to Adjust to Variable Flows and Solids Loads
- Maintenance Requirements
- Redundancy Requirements
- Constructability and Sequencing

Prior to conducting the analysis, Engineer shall propose a scoring criteria and weighting system for District consideration and comment. Engineer shall incorporate modifications to the criteria and weighting system based on District feedback. The results of the analysis shall be presented and discussed in the Alternative Selection Workshop and documented in the associated meeting minutes prior to initiating work on Task 3. For the evaluated factors impacted by equipment location, it is assumed that the new thickeners would be located in the existing WAS Thickening Building.

#### Task 2.2 - Alternative Selection Workshop

Engineer shall prepare a workshop to guide staff through the alternative selection analysis. The purpose of this meeting will be to discuss the alternatives selection process and determine the District's preferred thickening technology. Workshop materials and meeting minutes will describe and document the alternatives selection process conducted under Task 2.1 and the final technology selection that will be carried into Task 3.

#### Task 2.3 – Alternative Selection Site Visits (Optional)

If site visits are elected by the District, Engineer shall accompany District personnel on up to three (3) site visits within the United States. It is assumed that one member of the Engineer's team will travel to the sites and that each of these site visits will last up to eight (8) hours each.

### **Task 3 – Preliminary Design**

#### Task 3.1 – Develop Draft Preliminary Design Report

Engineer shall prepare a Preliminary Design Report (PDR) based on the technology selected in Task 2. The PDR will succinctly summarize the work completed during Preliminary Design and serve as the basis for Final Design. The PDR will include the following:

- Design criteria.
- Preliminary sizing calculations.
- An evaluation of the impacts of varying WAS concentration.

- A Cost/Benefit analysis of the Mannich and emulsion polymer systems.
- An analysis of the capacity and redundancy requirements.
- A recommendation whether full-scale pilot testing of selected technology is warranted.
- An estimate of the energy demands of thickening system and modifications required for electrical/control systems.
- An evaluation of replacement MCC, VFD, and PLC equipment.
- An assessment of the availability of utility and standby power, considering the estimated power requirements for the recommended thickening alternative.
- Preliminary structural, process mechanical and electrical layout sketches.
- Preliminary electrical single-line diagrams.
- Recommendations for modifications to the existing ancillary systems, including sludge feed and piping systems for WAS, PWAS and TWAS.
- Preliminary project cost estimate.
- Preliminary project schedule for final design and construction.
- A detailed construction sequencing analysis to determine construction duration, operational challenges, need for temporary systems to facilitate the project.
- A procurement strategy review, including the need for sole sourcing equipment and approaches to obtain competitive pricing.

It is assumed that the new thickeners would be located in the existing WAS Thickening Building and that the project would not include demolition that requires hazardous materials testing. If such demolition or testing for hazardous materials is required, it is assumed that it would be occur during the final design phase.

The preliminary design report shall be issued to the District in draft format, for review and comment by District staff.

### Task 3.2 – Preliminary Design Report Presentation

Engineer shall prepare a presentation workshop to guide staff through the evaluation and conclusions of the preliminary design report. This meeting will be conducted after submittal and District Review of the Preliminary Design Report. The purpose of this meeting will be to receive and discuss District staff review comments and to determine the preferred approach for implementation in the final

design phase. Workshop materials and meeting minutes will be included in the appendix of the final Preliminary Design Report prepared under Task 3.3.

### Task 3.3 – Final Preliminary Design Report

Engineer shall review, understand and incorporate comments received from District staff at presentation workshop and received by written correspondence. Engineer shall provide a final, stamped preliminary design report to serve as the basis for final design. Capital and life cycle cost estimates and project schedules shall be adjusted based on District comments. Engineer shall prepare an electronic PDF deliverable.

### **Task 4 – CEQA**

Through its subconsultant, Scheidegger and Associates, Engineer shall review scope of project relative to environmental constraints to determine if any significant CEQA related issues are identified. The District hasn't determined whether SRF funding will be utilized for the project, therefore a recommendation for the subsequent environmental documentation process, either using a Categorical Exemption (CE), Negative Declaration (ND) or Mitigated Negative Declaration (MND) will be proposed. Subconsultant will use Initial Study (IS) checklist as a guide to identify any environmental issues. Subconsultant will meet with District to review findings and agree on approach for final environmental documentation. In the event that a CE is the recommended approach, subconsultant will prepare and file a NOE with the Alameda County Clerk. Preparation of the IS/ND or IS/MND will be deferred until the final design phase. It is assumed that the preliminary design phase will not include air permitting. If such permits are required, it is assumed that they will be addressed in the final design phase.

### **Task 5 – 3D Laser Scanning and Geotechnical Investigations**

#### Task 5.1 – 3D Laser Scanning

Engineer shall retain Vara3D Inc. to conduct a laser (LIDAR) scan of the existing WAS Thickening Building and produce an as-built 3D model of the building interior. The 3D model shall be delivered in 2016 Revit format. This model will be used in preliminary design for conceptual layouts of new thickening equipment, pumps, and piping inside the WAS Thickening Building. The model will continue to be used in final design for development of final design drawings.

If necessary, Engineer shall retain LCC Engineering and Surveying to conduct topographic mapping and field surveys as needed during final design.

Task 5.2 – Geotechnical Investigation

Engineer shall retain DCM Engineering to evaluate existing geotechnical considerations for the development of the project improvements. Suitability of existing subsurface conditions for installation of yard piping, bearing capacity of soils for new equipment loads and other necessary design information to complete the final design phase of the project will be developed. It is assumed that sufficient boring information exists in the vicinity of the existing thickening building such that reasonable conclusions can be drawn regarding the in-situ soils without new borings.

5. PAYMENT TO THE ENGINEER

Payment to the Engineer shall be as called for in Article 2 of the Agreement. The billing rate schedule is equivalent to an overall labor multiplier of 3.21 for office staff, including profit. Subconsultants and outside services will be billed at actual cost plus 5%; other direct costs will be billed at actual cost; and mileage will be billed at prevailing IRS standard rate.

The not-to-exceed amount for Task Order No. 1 shall be \$284,233. A summary of the anticipated distribution of cost and manpower between tasks is shown in Exhibit A.

The following table summarizes the previously-executed and proposed task orders and amendments under the Agreement:

<b>Task Order / Amendment</b>	<b>Not to Exceed Amount</b>	<b>Board Authorization Required? (Yes/No)</b>	<b>District Staff Approval</b>
Task Order No. 1 – Preliminary Design	\$284,233	Yes	Paul Eldredge
<b>Total</b>	<b>\$284,233</b>		

## 6. TIME OF COMPLETION

Anticipated schedule for completion of Engineer's scope of services is summarized as follows:

- Notice to Proceed (NTP): November 13, 2018
- Alternative Selection Workshop: January 9, 2018
- Submit Draft Preliminary Design Report: March 15, 2019
- Submit Final Preliminary Design Report: May 17, 2019 (Assumes 3-week District review of Draft)

## 7. KEY PERSONNEL

Engineering personnel assigned to this Task Order No. 1 are as follows:

<u>Key Person to be Assigned</u>	<u>Role</u>
Scott Parker	Principal in Charge
Rashi Gupta	Project Manager
Richard Gutierrez	Design Manager
Todd Beecher	Electrical/I&C Engineer

Key personnel shall not be changed except in accordance with Article 8 of the Agreement.

IN WITNESS WHEREOF, the parties hereto have made and executed this Task Order No. 1 as of November \_\_\_\_\_, 2018 and therewith incorporate it as part of the Agreement.

DISTRICT

ENGINEER

UNION SANITARY DISTRICT

CAROLLO ENGINEERS, INC.

By: \_\_\_\_\_  
Paul R. Eldredge, P.E.  
General Manager/District Engineer

By: \_\_\_\_\_  
Scott E. Parker, P.E.  
Senior Vice President

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

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

By: \_\_\_\_\_  
Christopher T. Cleveland, P.E.  
Senior Vice President

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

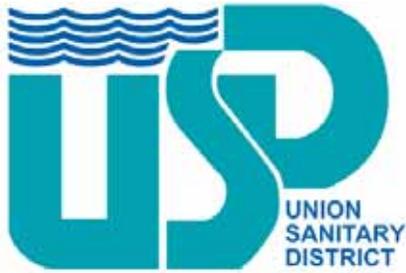
**WAS Thickener Replacement Project  
Union Sanitary District  
Exhibit A: Labor and Budget Estimate - Preliminary Design**

Task No.	Task Description	SP	LPP	PP	P	AP	CAD	Support	Total	Labor	PECE	Beecher Eng.	Scheidegger	Ewing	Mathy	Vara3D	Subconsultant	Mileage		Travel	ODC Cost	Total Cost	
		\$311	\$253	\$201	\$173	\$142	\$139	\$126	Hours	Cost	\$11.70	\$200			\$165	\$225		Mark up (5%)	Trips				Amount
<b>1.0</b>	<b>Project Management and Meetings</b>																						
1.1	Project Management	6	12	4	0	0	0	8	30	\$6,719	\$351	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	\$0	\$0	\$351	\$7,070
1.2	Kick off meeting	6	8	8	8	12	0	0	42	\$8,594	\$491	\$3,200	\$0	\$0	\$0	\$0	\$160	\$160	4	\$185	\$800	\$4,837	\$13,431
	Task 1.0 Subtotal =	12	20	12	8	12	0	8	72	\$15,313	\$842	\$3,200	\$0	\$0	\$0	\$0	\$160	\$160	4	\$185	\$800	\$5,188	\$20,501
<b>2.0</b>	<b>Alternative Development and Selection</b>																						
2.1	Alternatives Evaluation	16	72	64	32	96	0	0	280	\$55,280	\$3,276	\$8,000	\$0	\$1,650	\$0	\$0	\$483	\$483	0	\$0	\$0	\$13,409	\$68,689
2.2	Workshop	8	16	12	8	16	0	0	60	\$12,616	\$702	\$0	\$0	\$0	\$0	\$0	\$0	\$0	4	\$185	\$800	\$1,688	\$14,304
2.3	Alternative Selection Site Visits (Optional)	0	24	0	0	0	0	0	24	\$6,080	\$281	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	\$0	\$2,250	\$2,531	\$8,611
	Task 2.0 Subtotal =	24	112	76	40	112	0	0	364	\$73,976	\$4,259	\$8,000	\$0	\$1,650	\$0	\$0	\$483	\$483	4	\$185	\$3,050	\$17,628	\$91,604
<b>3.0</b>	<b>Preliminary Design</b>																						
3.1	Report	16	64	60	32	112	40	16	340	\$62,297	\$3,979	\$19,600	\$0	\$1,650	\$0	\$0	\$1,063	\$1,063	0	\$0	\$0	\$26,291	\$88,588
3.2	Pre-design Report Presentation	8	12	12	8	24	8	8	80	\$14,859	\$936	\$4,000	\$0	\$0	\$0	\$0	\$200	\$200	4	\$185	\$800	\$6,122	\$20,981
3.3	Finalize Report	4	20	20	8	64	16	8	140	\$24,046	\$1,638	\$6,000	\$0	\$1,650	\$0	\$0	\$383	\$383	0	\$0	\$0	\$9,671	\$33,717
	Task 3.0 Subtotal =	28	96	92	48	200	64	32	560	\$101,202	\$6,553	\$29,600	\$0	\$3,300	\$0	\$0	\$1,645	\$1,645	4	\$185	\$800	\$42,084	\$143,286
<b>4.0</b>	<b>CEQA</b>																						
4.1	Environmental Project Review and Initial Evaluation	1	2	4	0	4	0	1	12	\$2,317	\$140	\$0	\$5,540	\$0	\$0	\$0	\$277	\$277	0	\$0	\$0	\$5,958	\$8,275
	Task 4.0 Subtotal =	1	2	4	0	4	0	1	12	\$2,317	\$140	\$0	\$5,540	\$0	\$0	\$0	\$277	\$277	0	\$0	\$0	\$5,958	\$8,275
<b>5.0</b>	<b>3D Laser Scanning and Geotechnical Investigation</b>																						
5.1	3D Laser Scanning	1	2	2	0	0	2	1	8	\$1,625	\$94	\$0	\$0	\$0	\$0	\$12,100	\$605	\$605	0	\$0	\$0	\$12,799	\$14,424
5.2	Geotechnical Investigation	1	2	2	0	0	0	1	6	\$1,347	\$70	\$0	\$0	\$0	\$4,500	\$0	\$225	\$225	0	\$0	\$0	\$4,796	\$6,143
	Task 5.0 Subtotal =	2	4	4	0	0	2	2	14	\$2,972	\$164	\$0	\$0	\$0	\$4,500	\$12,100	\$830	\$830	0	\$0	\$0	\$17,595	\$20,567
	<b>Base Project Totals</b>	<b>67</b>	<b>210</b>	<b>188</b>	<b>96</b>	<b>328</b>	<b>66</b>	<b>43</b>	<b>998</b>	<b>\$195,780</b>	<b>\$11,958</b>	<b>\$40,800</b>	<b>\$5,540</b>	<b>\$4,950</b>	<b>\$4,500</b>	<b>\$12,100</b>	<b>\$3,395</b>	<b>\$3,395</b>	<b>12</b>	<b>\$555</b>	<b>\$4,650</b>	<b>\$88,453</b>	<b>\$284,233</b>

**Legend:**

SP	Senior Professional - Parker, Swanback	AP	Assistant Professional - Eve
LPP	Lead Project Professional - Gupta, Dadlik	CAD	CAD Technician
PP	Project Professional - Gutierrez, Green	Support	Support Staff
P	Professional - Gherini	PECE:	Project Equipment and Communication Expense

- Notes:**
- Mileage based on 85 miles per trip @ \$0.545/mile
  - Multiplier = 3.21



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

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

Karen W. Murphy  
*Attorney*

**DATE:** November 5, 2018

**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  
Kevin Chun, Associate Engineer

**SUBJECT:** Agenda Item No. 13 - Meeting of November 12, 2018  
**Authorize the General Manager to Execute an Agreement and Task Order No. 1 with Woodard & Curran, Inc. for the Control Box No. 1 Improvements Project**

**Recommendation**

Staff recommends the Board authorize the General Manager to execute an Agreement and Task Order No. 1 with Woodard & Curran, Inc. in the amount of \$229,041 for the Control Box No. 1 Improvements Project.

Funds for this project have been budgeted in the Renewal and Replacement Fund.

**Background**

Control Box No. 1 (CB1) is located within the Alvarado Wastewater Treatment Plant (WWTP), downstream of the Headworks Building, on the south side of the Primary Clarifier Nos. 1 through 4 Building. Please refer to Figure 1 for the location of the CB1 in the WWTP. CB1 was originally constructed during the 1978 Plant Project and was modified during the 1985 Plant Expansion Project and the 1993 Upgrade Project to accommodate new treatment processes.

CB1 is a rectangular concrete structure that receives the combined WWTP influent wastewater flows from the twin force mains and the Alvarado Influent Pump Station after the wastewater has passed through the Parshall flumes and mechanical bar screens located in the Headworks Building. CB1 distributes the wastewater to any of the six primary clarifiers through dedicated distribution boxes using weir gates and sluice gates. CB1 is integral to controlling flow in the liquid treatment process and cannot be taken out of service for long durations. For maintenance

and construction activities, CB1 can only be taken out of service during WWTP shutdowns, typically scheduled between 1 am and 5 am when wastewater flows are low.

The twin force mains and the Alvarado Influent Pump Station's force main are also connected to CB1, which allows the District to bypass the Headworks Building and divert the combined WWTP influent wastewater flows directly to CB1. The bypass is typically done for maintenance and construction activities at the Headworks Building and for force main cleaning operations. Due to the internal channel configuration of CB1, the wastewater flows entering the structure lose flow velocity which promotes the heavier grit materials to drop out of the wastewater. This results in significant amounts of grit to deposit inside CB1, resulting in the need for periodic cleaning of CB1. Please refer to Figure 2 for a drawing of the interior of CB1 and to Figures 3 through 6 for photos of the exterior CB1.

In 2011, The District retained Carollo Engineers to conduct a limited concrete assessment on the interior surface of CB1 between the main compartment and the six distribution boxes. Carollo observed that the concrete condition between the main compartment and the six distribution boxes was poor because of hydrogen sulfide exposure. As a result, temporary concrete repairs were made to CB1 in 2012 during the Primary Clarifiers Rehabilitation Project until permanent repairs could be made. Due to the age, existing configuration, and condition of CB1, staff has identified a project to rehabilitate CB1's existing infrastructure, along with other mechanical facilities, piping and equipment in the vicinity. The project will also include a more comprehensive condition assessment of CB1 and other structures and development of alternatives to reduce ongoing operation requirements and cost associated with removing grit deposited in CB1.

### **Request for Proposal**

Staff prepared and issued a Request for Proposal (RFP) to six consultants: AECOM, Brown and Caldwell, Woodard and Curran, Hazen and Sawyer, West Yost and Associates, and Carollo Engineers. AECOM, Carollo Engineers, and Woodard and Curran submitted proposals. Staff selected Woodard & Curran due to their proposed team members' relevant experience, qualifications, and approach to the project.

### **Task Order No. 1 – Predesign Services**

Woodard and Curran's primary scope of services will include the following tasks:

- Conduct a condition assessment of the concrete surfaces, structural steel components, pipelines, gates, valves, and related equipment at CB1, Alvarado Influent Valve Box, Alvarado Influent Pump Station Valve Box at CB1, and the chemical containment areas at the Maintenance Shop Building and the Odor Control Building.

- Evaluate grit management alternatives to prevent/minimize grit deposition in pipelines and in CB1 and provide recommendations.
- Evaluate other operational improvements such as footprint, layout, and hydraulics of CB1 to improve access and reduce cost associated with CB1 cleaning and provide recommendations.
- Evaluate CB1 bypass alternatives and construction sequencing.
- Evaluate odor control improvements at CB1.
- Prepare a predesign report summarizing the recommendations from the predesign tasks.

The scope of services and their respective fees are summarized as follows:

<b>Task No.</b>	<b>Task Description</b>	<b>Fee</b>
1.1	Progress, Budget, and Schedule Tracking	\$13,605
1.2	Kickoff Meeting and Workshops	\$15,527
2.1	CB1 Assessment and Alternative Evaluation <ul style="list-style-type: none"> <li>• Grit Management Alternatives</li> <li>• Operational Improvements</li> <li>• Bypass Alternatives</li> </ul>	\$133,775
2.2	Recommended Project <ul style="list-style-type: none"> <li>• Footprint, Layout, and Hydraulics</li> <li>• Construction Sequencing</li> <li>• Odor Control</li> <li>• Cost Estimate</li> </ul>	\$35,892
2.3	Draft Predesign Technical Memorandum	\$16,143
2.4	Final Predesign Technical Memorandum	\$6,731
2.5	Quality Assurance/Quality Control	\$7,368
	<b>Total Not-to-Exceed Fee</b>	<b>\$229,041</b>

Staff believes the total not-to-exceed fee of \$229,041 is reasonable given the effort needed to conduct the condition assessment of the components of CB1 and other structures, the evaluation of the grit deposition issue, and the evaluation of the CB1 bypass alternatives to facilitate construction of the improvements.

### Schedule

Staff anticipates completion of Task Order No. 1 services by summer 2019.

Staff recommends the Board authorize the General Manager to execute an Agreement and Task Order No. 1 with Woodard & Curran, Inc. in the amount of \$229,041 for the Control Box No. 1 Improvements Project.

PRE/SEG/RC/KC;dl

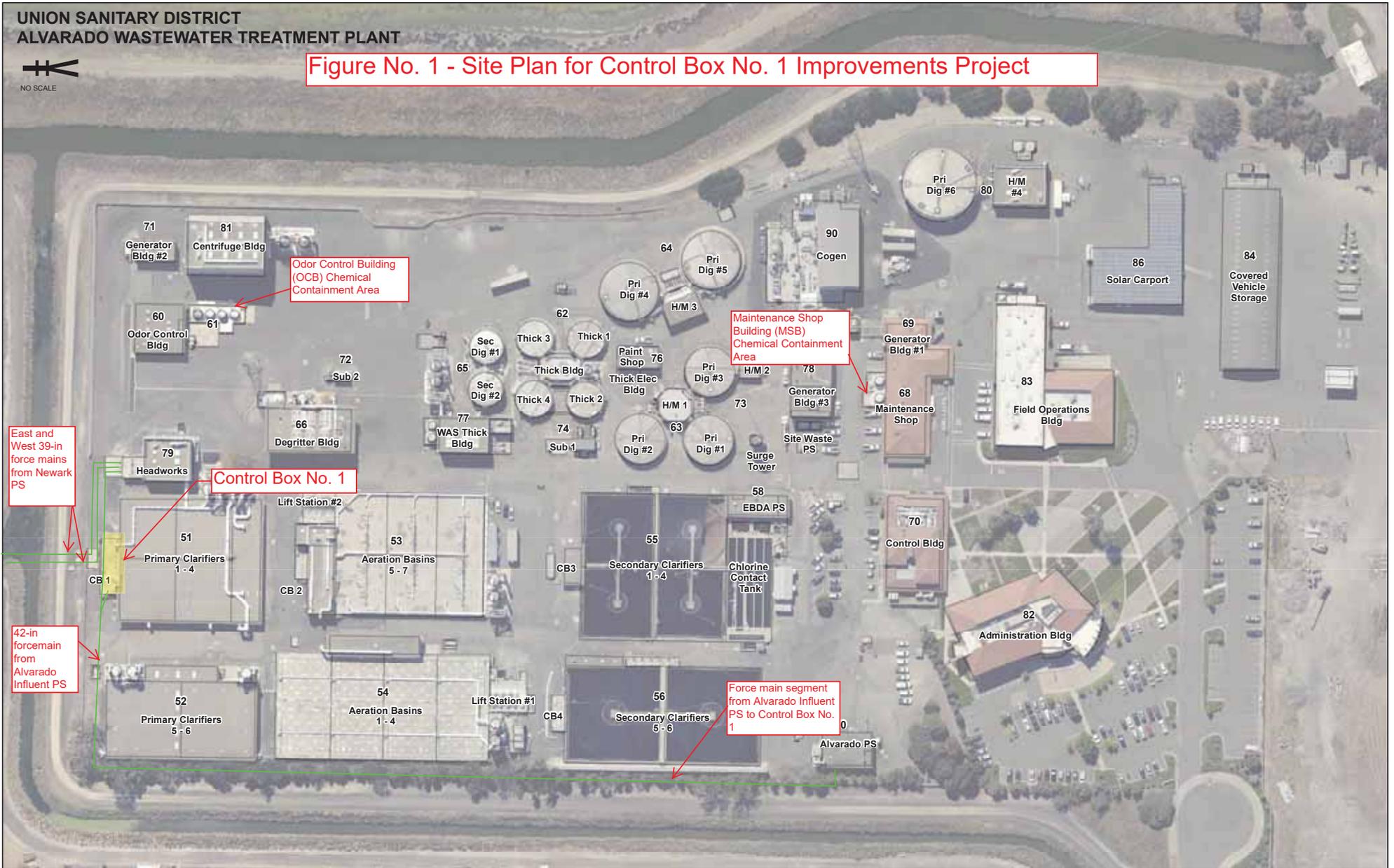
Attachments: Figure 1 – Site Map  
Figure 2 – CB1 Drawing  
Figures 3 through 6 - Photos  
Agreement  
Task Order No. 1

UNION SANITARY DISTRICT  
ALVARADO WASTEWATER TREATMENT PLANT

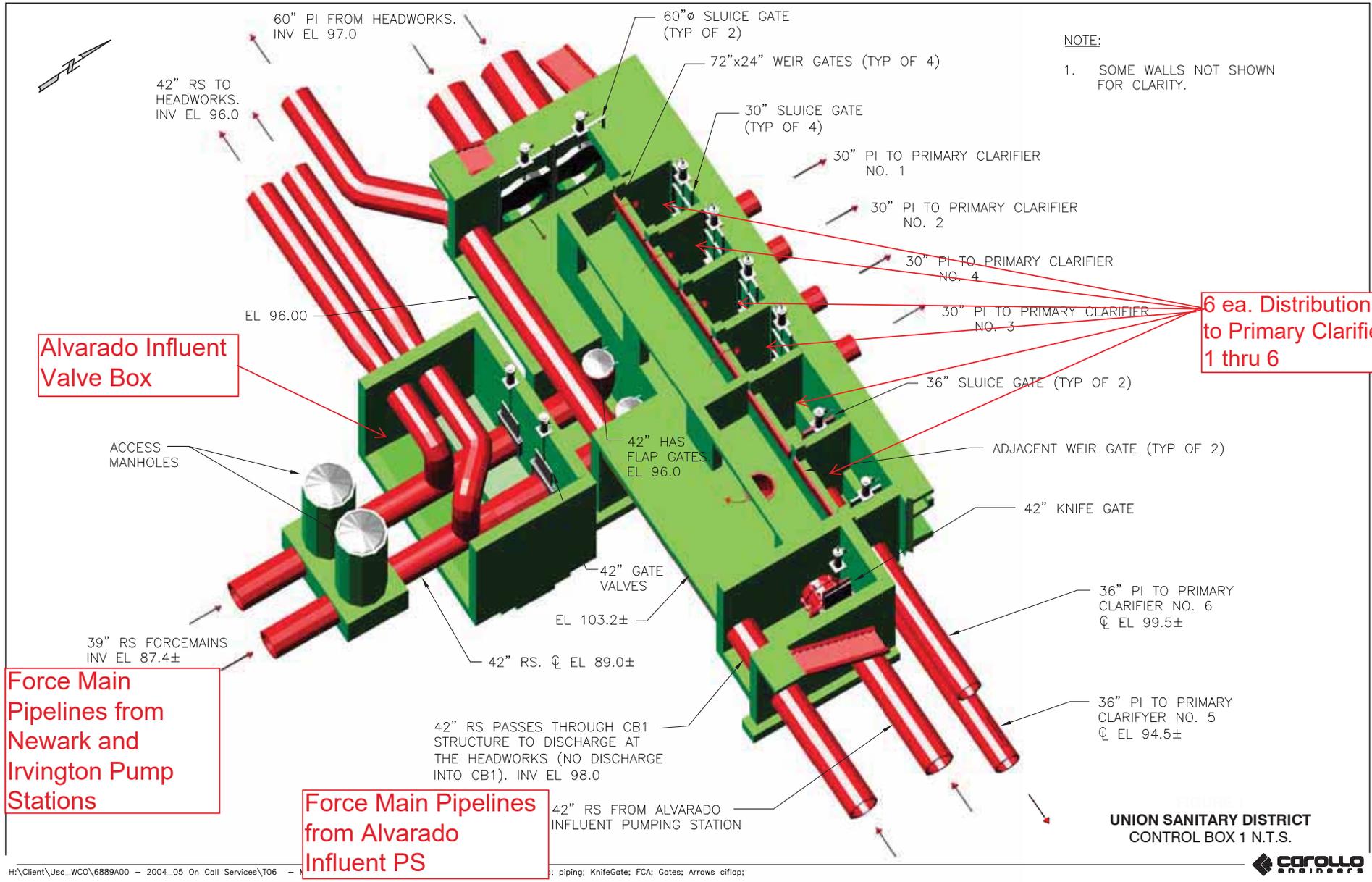


NO SCALE

Figure No. 1 - Site Plan for Control Box No. 1 Improvements Project



**Figure No. 2 - Control Box No. 1 Isometric Drawing**



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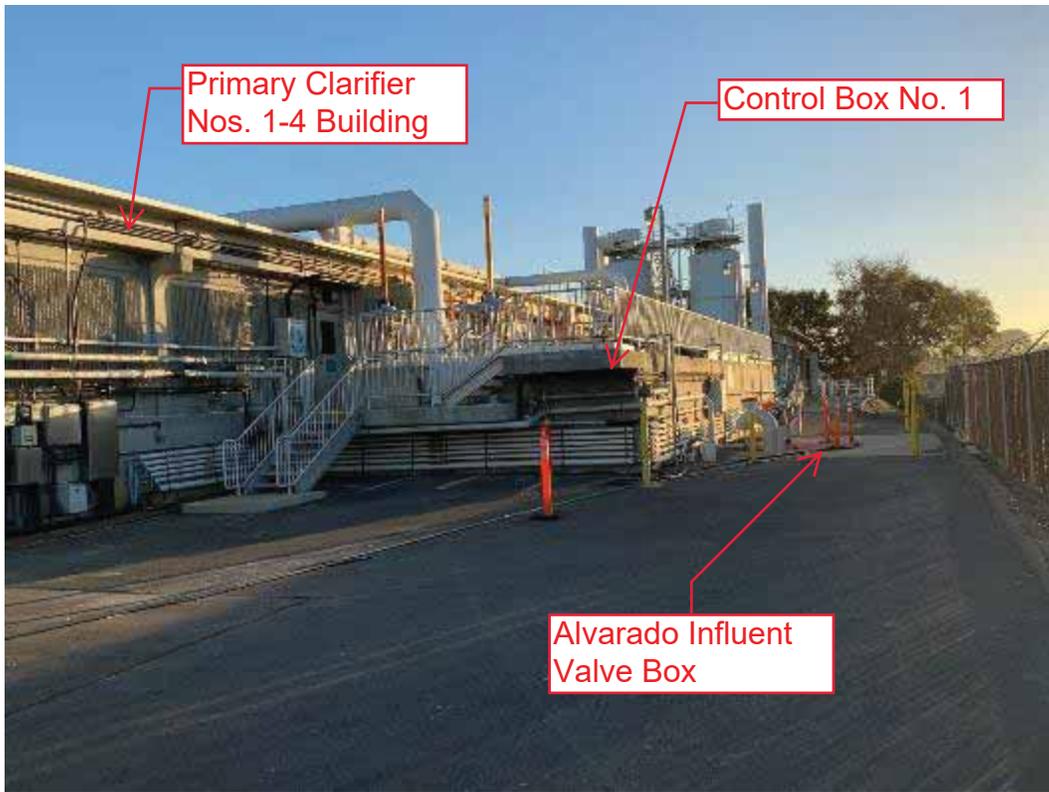


Figure 3 – Control Box No. 1



Figure 4 – Top Deck of Control Box No. 1 – Looking South



Figure 5 – Control Box No. 1 Weir Gates and Sluice Gates



Figure 6 – Alvarado Influent Valve Box (Twin Force Mains and Valves Inside)

**Control Box No. 1 Improvements Project  
AGREEMENT**

BETWEEN

UNION SANITARY DISTRICT

AND

WOODARD & CURRAN, INC.

FOR

PROFESSIONAL SERVICES

THIS IS AN AGREEMENT MADE AS OF November \_\_\_\_\_, 2018, BETWEEN UNION SANITARY DISTRICT (hereinafter referred to as District), and WOODARD & CURRAN, INC. (hereinafter referred to as Engineer).

WITNESSETH:

WHEREAS, District intends to design and construct the Control Box No. 1 Improvements Project (hereinafter referred to as Project), and,

WHEREAS, District requires certain professional services in connection with the Project (hereinafter referred as Services); and

WHEREAS, Engineer is qualified and prepared to provide such Services;

NOW, THEREFORE, in consideration of the promises contained herein, the parties agree as follows:

**ARTICLE 1 - SERVICES TO BE PERFORMED BY ENGINEER**

- 1.1 Specific Services and the associated scope of services, payment, schedule, and personnel will be defined in specific Task Order as mutually agreed by District and Engineer.

- 1.2 All Task Orders will by reference incorporate the terms and conditions of this Agreement and become formal amendments hereto.

## ARTICLE 2 - COMPENSATION

- 2.1 Compensation for consulting services performed under this Agreement shall include:

- (1) Direct labor costs, multiplied by an agreed upon fixed factor (the Multiplier), to compensate for fringe benefits, indirect costs, and profit.
- (2) Non-labor direct project charge not included in the fixed factor and acceptable, without any markup.
- (3) Subconsultant costs, with a maximum markup of 5%.

Definitions are as follows:

- (a) Direct labor is salaries and wages paid to personnel for time directly chargeable to the project. Direct labor does not include the cost of Engineer's statutory and customary benefits, such as sick leave, holidays, vacations, and medical and retirement benefits nor the cost of the time of executive and administrative personnel and others whose time is not identifiable to the project.
- (b) Fringe benefits include Engineer's statutory and customary benefits, such as sick leave, holidays, vacations, medical and retirement benefits, incentive pay, tuition, and other costs classified as employee benefits.
- (c) Indirect costs are allocations of costs that are not directly chargeable to a specific engagement and are commonly referred to as Engineer's overhead. Indirect costs include provisions for such things as clerical support, office space, light and heat, insurance, statutory and customary employee benefits, and the time of executive and administrative personnel and others whose time is not identifiable to the Project or to any other project. Under no circumstances can the same labor costs be charged as direct labor and also appear at the same time as indirect costs, and vice versa.

- (d) The Multiplier is a multiplicative factor which is applied to direct labor costs, and compensates Engineer for fringe benefits and indirect costs (overhead) and profit.
- (e) Other non-labor direct project charges shall be included in the overhead and these charges include typical expenses as cost of transportation and subsistence, printing and reproduction, computer time and programming costs, identifiable supplies, outside consultant's charges, subcontracts, and charges by reviewing authorities."

Alternatively, the District and the Engineer may agree to utilize the fully-encumbered hourly rates and fees for Services performed by the Engineer. These hourly rates and fees shall be based on the Engineer's rate schedule published at the time this Agreement or Task Order is executed and shall be attached to each applicable Task Order.

- 2.2 Reimbursement for mileage shall not exceed the prevailing Internal Revenue Service's standard mileage rate.
- 2.3 A *Cost Ceiling* will be established for each Task Order which is based upon estimated labor-hours and cost estimates. Costs as described above, comprising direct labor, overhead cost, and other direct costs, shall be payable up to a Cost Ceiling as specified in the Task Order. A *Maximum Fee Ceiling*, or *Task Order Firm Ceiling*, will also be established for each Task Order which includes the Cost Ceiling plus the Professional Fee.
- 2.4 Engineer shall invoice District monthly for the actual costs incurred, and a pro-rated portion of the Professional Fee for work performed during the previous month. If the Maximum Fee Ceiling is reached, the Engineer will complete the agreed-upon work for the Maximum Fee Ceiling. With District staff approval, labor hours may be reallocated within the tasks without renegotiation in such a manner so as not to exceed the Maximum Fee Ceiling.
- 2.5 The Engineer shall provide the District with a review of the budget amounts when 75 percent of the Cost Ceiling for any task has been expended. Engineer may request a revision in the Cost Ceiling for performance of this Agreement, and will relate the rationale for the revision to the specific basis of estimate as defined in the Scope of Services. Such notification will be submitted to the District at the earliest possible date. The authorized Cost Ceiling shall not be exceeded without written approval of the District.

- 2.6 The Professional Fee will not be changed except in the case of a written amendment to the Agreement which alters the Scope of Services. District and Engineer agree to negotiate an increase or decrease in Cost Ceiling and Professional Fee for any change in Scope of Services required at any time during the term of this Agreement. Engineer will not commence work on the altered Scope of Services until authorized by District.
- 2.7 Direct labor rates are subject to revision to coincide with Engineer's normal salary review schedule. Adjustments in direct labor rates shall not affect the firm ceiling without prior written authorization of the District.
- 2.8 District shall pay Engineer in accordance with each Task Order for Services.
- 2.9 Engineer shall submit monthly statements for Services rendered. District will make prompt monthly payments in response to Engineer's monthly statements.

#### ARTICLE 3 - PERIOD OF SERVICE

- 3.1 Engineer's services will be performed and the specified services rendered and deliverables submitted within the time period or by the date stipulated in each Task Order.
- 3.2 Engineer's services under this Agreement will be considered complete when the services are rendered and/or final deliverable is submitted and accepted by District.
- 3.3 If any time period within or date by which any of the Engineer's services are to be completed is exceeded through no fault of Engineer, all rates, measures and amounts of compensation and the time for completion of performance shall be subject to equitable adjustment.

#### ARTICLE 4 - DISTRICT'S RESPONSIBILITIES

District will do the following in a timely manner so as not to delay the services of Engineer.

- 4.1 Provide all criteria and full information as to District's requirements for the services assignment and designate in writing a person with authority to act on District's behalf on all matters concerning the Engineer's services.

- 4.2 Furnish to Engineer all existing studies, reports and other available data pertinent to the Engineer's services, obtain or authorize Engineer to obtain or provide additional reports and data as required, and furnish to Engineer services of others required for the performance of Engineer's services hereunder, and Engineer shall be entitled to use and rely upon all such information and services provided by District or others in performing Engineer's services under this Agreement.
- 4.3 Arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services hereunder.
- 4.4 Perform such other functions as are indicated in each Task Order related to duties of District.
- 4.5 Bear all costs incident to compliance with the requirements of this Section.

#### ARTICLE 5 - STANDARD OF CARE

- 5.1 Engineer shall exercise the same degree of care, skill, and diligence in the performance of the Services as is ordinarily provided by a professional Engineer under similar circumstance and Engineer shall, at no cost to District, re-perform services which fail to satisfy the foregoing standard of care.

#### ARTICLE 6 - OPINIONS OF COST AND SCHEDULE

- 6.1 Since Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over contractors', subcontractors', or vendors' methods of determining prices, or over competitive bidding or market conditions or economic conditions, Engineer's cost estimate and economic analysis shall be made on the basis of qualification and experience as a professional engineer.
- 6.2 Since Engineer has no control over the resources provided by others to meet contract schedules, Engineer's forecast schedules shall be made on the basis of qualification and experience as a professional Engineer.
- 6.3 Engineer cannot and does not guarantee that proposals, bids or actual project costs will not vary from his cost estimates or that actual schedules will not vary from his forecast schedules.

## ARTICLE 7 - SUBCONTRACTING

- 7.1 No subcontract shall be awarded by Engineer until prior written approval is obtained from the District.

## ARTICLE 8 - ENGINEER-ASSIGNED PERSONNEL

- 8.1 Engineer shall designate in writing an individual to have immediate responsibility for the performance of the services and for all matters relating to performance under this Agreement. Key personnel to be assigned by Engineer will be stipulated in each Task Order. Substitution of any assigned person shall require the prior written approval of the District, which shall not be unreasonably withheld. If the District determines that a proposed substitution is not responsible or qualified to perform the services then, at the request of the District, Engineer shall substitute a qualified and responsible person.

## ARTICLE 9 - OWNERSHIP OF DOCUMENTS

- 9.1 All work products, drawings, data, reports, files, estimate and other such information and materials (except proprietary computer programs, including source codes purchased or developed with Engineer monies) as may be accumulated by Engineer to complete services under this Agreement shall be owned by the District.
- 9.2 Engineer shall retain custody of all project data and documents other than deliverables specified in each Task Order, but shall make access thereto available to the District at all reasonable times the District may request. District may make and retain copies for information and reference.
- 9.3 All deliverables and other information prepared by Engineer pursuant to this Agreement are instruments of service in respect to this project. They are not intended or represented to be suitable for reuse by District or others on extensions of this Project or on any other project. Any reuse without written verification or adaptation by Engineer for the specific purpose intended will be at District's sole risk and without liability or legal exposure to Engineer; and District shall indemnify and hold harmless Engineer against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from such reuse. Any such verification or adaptation will entitle Engineer to further compensation at rates to be agreed upon by District and Engineer.

## ARTICLE 10 - RECORDS OF LABOR AND COSTS

- 10.1 Engineer shall maintain for all Task Orders, records of all labor and costs used in claims for compensation under this Agreement. Records shall mean a contemporaneous record of time for personnel; a methodology and calculation of the Multiplier for fringe benefits and indirect costs; and invoices, time sheets, or other factors used as a basis for determining other non-labor Project charges. These records must be made available to the District upon reasonable notice of no more than 48 hours during the period of the performance of this Agreement.
- 10.2 After delivery of Services (completion of Task Orders) under this Agreement, the Engineer's records of all costs used in claims for compensation under this Agreement shall be available to District's accountants and auditors for inspection and verification. These records will be maintained by Engineer and made reasonably accessible to the District for a period of three (3) years after completion of Task Orders under this Agreement.
- 10.3 Engineer agrees to cooperate and provide any and all information concerning the Project costs which are a factor in determining compensation under this Agreement as requested by the District or any public agency which has any part in providing financing for, or authority over, the Services which are provided under the Agreement.
- 10.4 Failure to provide documentation or substantiation of all Project costs used as a factor in compensation paid under Article 2 hereof will be grounds for District to refuse payment of any statement submitted by the Engineer and for a back charge for any District funds, including interest from payment; or grant, matching, or other funds from agencies assisting District in financing the Services specified in this Agreement.

## ARTICLE 11 - INSURANCE

Engineer shall provide and maintain at all times during the performance of the Agreement the following insurances:

- 11.1 Workers' Compensation and Employer's Liability Insurance for protection of Engineer's employees as required by law and as will protect Engineer from loss or damage because of personal injuries, including death to any of his employees.
- 11.2 Comprehensive Automobile Liability Insurance. Engineer agrees to carry a Comprehensive Automobile Liability Policy providing bodily injury liability. This policy shall protect Engineer against all liability

arising out of the use of owned or leased automobiles both passenger and commercial. Automobiles, trucks, and other vehicles and equipment (owned, not owned, or hired, licensed or unlicensed for road use) shall be covered under this policy. Limits of liability for Comprehensive Automobile Liability Insurance shall not be less than \$1,000,000 Combined Single Limit.

11.3 Comprehensive General Liability Insurance as will protect Engineer and District from any and all claims for damages or personal injuries, including death, which may be suffered by persons, or for damages to or destruction to the property of others, which may arise from the Engineer's operations under this Agreement, which insurance shall name the District as additional insured. Said insurance shall provide a minimum of \$1,000,000 Combined Single Limit coverage for personal injury, bodily injury, and property damage for each occurrence and aggregate. Such insurance will insure Engineer and District from any and all claims arising from the following:

1. Personal injury;
2. Bodily injury;
3. Property damage;
4. Broad form property damage;
5. Independent contractors;
6. Blanket contractual liability.

11.4 Engineer shall maintain a policy of professional liability insurance, protecting it against claims arising out of negligent acts, errors, or omissions of Engineer pursuant to this Agreement, in an amount of not less than \$1,000,000. The said policy shall cover the indemnity provisions under this Agreement.

11.5 Engineer agrees to maintain such insurance at Engineer's expense in full force and effect in a company or companies satisfactory to the District. All coverage shall remain in effect until completion of the Project.

11.6 Engineer will furnish the District with certificates of insurance and endorsements issued by Engineer's insurance carrier and countersigned by an authorized agent or representative of the insurance company. The certificates shall show that the insurance will not be cancelled without at least thirty (30) days' prior written notice to the District. The certificates for liability insurance will show that liability assumed under this Agreement is included. The endorsements will show the District as an additional insured on Engineer's insurance policies for the coverage required in Article 11 for services performed

under this Agreement, except for workers' compensation and professional liability insurance.

- 11.7 Waiver of Subrogation: Engineer hereby agrees to waive subrogation which any insurer of Engineer may acquire from Engineer by virtue of the payment of any loss. Engineer agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation.

The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the District for all work performed by the Engineer, its employees, agents and subconsultants.

## ARTICLE 12 - LIABILITY AND INDEMNIFICATION

- 12.1 Having considered the risks and potential liabilities that may exist during the performance of the Services, and in consideration of the promises included herein, District and Engineer agree to allocate such liabilities in accordance with this Article 12. Words and phrases used in this Article shall be interpreted in accordance with customary insurance industry usage and practice.
- 12.2 Engineer shall indemnify and save harmless the District and all of their agents, officers, and employees from and against all claims, demands, or causes of action of every name or nature to the extent caused by the negligent error, omission, or act of Engineer, its agents, servants, or employees in the performance of its services under this Agreement. In no event shall Engineer's costs to defend the District exceed the Engineer's proportionate percentage of negligence or fault, based upon a final judicial determination, except that if one or more defendants in an action are unable to pay its share of defense costs due to bankruptcy or dissolution, Engineer shall meet and confer with the other defendant parties regarding defense costs.
- 12.3 In the event an action for damages is filed in which negligence is alleged on the part of District and Engineer, Engineer agrees to defend District. In the event District accepts Engineer's defense, District agrees to indemnify and reimburse Engineer on a pro rata basis for all expenses of defense and any judgment or amount paid by Engineer in resolution of such claim. Such pro rata share shall be based upon a final judicial determination of proportionate negligence or, in the absence of such determination, by mutual agreement.
- 12.4 Engineer shall indemnify District against legal liability for damages arising out of claims by Engineer's employees. District shall indemnify Engineer against legal liability for damages arising out of claims by District's employees.

- 12.5 Indemnity provisions will be incorporated into all Project contractual arrangements entered into by District and will protect District and Engineer to the same extent.
- 12.6 Upon completion of all services, obligations and duties provided for in the Agreement, or in the event of termination of this Agreement for any reason, the terms and conditions of this Article shall survive.
- 12.7 To the maximum extent permitted by law, Engineer's liability for District's damage will not exceed the aggregate compensation received by Engineer under this Agreement or the maximum amount of professional liability insurance available at the time of any settlement or judgment, which ever is greater.

#### ARTICLE 13 - INDEPENDENT CONTRACTOR

Engineer undertakes performance of the Services as an independent contractor and shall be wholly responsible for the methods of performance. District will have no right to supervise the methods used, but District will have the right to observe such performance. Engineer shall work closely with District in performing Services under this Agreement.

#### ARTICLE 14 - COMPLIANCE WITH LAWS

In performance of the Services, Engineer will comply with applicable regulatory requirements including federal, state, and local laws, rules, regulations, orders, codes, criteria and standards. Engineer shall procure the permits, certificates, and licenses necessary to allow Engineer to perform the Services. Engineer shall not be responsible for procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Engineer in Task Order.

#### ARTICLE 15 - NONDISCLOSURE OF PROPRIETARY INFORMATION

Engineer shall consider all information provided by District and all drawings, reports, studies, design calculations, specifications, and other documents resulting from the Engineer's performance of the Services to be proprietary unless such information is available from public sources. Engineer shall not publish or disclose proprietary information for any purpose other than the performance of the Services without the prior written authorization of District or in response to legal process.

## ARTICLE 16 - TERMINATION OF CONTRACT

- 16.1 The obligation to continue Services under this Agreement may be terminated by either party upon seven days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.
- 16.2 District shall have the right to terminate this Agreement or suspend performance thereof for District's convenience upon written notice to Engineer, and Engineer shall terminate or suspend performance of Services on a schedule acceptable to District. In the event of termination or suspension for District's convenience, District will pay Engineer for all services performed and costs incurred including termination or suspension expenses. Upon restart of a suspended project, equitable adjustment shall be made to Engineer's compensation.

## ARTICLE 17 - UNCONTROLLABLE FORCES

- 17.1 Neither District nor Engineer shall be considered to be in default of this Agreement if delays in or failure of performance shall be due to uncontrollable forces, the effect of which, by the exercise of reasonable diligence, the nonperforming party could not avoid. The term "uncontrollable forces" shall mean any event which results in the prevention or delay of performance by a party of its obligations under this Agreement and which is beyond the control of the nonperforming party. It includes, but is not limited to, fire, flood, earthquake, storms, lightening, epidemic, war, riot, civil disturbance, sabotage, inability to procure permits, licenses, or authorizations from any state, local, or federal agency or person for any of the supplies, materials, accesses, or services required to be provided by either District or Engineer under this Agreement, strikes, work slowdowns or other labor disturbances, and judicial restraint.
- 17.2 Neither party shall, however, be excused from performance if nonperformance is due to uncontrollable forces which are removable or remediable, and which the nonperforming party could have, with the exercise of reasonable diligence, removed or remedied with reasonable dispatch. The provisions of this Article shall not be interpreted or construed to require Engineer or District to prevent, settle, or otherwise avoid a strike, work slowdown, or other labor action. The nonperforming party shall, within a reasonable time of being prevented or delayed from performance by an uncontrollable force, give written notice to the other party describing the circumstances and uncontrollable forces preventing continued performance of the obligations of this Agreement. The

Engineer will be allowed reasonable negotiated extension of time or adjustments for District initiated temporary stoppage of services.

#### ARTICLE 18 - MISCELLANEOUS

- 18.1 A waiver by either District or Engineer of any breach of this Agreement shall not be binding upon the waiving party unless such waiver is in writing. In the event of a written waiver, such a waiver shall not affect the waiving party's rights with respect to any other or further breach.
- 18.2 The invalidity, illegality, or unenforceability of any provision of this Agreement, or the occurrence of any event rendering any portion or provision of this Agreement void, shall in no way effect the validity or enforceability of any other portion or provision of the Agreement. Any void provision shall be deemed severed from the Agreement and the balance of the Agreement shall be construed and enforced as if the Agreement did not contain the particular portion or provision held to be void.

#### ARTICLE 19 - INTEGRATION AND MODIFICATION

- 19.1 This Agreement (consisting of pages 1 to 14), together with all Task Orders executed by the undersigned, is adopted by District and Engineer as a complete and exclusive statement of the terms of the Agreement between District and Engineer. This Agreement supersedes all prior agreements, contracts, proposals, representations, negotiations, letters, or other communications between the District and Engineer pertaining to the Services, whether written or oral.
- 19.2 The Agreement may not be modified unless such modifications are evidenced in writing signed by both District and Engineer.

#### ARTICLE 20 - SUCCESSORS AND ASSIGNS

- 20.1 District and Engineer each binds itself and its directors, officers, partners, successors, executors, administrators, assigns and legal representatives to the other party to this Agreement and to the partners, successors, executors, administrators, assigns, and legal representatives of such other party, in respect to all covenants, agreements, and obligations of this Agreement.
- 20.2 Neither District nor Engineer shall assign, sublet, or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Agreement without the written

consent of the other, except to the extent that the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent Engineer from employing such independent engineers, associates, and subcontractors as he may deem appropriate to assist him/her in the performance of the Services hereunder and in accordance with Article 7.

20.3 Nothing herein shall be construed to give any rights or benefits to anyone other than District and Engineer.

#### ARTICLE 21 – INFORMATION SYSTEM SECURITY

When the District determines this article is applicable, the Engineer shall obtain written approval from the District representative prior to accessing District internal systems through real-time computer connections. Upon approval, the Engineer will use only in-bound connections to accomplish a legitimate business need and a previously defined and approved task. As a condition of approval, the Engineer shall:

- a) Be running a current operating system supported by the District with up-to-date security patches applied as defined in the District COE/Non-COE document.
- b) Have anti-virus software installed on his/her personal computer with up-to-date virus signatures.
- c) Have personal firewall software installed and enabled on their computer.
- d) Understand and sign the District's Electronic Equipment Use Policy, number 2160.

The District reserves the right to audit the security measures in effect on Engineer's connected systems without prior notice. The District also reserves the right to terminate network connections immediately with all Engineer's systems not meeting the above requirements.

#### ARTICLE 22 – EMPLOYEE BACKGROUND CHECK

Engineer, at no additional expense to the District, shall conduct a background check for each of its employees, as well as for the employees of its subconsultants (collectively "Consultant Employees") who will have access to District's computer systems, either through on-site or remote access, or whose contract work requires

an extended presence on the District's premises. The minimum background check process for any District consultant shall include, but not be limited to:

1. California residents: Criminal Records (County and State Criminal Felony and Misdemeanor)
2. Out of State residents: Federal criminal search of the National Criminal Database

The background check shall be conducted and the results submitted to the District prior to initial access by Consultant Employees. If at any time, it is discovered that a Consultant Employee has a criminal record that includes a felony or misdemeanor, the Engineer is required to inform the District immediately and the District will assess the circumstances surrounding the conviction, time frame, nature, gravity, and relevancy of the conviction to the job duties, to determine whether the Consultant Employee will be placed or remain on a District assignment. The District may withhold consent at its sole discretion. The District may also conduct its own criminal background check of the Consultant Employees. Failure of the Engineer to comply with the terms of this paragraph may result in the termination of its contract with the District.

ARTICLE 23 - EXCEPTIONS

No exceptions.

IN WITNESS THEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

UNION SANITARY DISTRICT

WOODARD & CURRAN, INC.

By: \_\_\_\_\_  
Paul R. Eldredge, P.E.  
General Manager/District Engineer

By: \_\_\_\_\_  
Michael H. Matson  
Sr. Vice President

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

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

# Control Box No. 1 Improvements Project

TASK ORDER NO. 1

to

AGREEMENT

BETWEEN

UNION SANITARY DISTRICT

AND

WOODARD & CURRAN, INC.

FOR

PROFESSIONAL SERVICES

Dated November \_\_\_\_, 2018

## 1. PURPOSE

The purpose of Task Order No. 1 is to commission an improvement project for Control Box No. 1 (CB1). The purpose of the Control Box No. 1 Improvements Project (Project) is to rehabilitate CB1, along with other mechanical facilities, piping and equipment in the vicinity, and to develop alternatives to reduce ongoing operation requirements and cost associated with removing grit deposited in CB1.

## 2. PROJECT COORDINATION

All work related to this task order shall be coordinated through the District's Project Manager, Kevin Chun.

## 3. SCOPE OF SERVICES

The task numbers in this Scope of Services are associated with the cost and schedule data presented in Exhibits A and B, respectively.

### General Scope Assumptions

- The District shall provide Engineer with a consolidated summary of District comments on all reviewed deliverables.
- Although the Task Order Scope of Work is comprised of various tasks, the fee estimate for each individual task shall not be considered a “not to exceed” amount for each task. It is anticipated that some tasks may require more effort, and some may require less effort. With the District’s input, the Engineer shall have the ability to adjust and reallocate the task budgets within the Task Order Scope of Work among other tasks to balance the overall level of effort. However, the reallocation of the task budgets shall not be construed as a reduction in Engineer’s Scope of Work, unless authorized by the District. The Engineer shall not exceed the total Task Order budget for the project without written authorization from the District.

## **Task 1 – Project Management**

### Subtask 1.1 - Project Plan, Budget, and Schedule Management

Engineer shall develop a project plan that includes the process the consultant will utilize to fulfill the requirements of the Project and the schedule for completing its tasks. Engineer shall provide progress, budget, and schedule monitoring and reporting for the assumed 6-month duration of this Task Order. Engineer shall prepare monthly invoices and progress reports that provide a summary of the project status including work accomplished, an earned value report and reports on budget and schedule.

### Subtask 1.2 – Kickoff Meeting and Workshops

Engineer shall conduct one kickoff meeting, lasting approximately two hours. The kickoff meeting will include discussion of the project plan, proposed project schedule, and required background information. Engineer shall solicit input from District staff to establish goals, process needs, requirements, preferences, and concerns and evaluation criteria for project alternatives from District staff.

In addition to the kickoff meeting, Engineer shall facilitate and attend up to four (4) additional workshops, each of up to two-hour duration, covering:

1. Condition Assessment Inspection Planning: Review inspection plan and coordination with District operations group. Focus will be on District activities to prepare CB-1 for inspections by Engineer’s subconsultant and inspection activities and protocols.

2. CB-1 Improvement Alternatives Discussion: Present preliminary findings of the condition assessment and obtain the District's input on potential grit removal enhancement alternatives. An initial selection of desired project components will be made during this workshop, which will facilitate the development of a recommended project.
3. Recommended Project Development: Present a preliminary project recommendation for discussion and refinement. Input from the workshop will be incorporated into the Draft Predesign Technical Memorandum (TM).
4. Draft TM Review Workshop: Present, discuss and resolve District's comments on the Draft Predesign TM. Findings from the workshop will also be incorporated into the Final TM.

#### Subtask 1.4 – QA/QC

Engineer shall prepare a project Quality Control Plan identifying roles and responsibilities, procedures (in accordance with Engineer's Quality Assurance Program requirements), and resources.

Assumptions:

- Preliminary Design project duration is 6 months.
- Kickoff meeting and workshops will be held at District's offices

### **Task 2 – Basis of Design**

#### Subtask 2.1 – CB1 Assessment and Alternatives Evaluation

##### *Review and Assess Existing Infrastructure*

The Engineer shall visit the site and meet with staff to gain additional insight on the operation of CB1, including constraints, deficiencies and the O&M issues for CB1 and other project elements. Engineer shall review and understand available information, and perform a condition assessment of the following existing infrastructure at the WWTP:

- Concrete, Steel, and Pipeline (For Potential Rehabilitation)
  - CB1 interior concrete surfaces, including existing coating/lining. Three of six primary influent distribution boxes will be inspected.
  - CB1 exterior concrete surfaces; access hatch doors, hardware, and frames; handrail post anchors.
  - Force main manhole components; the manhole is located south of CB1 just outside of the WWTP fence line.

- Concrete surfaces at the Odor Control Building and Maintenance Shop Building chemical containment structures. The chemical stored in both containment structures is sodium hypochlorite (14 percent solution) used for final effluent disinfection, odor control, and control of excessive filamentous growth in the return activated sludge. The existing coating systems have failed, and the District is interested in new coating systems to protect the concrete from exposure to sodium hypochlorite that occurs during normal operation and maintenance activities of the chemical systems.
- Alvarado Influent Pump Station Valve Box at CB1 – Interior concrete surfaces; discharge pipeline; access hatch door, hardware, and frame. The District replaced the gate valve in 2017.
- Alvarado Influent Valve Box – Interior concrete surfaces; welded steel pipelines; welded steel pipeline wall spools; pipe/valve supports.
- Gates, Valves, Motorized Actuators and Equipment (for potential replacement)
  - Two 60-inch diameter sluice gates and motorized actuators – These gates are used to isolate the entire WWTP influent wastewater between the Headworks Building and CB1. Both gates are normally open.
  - Four 30-inch diameter and two 36-inch diameter sluice gates and motorized actuators – These gates are located within individual distribution boxes and are used to isolate wastewater between the main compartment of CB1 and the six primary clarifiers.
  - Four 72-inch by 24-inch weir gates and two 106-inch by 24-inch weir gates with manual actuators – These gates are located upstream of each of the six distribution boxes and are used to control the wastewater from the main compartment of CB1 into the distribution boxes.
  - Two 42-inch gate valves and motorized actuators – These valves are located within the Alvarado Influent Valve Box and are used to isolate the wastewater from the twin force mains (combined Newark and Irvington wastewater) into CB1 and to divert the wastewater to the Headworks Building. These valves are normally closed.
  - One 42-inch gate valve and motorized actuator – This valve is located at the Headworks Valve Box and is used to isolate the wastewater from the west force main (combined Newark and Irvington wastewater) into the Headworks Influent Channel. This valve is normally open.

- Headworks Channel Air Blowers 1 and 2 Replacement – The blowers are connected to air piping at the Headworks Influent Channel and the main compartment of CB1 and provides coarse-bubble air at each location to keep the grit in suspension prevent deposition on the floors.

Equipment and infrastructure will be assessed for age, remaining useful life, physical condition, ability to incorporate automation, and compatibility with potential new equipment. If required, a replacement or rehabilitation (type and material) will be included as part of the recommendations developed from the assessment.

Engineer's subconsultant, V&A, will be responsible for performing the condition assessment work, with the exception of the Headworks Channel Air Blowers, which will be performed by the Engineer. The condition inspection work by V&A shall include the following:

#### Safety Plan Preparation

- Review the drawings and existing documentation for the pump station to determine the access locations, staging of safety equipment, and testing locations.
- Review District safety plans and protocols.
- Submit a safety plan prior to the confined space entries. The safety plan will document the entry approach, identify possible hazards, and provide rescue procedures for confined space entry. A draft Safety Plan will be submitted for review. Comments will be incorporated in a final Safety Plan.

#### Field Inspections

Field inspections shall be performed in accordance with the field inspection matrix below. The actual order and timing of inspections shall be coordinated with the District. Two days of night time inspections are assumed, occurring between 12 a.m. and 6 a.m. Up to five additional days of day time inspections are assumed, occurring between 8 a.m. and 2 p.m. The last two days will be verified as needed based on the inspection of the first primary influent distribution box.

Refer to Exhibit C – Field Inspection for details of this task.

#### Condition Assessment Report

V&A shall prepare a technical memorandum with the results of field observations and recommendations for mitigating and repairing observed

corrosion and deterioration. The letter report shall include photographic documentation of the existing conditions, data tables, and necessary graphical and illustrative figures, as required, to present the information gathered during this study.

### *Improvement Evaluation*

Engineer shall evaluate the following improvements as part of the scope of work:

1. Grit Deposition Mitigation – Engineer shall evaluate up to three (3) alternatives to mitigate grit deposition within CB1. The three alternatives are assumed to be the following:
  - a. Minor modification – Shaping or filling in portions of CB1 with grout and the addition of additional air lines to keep grit in suspension.
  - b. Major modification – Structural reconfiguration of CB1 to provide better isolation of portions of CB1 for cleaning and to simplify grit removal.
  - c. New Grit Process – A new grit process unit located on the north side of the headworks building and within the flow path between the headworks and CB1. This alternative would facilitate the removal of grit prior to CB1.
2. Other Operational Improvements - Engineer shall evaluate the following operational improvements:
  - a. Vector Truck Hose Access Improvements – Engineer will review access requirements for vector hose access and identify additional access locations to facilitate cleaning of CB1.
  - b. Alvarado Influent Pump Station Force Main Discharge Modification – Evaluate and recommend improvements for the installation of a flapper gate, duckbill check valve, or equivalent on the discharge opening of discharge pipe from the Alvarado Influent Pump Station to CB1. If there is no feasible alternative, evaluate and recommend the installation of fall protection measures for personnel during grit removal maintenance activities.
  - c. Twin Force Main Discharge Modification – The twin force mains can discharge to the Headworks Building or into CB1. The normal operation is to discharge the wastewater from the twin force mains to the Headworks Building. Evaluate and recommend improvements for the replacement or rehabilitation of the flapper gates, or if there are no flapper gates provide recommendations for a new flapper gate, duckbill check valve, or equivalent on the force main discharge to CB1.

3. Bypass Alternatives - Engineer shall evaluate up to two (2) alternatives to provide temporary bypass pumping to allow for construction work within CB1. The bypass alternatives shall include redundancy sufficient for operation with the largest unit out of service. The two alternatives are assumed to be the following:
  - a. Temporary Bypass Pumps and Piping – This configuration would involve temporary pumps with temporary piping from the effluent channel at the headworks to individual primary clarifier inlet boxes at CB1.
  - b. Temporary Bypass Using the Alvarado Influent Pump Station – This configuration would involve allowing flow from Newark and Irvington force mains to pass through the headworks and then flow by gravity to the Alvarado Influent Pump Station by gravity via the Site Waste Pump Station. Flow from the Alvarado Basin would be combined with the flow from Newark and Irvington at the Alvarado Influent Pump Station Wet Well and pumped to CB1, where temporary piping would be provided to direct flow to the individual primary clarifier inlet boxes.
  
4. Recommendations for renewal/replacement of listed gates, valves, equipment and motorized actuators

The analysis of alternatives developed will take the following factors into consideration:

- Capital Cost, including demolition, structural modifications, new equipment (valves, gates, etc.), concrete repair, protective coatings, and temporary facilities for construction.
- Life Cycle Cost (O&M, labor, power, etc.)
- Footprint/Layout
- Process & Equipment Reliability
- Ease of Operation/Automation
- Maintenance Requirements
- Redundancy
- Constructability/Sequencing

Assumptions:

- Pipeline and valve inspection shall be limited to the portions visible from the outside. Internal inspection of pipeline and valves is not included in the scope of work.
- Prior to inspections, District staff shall perform lock-out-tag-out (LOTO) and conduct a walk through with V&A staff

- Prior to inspections, District will dewater the structures as much as practicable.
- The District will provide available as-built documentation and geographic information system (GIS) information.
- The District will provide information on existing applicable plant data.
- Backgrounds for the layouts shall be either CAD files or scanned record drawing images provided by the District.
- Services of a surveyor, utility locator, architect, geotechnical, mechanical or electrical engineer have not been included in the scope. Should these services be needed, it is assumed the District will contract directly for these services.
- Inspections can be performed within the timeline outlined in the tables above and the shutdowns can be executed to accommodate these timelines. Additional nights/days would require additional budget.
- District will open up the areas to be accessed by Engineer's subconsultant, V&A. V&A will then be self-sufficient in performing the work, including entry, inspections, testing, rescue/egress. District will close up areas at end of inspection period.

### Subtask 2.2 – Recommended Project

This task will document the configuration, footprint, and layout for the recommended CB1 Improvements Project. The recommended project (Project) will be selected and refined based on input provide by the District during the project workshops. The Project description shall include impacts to existing underground utilities, plant access and operations, odor, and hydraulics.

The following facilities shall be included in the layout:

- Control Box 1 related valves and gates
- Three Force Main Manholes upstream of CB1
- Alvarado Influent Valve Box where twin 42" FMs enter CB-1
- Alvarado Influent Valve Box at CB1 where Alvarado FM enters CB-1
- Headworks Building and Influent Valve Box
- Primary Clarifiers 1 through 6
- Required major piping and other underground modifications

A construction sequencing plan will be developed to facilitate the most effective and efficient way to complete the Project. The proposed sequence shall identify the required temporary pumping and piping systems, as well as consider the cost and schedule impacts, redundancy requirements, and operational risks from the pre-construction phase through startup and testing. The Engineer shall coordinate with the District to refine the selected bypass pumping alternative.

Engineer shall prepare an Engineer's Opinion of Probable Cost based on the recommended CB1 Improvements. The estimate shall be based on vendor price quotes for major equipment, detailed cost estimates for similar facilities, published construction cost estimating guides, in-house construction cost data, and the anticipated construction sequence and constraints. All cost resources shall be adjusted for work in the San Francisco Bay Area and bid award in the Fall of 2019. The Association for the Advancement of Cost Engineering, International (AACE) defines this as a Budget level estimate (Class 4), which is expected to be accurate within a range of plus 40 percent to minus 10 percent.

### Subtask 2.3 – Draft Basis of Design TM

The primary objective of the basis of design TM is to present information and to receive feedback sufficient to determine the major design concepts and configurations. This shall allow the final design to proceed with minimal conceptual or process changes. The basis of design document shall:

- Finalize the overall CB1 Improvements Project design goals and operations requirements
- Document engineering design and operating criteria
- Document basic facility layout
- Document construction sequencing and bypass requirements

The predesign report shall include the following developed under Tasks 2.1 and 2.2:

- Recommendations for rehabilitation of evaluated structures, equipment, valves, gates, and pipes, including estimates of probable costs for repair.
- Recommended operational improvements for CB1 and grit management
- Construction sequencing plan
- Bypass pumping plan
- Capital and life cycle cost estimate
- Development of predesign level design criteria, process schematics, and layouts

Structural preliminary support services shall include evaluation of the structural adequacy of existing structures related to proposed modifications. The structural design shall be based on the 2016 California Building Code.

Assumptions:

- Basis of Design TM will include 1 site plan drawing and 2 CB1 layout drawings
- The level of effort for the Predesign TM is based on the recommended project developed in Tasks 2.1 and 2.2 with no significant changes.

#### Subtask 2.4 – Final Basis of Design TM

Engineer shall address District comments and workshop outcomes on draft TM and finalize the TM.

#### Subtask 2.5 – QA/QC

Engineer shall conduct internal senior QA/QC reviews of the draft and final TM submittals for conformance to the industry standard of care.

### 4. DELIVERABLES

#### Task 1 – Project Management

##### Deliverables:

- Emails summarizing the action items from progress phone calls
- Monthly Progress Reports (6 assumed)
- Kickoff Meeting agenda, presentation materials, and minutes
- Workshop agenda, presentation materials, and minutes for 4 workshops

#### Task 2 – Basis of Design

##### Deliverables:

- Condition Assessment TM
- Draft Basis of Design TM (1 electronic PDF copy)
- Final Basis of Design TM (1 electronic PDF copy)

### 5. DIGITAL SUBMITTAL REQUIREMENTS

The Engineer shall submit one hard copy and one electronic copy of the final base map that shows the project area in accordance with the following:

Digital files submitted shall be based on accurate coordinate geometry calculations and the California State Plane Coordinate System, Zone III in feet, NAD83. The digital file submitted shall be in AutoCAD Release 2000 or later, “.dwg” or “.dxf” (digital exchange format) format and shall be in one (1) drawing file containing all layers, illustrating all existing and proposed improvements within the project area as well as any off-site work associated

with the project. Descriptive information (i.e. text) may be included in the appropriate layer, or added as a separate layer. Submitted digital files shall be in accordance with these minimum requirements, or as otherwise approved by the District. Submit these digital files on a CD or via an FTP site.

Each submittal shall be labeled with the project name, project number, company name, address and phone number.

All drawings shall use the California State Plane Coordinate System – Zone 3 in units of feet. The horizontal datum shall be the North American Datum of 1983 (NAD83) in units of feet and the vertical datum shall be the North American Vertical Datum of 1988 (NAVD88) in units of feet, or other datum as authorized by the District. The Drawings should include a conversion equation between NAVD88 and NGVD29 for the project site.

All files shall be uncompressed. Compressed files are acceptable only when using the WinZip utility or if the appropriate software to decompress the data is provided.

All drawing files shall have a North orientation of vertical (i.e. toward the top of the page).

Layers shall be coordinated with the District prior to any AutoCAD work.

Layer colors, line types and line weights shall be left to the discretion of the Engineer.

Submitted AutoCAD files shall NOT contain external reference or nested external reference files. All external references shall be bound into the drawing.

6. EQUIPMENT AND PIPELINE SCHEDULES – NOT USED

7. PAYMENT TO THE ENGINEER

Payment to the Engineer shall be as called for in Article 2 of the Agreement. The billing rate schedule is equivalent to an overall labor multiplier of 3.22, including profit. Subconsultants and outside services will be billed at actual cost plus 5%; other direct costs will be billed at actual cost; and mileage will be billed at prevailing IRS standard rate.

Total charges to the DISTRICT not-to-exceed amount shall be \$229,041. A summary of the anticipated distribution of cost between tasks is shown in Exhibit A.

The following table summarizes the previously-executed and proposed task orders and amendments under the Agreement:

<b>Task Order / Amendment</b>	<b>Not to Exceed Amount</b>	<b>Board Authorization Required?</b>	<b>District Staff Approval</b>
Task Order No. 1 – Predesign Services	\$229,041	Yes	Paul Eldredge
<b>Total</b>	<b>\$229,041</b>		

7. TIME OF COMPLETION

All work defined in this Task Order shall be complete in 180 calendar days after the execution of this Task Order and subject to the conditions of Article 3 of this Agreement. A schedule for the work is shown in Exhibit B. The key project milestone dates are as follows:

- Notice to Proceed: November 12, 2018
- Condition Assessment Report: January 23, 2019
- Draft Predesign Technical Memorandum: March 11, 2019
- Final Predesign Technical Memorandum: April 26, 2019 (Assumes the District completes review of the draft technical memorandum within three weeks of receipt)

9. KEY PERSONNEL

Engineering personnel assigned to this Task Order No. 1 are as follows:

<u>Role</u>	<u>Key Person to be Assigned</u>
Project Manager	Michael H. Matson, P.E.
Project Engineer	Jennifer Glynn, P.E.
Principal-in-Charge	David Richardson, P.E.

Key personnel shall not be changed except in accordance with Article 8 of the Agreement.

IN WITNESS WHEREOF, the parties hereto have made and executed this Task Order No. 1 as of November \_\_\_\_\_, 2018 and therewith incorporate it as part of the Agreement.

DISTRICT

ENGINEER

Union Sanitary District

Woodard & Curran, Inc.

By: \_\_\_\_\_  
Paul R. Eldredge, P.E.  
General Manager/District Engineer

By: \_\_\_\_\_  
Michael H. Matson  
Sr. Vice President

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

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



# Exhibit A - Fee Schedule

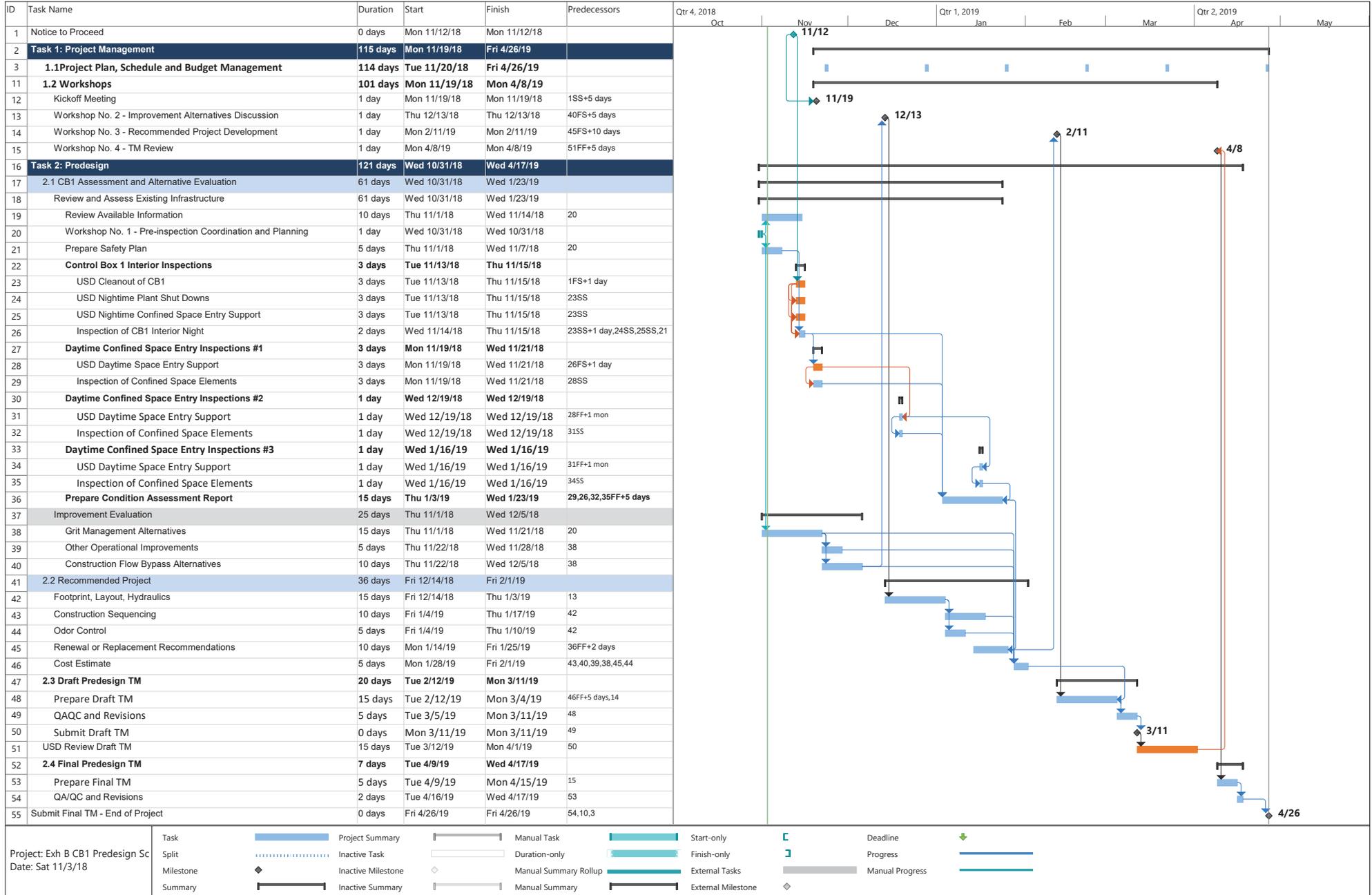
## Level of Effort and Fee Estimate

### Union Sanitary District Control Box 1 Improvements Project - Predesign

Tasks	Labor											Total Hours	Total Labor Costs (1)	Outside Services				Total ODCs (3)	Total Fee	
	Dave Richardson	Mike Matson	Jen Glynn	David Fairburn	Mark Takemoto	Chibby Alloway	Michael Headd		Senior Technical Reviewer	CAD Designer	Graphics			Admin.	TJCAA	V&A	Subconsultant Subtotal			Sub Consultant Total Cost (2)
	PIC	Project Manger	Project Engineer/ Bypass Pumping	Staff Engineer	Process Lead	Operations/ Operability	Odor Control	Technical Review	QA/QC	CAD	Graphics & Support				Structural	Condition Assessment				
	\$321	\$307	\$279	\$186	\$279	\$307	\$307	\$307	\$307	\$168	\$0	\$110								
<b>Task 1: Project Management</b>																				
1.1 Progress, Budget, and Schedule Tracking		16	8									6	30	\$7,804.00	\$948.00	\$4,577.00	\$5,525.00	\$5,801.00	\$0.00	\$13,605.00
1.2 Kickoff Meeting and Workshops	3	20	20		4	4							51	\$15,027.00	\$0.00	\$0.00	\$0.00	\$0.00	\$500.00	\$15,527.00
<b>Subtotal Task 1:</b>	<b>3</b>	<b>36</b>	<b>28</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>81</b>	<b>\$22,831.00</b>	<b>\$948.00</b>	<b>\$4,577.00</b>	<b>\$5,525.00</b>	<b>\$5,801.00</b>	<b>\$500.00</b>	<b>\$29,132.00</b>
<b>Task 2: Predesign</b>																				
<b>2.1 CB1 Assessment and Alternative Evaluation</b>																				
Review Existing Information		2	8	16		2							28	\$6,436.00	\$948.00	\$0.00	\$948.00	\$995.00	\$100.00	\$7,531.00
Prepare Safety Plan for Inspections		2											2	\$614.00	\$0.00	\$6,862.00	\$6,862.00	\$7,205.00	\$0.00	\$7,819.00
Existing Infrastructure Field Inspections		8		12									20	\$4,688.00	\$0.00	\$47,636.67	\$47,637.00	\$50,019.00	\$100.00	\$54,807.00
Condition Assessment Letter Report		2	2										4	\$1,172.00	\$0.00	\$35,964.00	\$35,964.00	\$37,762.00	\$0.00	\$38,934.00
Improvement Evaluation																				
Grit Management Alternatives		2	2	24	8								36	\$7,868.00	\$0.00		\$0.00	\$0.00	\$0.00	\$7,868.00
Other Operational Improvements		4	4	12	4								24	\$5,692.00	\$0.00		\$0.00	\$0.00	\$0.00	\$5,692.00
Bypass Alternatives		10	12	16	4	2							44	\$11,124.00	\$0.00		\$0.00	\$0.00	\$0.00	\$11,124.00
<b>Subtotal - Task 2.1</b>													<b>158</b>	<b>\$37,594.00</b>	<b>\$948.00</b>	<b>\$90,462.67</b>	<b>\$91,411.00</b>	<b>\$95,981.00</b>	<b>\$200.00</b>	<b>\$133,775.00</b>
<b>2.2 Recommended Project</b>																				
Footprint, Layout, and Hydraulics	2	4	8	16	4								62	\$12,898.00	\$3,792.00		\$3,792.00	\$3,982.00	\$0.00	\$16,880.00
Construction Sequencing		10	16	8		6							40	\$10,864.00	\$0.00		\$0.00	\$0.00	\$0.00	\$10,864.00
Odor Control		2	2				6						10	\$3,014.00	\$0.00		\$0.00	\$0.00	\$0.00	\$3,014.00
Cost Estimate		4	6	12									22	\$5,134.00	\$0.00		\$0.00	\$0.00	\$0.00	\$5,134.00
<b>Subtotal - Task 2.2</b>													<b>132</b>	<b>\$31,910.00</b>	<b>\$3,792.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$3,982.00</b>	<b>\$0.00</b>	<b>\$36,892.00</b>
2.3 Draft Predesign TM	2	12	16	30	2								64	\$15,148.00	\$948.00		\$948.00	\$995.00	\$0.00	\$16,143.00
2.4 Final Predesign TM	1	4	8	12									27	\$6,233.00	\$474.00		\$474.00	\$498.00	\$0.00	\$6,731.00
2.5 QA/QC													24	\$7,368.00	\$0.00		\$0.00	\$0.00	\$0.00	\$7,368.00
<b>Subtotal Task 2:</b>	<b>5</b>	<b>66</b>	<b>84</b>	<b>158</b>	<b>22</b>	<b>10</b>	<b>6</b>	<b>0</b>	<b>24</b>	<b>28</b>	<b>0</b>	<b>4</b>	<b>407</b>	<b>\$98,253.00</b>	<b>\$6,162.00</b>	<b>\$90,462.67</b>	<b>\$96,625.00</b>	<b>\$101,456.00</b>	<b>\$200.00</b>	<b>\$199,909.00</b>
<b>TOTAL All Tasks</b>	<b>8</b>	<b>102</b>	<b>112</b>	<b>158</b>	<b>26</b>	<b>14</b>	<b>6</b>	<b>0</b>	<b>24</b>	<b>28</b>	<b>0</b>	<b>10</b>	<b>488</b>	<b>\$121,084.00</b>	<b>\$7,110.00</b>	<b>\$95,039.67</b>	<b>\$102,150.00</b>	<b>\$107,257.00</b>	<b>\$700.00</b>	<b>\$229,041.00</b>

- The individual hourly rates include salary, overhead and profit, and a 2% escalation to account for work performed in the next calendar year.
- Sub Consultants will be billed at actual cost plus 5%.
- Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost.
- Woodard & Curran reserves the right to adjust its hourly rate structure and ODC markup at the beginning of the calendar year for all ongoing contracts.
- Woodard & Curran CAD hours assume the production of two drawings under Task 2.2.

## Exhibit B - Schedule



**Exhibit C  
Field Inspections**

**Field Inspection Matrix**

<b>Item</b>	<b>Asset</b>	<b>Timing</b>	<b>Confined Space Entry</b>	<b>Plant Shutdown Required</b>	<b>District Pre-Inspection Support</b>	<b>District Support Required During Inspection</b>	<b>Inspection Day(s)</b>
<b>Control Box 1 Interior Inspections</b>							
1a	Control Box 1 Structure (Interior)	Nighttime	Yes PRCS	Yes	USD to clean out CB1 1 one night prior to and during inspections	- Hold back influent flow to isolate CB1 - Provide access into CB1	Days 1 and 2 (night)
1b	Two 60-inch diameter sluice gates and motorized actuators (inside CB1)	Nighttime	Yes PRCS	Yes		- Hold back influent flow to isolate CB1 - Provide access into CB1	Day 1 (night)
1c	Four 72-inch by 24-inch weir gates and two 106-inch by 24-inch weir gates with manual actuators (inside CB1)	Nighttime	Yes PRCS	Yes		- Hold back influent flow to isolate CB1 - Provide access into CB1	Days 1 and 2 (night)
<b>Daytime Confined Space Entry Inspections</b>							
2	Force main manhole (not in service) upstream of CB1	Daytime	Yes	No	None	- Provide latch key for access into manhole	Day 3
3	Alvarado Influent Force Main Valve Box at CB1	Daytime	Yes	No	None	- Provide latch key for access into box	Day 4
4a	Alvarado Valve Box Twin Force Mains Influent	Daytime	Yes	No	None	- Provide latch key for access into box	Day 3
4b	Two 42-inch gate valves and motorized actuators (inside Alvarado Valve Box Twin Force Mains Influent)	Daytime	Yes	No	None	- Provide latch key for access into box	Day 3

**Exhibit C  
Field Inspections**

<b>Item</b>	<b>Asset</b>	<b>Timing</b>	<b>Confined Space Entry</b>	<b>Plant Shutdown Required</b>	<b>District Pre-Inspection Support</b>	<b>District Support Required During Inspection</b>	<b>Inspection Day(s)</b>
5	Two 30-inch diameter and One 36-inch diameter sluice gates and motorized actuators (inside CB1 Primary Influent Distribution Boxes)	Daytime	Yes	No	None	- Provide latch key for access into box -	Day 5 and Days 6 and 7 as needed
6	One 42-inch gate valve and motorized actuator (inside Headworks Valve Box)	Daytime	Yes	No	None	- Provide latch key for access into box	Day 4
<b>Daytime Inspections</b>							
7	Exterior of CB1, Alvarado Influent Valve Box, and Alvarado Influent Pump Station Valve Box at CB1	Daytime	No	No	None	None	Day 5
8	Odor Control Building and Maintenance Shop Building Chemical Containment Structures	Daytime	No	No	None	None	Day 4

## Exhibit C Field Inspections

### General Assessment Methods

Assessments and testing associated with field inspections are based on the following:

Type	Investigation Method	Description
A	Coating Thickness	Nondestructive testing to measure the existing thickness of a coating on ferrous and non-ferrous surfaces.
B	Concrete Sounding	Conduct sounding testing on the concrete surfaces of the structures. Sounding a surface refers to tapping the structure surfaces with a chipping hammer and listening for discontinuities within the surface. Locations for sounding testing will be conducted at locations of interest such as cracks, spalls or honeycombs on the structure at the discretion of the engineer conducting the evaluation.
C	Concrete Penetration Measurements	Perform concrete penetration measurements on accessible areas of structures to find depth to sound concrete. At least 2 penetration tests will be conducted on each structure. The concrete penetration tests will be performed by striking the concrete with a handheld chipping hammer and measuring the maximum depth to hard concrete.
D	Concrete pH Samples	Test the pH of the surface at up to two locations. The pH of concrete can substantiate the levels of concrete corrosion attack prevalent within the structures. One measurement per structure.
E	Depth to Reinforcing Steel	Measure the thickness of concrete protecting the reinforcing steel using an electronic gauge. These tests will be conducted at up to two locations per structures that are immersed or exposed to the wastewater environment.
F	Ultrasonic Metal Thickness Evaluation (UT)	Conduct A-scan UT measurements on metallic piping to determine remaining metal wall thickness. The field engineer will obtain pit depth readings at locations exhibiting excessive corrosion where UT measurements are not possible.
G	Visual Assessment	Visually document the condition of the structures with digital still photographs. Defects such as cracks, spalls, exposed reinforcing steel, steel corrosion or general patterns of deterioration will be documented.
H	Concrete Coring	Obtain 2 inch or 3 inch diameter cores. Test incremental chlorides, pH and compressive strength. Openings left from corings filled with non-shrink grout.

**Exhibit C  
Field Inspections**

**Assumed Assessments Required**

Name of Facility	Assessment Type							
	A	B	C	D	E	F	G	H
Control Box 1 Interior		X	X	X			X	
Two 60-inch sluice gates							X	
Four 72-inch by 24 weir gates and 106-inch by 24-inch weir gates							X	
Two force main manholes upstream of CB1	X					X	X	
Alvarado Influent Pump Station Valve Box at CB1	X					X	X	
Alvarado Influent Valve Box	X					X	X	
Two 42-inch gate valves inside Alvarado PS Influent Box	X					X	X	
OCB and MSB Chemical Containment Areas		X	X	X	X		X	X
Four 30-inch diameter and two 36-inch diameter sluice gates							X	
One 42-inch gate valve inside the Headworks Valve Box	X					X	X	
CB-1 Exterior (Visual only)								



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

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

Karen W. Murphy  
*Attorney*

**DATE:** November 5, 2018

**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  
Kevin Chun, Associate Engineer

**SUBJECT:** Agenda Item No. 14 - Meeting of November 12, 2018  
**Authorize the General Manager to Execute Task Order No. 3 with CH2M HILL Engineers, Inc. for the Odor Control Alternatives Study**

### **Recommendation**

Staff recommends the Board authorize the General Manager to execute Task Order No. 3 with CH2M HILL Engineers, Inc. (CH2M) in the amount of \$86,700 for the Odor Control Alternatives Study.

Funds for this project have been budgeted in the Special Projects Fund.

### **Background**

On November 15, 2017, the Bay Area Air Quality Management District (BAAQMD) adopted "Regulation 11, Hazardous Air Pollutants, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities" (Rule 11-18) to improve air quality and evaluate emissions from large facilities like factories, oil refineries, and wastewater treatment plants; as well as smaller operations like back-up generators and gas stations. The BAAQMD estimates that hundreds of facilities throughout the Bay Area will be subject to the new rule.

The BAAQMD has published a document describing Rule 11-18 Implementation Procedures, including the facilities that will be required to prepare assessments. The BAAQMD has categorized potentially higher risk facilities as Phase I facilities, that will be addressed first, and lower risk facilities as Phase II facilities, that will be addressed at a later time. The District's Alvarado Wastewater Treatment Plant (WWTP) and Irvington Pump Station are listed in Phase II of the BAAQMD Rule 11-18 implementation plan. The Newark Pump Station has similar sources

of air characteristics to the Irvington Pump Station; therefore, staff expects this facility will also be evaluated by BAAQMD for Rule 11-18 applicability.

Rule 11-18 states that if an assessment shows that a facility's actual emissions are within the action levels listed in Rule 11-18, the facility is required to prepare a plan for BAAQMD approval within 180 days of notification by BAAQMD and implement the plan within five years of BAAQMD approval.

BAAQMD has not yet published a schedule for the assessments of the Phase II facilities. However, staff wants to be proactive and hire a consultant to update the current WWTP's emissions inventory and perform a preliminary assessment to gauge whether a plan may be required. Although the Newark and Irvington Pump Stations have not yet been formally evaluated for Rule 11-18 applicability, the presence of a diesel standby generator at each facility makes it likely that an assessment will also be required for these facilities to determine whether preparation and implementation of a plan will be required.

#### **Task Order No. 1**

On January 9, 2017, the Board authorized the General Manager to execute an Agreement and Task Order No. 1 with CH2M in the amount of \$139,801 to conduct the Odor Control Alternatives Study. The main purpose of Task Order No. 1 is to evaluate alternative odor control technologies not identified in previous odor control evaluations.

#### **Task Order No. 2**

On February 26, 2018, the Board authorized the General Manager to execute Task Order No. 2 in the amount of \$190,033, to evaluate the potential of minimizing odors and capital improvement costs at the WWTP by the development, refinement, and implementation of a source control program in the collection system. CH2M conducted sampling and evaluation of the collection system and force main odors and recommended two odor control technology alternatives be pilot tested at the Newark and Irvington Pumps Stations. CH2M is currently evaluating the data and will share the preliminary results with staff soon.

One of the tasks in Task Order No. 2 included an evaluation of how the Rule 11-18 could affect the District's WWTP facilities. CH2M evaluated the WWTP and concluded that, in its current configuration, the WWTP may have some challenges meeting the Rule 11-18 exemption criteria. Therefore, an assessment would be required to determine whether the WWTP will need to prepare and implement a plan pursuant to Rule 11-18.

CH2M recommended that the District refine the emissions estimates and perform a preliminary assessment for the Alvarado WWTP, and depending on the outcome of the assessment, evaluate

potential opportunities. Early identification and implementation of measures prior to the official Rule 11-18 assessment may be advantageous if the official assessment will show that the District’s emissions do not exceed action levels.

**Task Order No. 3**

In addition to proceeding with the recommendations for the Alvarado WWTP, staff would like to have CH2M perform emissions calculations and an assessment of the Irvington and Newark Pump Stations.

The scope of services and fees of Task Order No. 3 are summarized as follows:

<b>Task No.</b>	<b>Task Description</b>	<b>Fee</b>
1	Kickoff Meeting	\$3,438
2	WWTP Assessment	\$20,572
3	Pressure Relief Valve Source Evaluation	\$1,476
4	Irvington Pump Station and Newark Pump Station Emissions Inventories	\$14,224
5	Irvington Pump Station and Newark Pump Station Assessments	\$16,430
6	Project Management	\$4,704
7	Optional Task: Assessment Exemption Submittal Preparation	\$7,262
8	Optional Task: Alternate WWTP Model and Revised Assessment	\$18,594
	<b>Total Not-to-Exceed Fee</b>	<b>\$86,700</b>

Staff believes the total not-to-exceed fee of \$86,700 is reasonable given the effort needed to conduct an assessment of the Alvarado WWTP and calculate the emissions and perform an assessment of the Newark and Irvington Pump Stations.

The total fee for the Project’s agreement with CH2M is summarized in the table below:

<b>Description</b>	<b>Fee</b>
Task Order No. 1 – WWTP Odor Study	\$139,801
Task Order No. 2 – Collection system Odor Study and BAAQMD Rule 11-18 Strategy	\$190,033
Amendment No. 1 to Task Order No. 2 – Additional Sampling cost for Pilot Testing	\$48,924

<b>Description</b>	<b>Fee</b>
Task Order No. 3 – Plant Assessment and Pump Stations Emissions and Assessment	\$86,700
<b>Total for this Agreement</b>	<b>\$465,458</b>

**Schedule**

Staff anticipates completion of Task Order No. 3 by spring of 2019.

Staff recommends the Board authorize the General Manager to execute Task Order No. 3 with CH2M HILL Engineers, Inc. in the amount of \$86,700 for the Odor Control Alternatives Study.

PRE/SEG/RC/KC;dl

Attachment: Task Order No. 3

# ODOR CONTROL ALTERNATIVES STUDY

## TASK ORDER NO. 3

to

## AGREEMENT

BETWEEN

UNION SANITARY DISTRICT

AND

CH2M HILL ENGINEERS, INC.

FOR

PROFESSIONAL SERVICES

Dated JANUARY 10, 2017

### 1. PURPOSE

The purpose of Task Order No. 3 is to perform an Assessment of The District's Alvarado Wastewater Treatment Plant (WWTP), estimate toxic air contaminants (TAC) emissions, and perform an Assessment of the Irvington and Newark Pump Stations. The objective of the Assessment is to estimate health indices from the estimated TAC emissions.

As part of Task Order No. 2, the Engineer evaluated TAC emissions from the Alvarado WWTP and concluded that the WWTP was unlikely to meet the Bay Area Air Quality Management District (BAAQMD) Regulation 11, Hazardous Air Pollutants, Rule 18, Reduction of Risk from Air Toxic Emissions at Existing Facilities (Rule 11-18) exemption criteria. Therefore, an Assessment is required to determine whether the Alvarado WWTP will need to prepare and implement a plan pursuant to Rule 11-18.

The Irvington Pump Station is also listed in the Phase 2 implementation phase of Rule 11-18. Similar sources of TACs at the Irvington Pump Station can be found at the Newark Pump Station. The presence of a large (2000+ horsepower) diesel emergency generator at the Newark Pump Station makes it likely that this facility will also be evaluated by BAAQMD for Rule

11-18 applicability. Therefore, the District requested the Engineer to estimate TAC emissions and perform an Assessment of both the Irvington and Newark Pump Stations.

## 2. PROJECT COORDINATION

All work related to this task order shall be coordinated through The District's Project Manager, Kevin Chun.

## 3. SCOPE OF SERVICES

The task numbers in this Scope of Services are associated with the cost data presented in Exhibit A.

### **Task 1: Kickoff Meeting**

The Engineer shall meet with the District to review the scope of work, schedule, emission estimating and modeling assumptions, and data needs. Before the meeting, the Engineer will request applicable Assessment guidance and pre-processed meteorology files from BAAQMD.

The Engineer will submit an agenda and a list of data needs to the District in advance of the meeting. After the meeting, the Engineer shall prepare meeting minutes to summarize meeting decisions and action items. The meeting minutes will also include discussion of BAAQMD Assessment guidance, Assessment approaches and assumptions, and identification of remaining data gaps.

### **Assumptions:**

- Deliverables will be provided electronically
- The Engineer has budgeted for one, two-hour meeting, for up to two of the Engineer's staff to attend the meeting

### **Deliverables:**

- Meeting agenda
- Data request
- Meeting minutes

## **Task 2: Alvarado WWTP Assessment**

Prior to performing the Assessment, the Engineer shall contact GE Jenbacher and the oxidation catalyst supplier to update the emissions of the cogeneration engines and engine emission control device. The goal of this effort is to obtain updated emissions and removal rates, which are specific to the current cogeneration engines the District has on site. This emissions rate will replace the Environmental Protection Agency (EPA) emissions factors and conservative removal rate used in the original TAC emissions estimate.

After the TAC emissions estimate is refined, the Engineer shall conduct the following tasks:

- Gather and compile data for input into the AERMOD dispersion model
- Run the dispersion model to estimate TAC ground-level concentrations
- Input TAC ground-level concentration data into the California Air Resources Board (CARB) Hotspots Analysis and Reporting Program (HARP)
- Select the risk scenario and exposure pathway criteria per California Office of Environmental Health Hazard Assessment (OEHHA) and BAAQMD guidance
- Summarize results from HARP for comparison to Rule 11-18 action levels

Emission point data will be required for the AERMOD dispersion model. The Engineer shall utilize H<sub>2</sub>S emission data for the odor scrubbers that was determined in Task Order 1. For cogeneration engines, flares, emergency diesel engines, gas dispensing facility and dual-fuel boiler, the Engineer shall work with the District to develop and confirm emission point data, including:

- Universal Transverse Mercator (UTM) coordinates
- Emission point height
- Emission point cross section shape and dimensions
- Emission point exhaust flow and temperature

Two scenarios will be evaluated for the Assessment:

- Scenario 1 – The Engineer shall use the TAC emission estimates determined in Task Order 2 for the Assessment. While hydrogen sulfide was estimated for each wastewater treatment process, other TACs (such as chloroform) were not estimated for each individual treatment process due to lack of available information. These sources were estimated for the entire WWTP Plant by mass balance and assumed to be emitted from the Alvarado Influent Pump Station. Therefore, for this scenario, the emission points for the non-hydrogen sulfide TACs, emitted from each wastewater treatment process, are assumed to emit from the Alvarado Influent Pump Station scrubber stack.
- Scenario 2 – The Engineer shall re-run Scenario 1 to replace the six existing emergency engines with two new emergency engines at the north end of the WWTP. The Engineer shall model the new generator emissions at the limits set by State and Federal regulations for Tier 2 emergency generators.

The Engineer shall perform the Assessment based on the TAC emission inventory, emission point characteristics, meteorological files, and OEHHA and BAAQMD guidance. The Assessment approach will consist of (1) applying the AERMOD dispersion model to determine ground-level concentrations of TACs emitted from the WWTP, and (2) applying version 2 of the CARB HARP to TAC ground-level concentrations, to estimate exposure to offsite receptors. HARP will be run consistent with the 2015 OEHHA Guidance Manual for Preparation of Assessments.

In addition, the point of maximum impact will be determined by the Engineer for health indices. HARP analysis options will follow BAAQMD and OEHHA guidance.

In the Assessment Strategy technical memorandum (TM) prepared in Task Order 2, the Engineer noted that BAAQMD has indicated that it may allow application of proximity adjustment factors (PAFs) to reduce prioritization scores only in certain cases. As a follow-up task to the TAC emission estimate, the Engineer shall contact BAAQMD to confirm criteria allowing inclusion of PAFs. A summary of this discussion and requirements for the District to meet the criteria to use PAFs, if applicable, will be provided as part of the summary TM.

A summary TM will be prepared by the Engineer that presents a summary of the Assessment basis and results for each of two alternative scenarios including the AERMOD inputs, summary of HARP receptor and pathway settings, location figures, and model result isopleths. The TM will also include a tabular breakdown and discussion of the sources and TACs that are the major contributors to the aggregate values. The analysis and discussion will focus on those values approaching or exceeding the Rule 11-18 action levels. The Engineer shall incorporate all the District comments from the draft TM into the final TM.

Following the Districts review of the draft TM, the Engineer shall develop a draft agenda and PowerPoint presentation to present a summary of results and findings. Outcomes and findings of this meeting will be incorporated into the final TM.

The Engineer shall conduct a meeting to review results and respond to questions and comments following submittal of the draft technical memorandum.

**Assumptions:**

- Only two facility scenarios will be evaluated, as described above.
- Diesel particulate matter will be used to represent all diesel emergency engine TAC emissions per CARB and BAAQMD direction; emissions of individual diesel combustion TACs will not be modeled.
- No field work will be required to develop emission point data. The data will be developed based on available information including The District process knowledge, engineering drawings, historical permit applications, and the approximate UTM location coordinates based on location data in Google Earth or U.S. Geological Survey resources.
- Meteorological files will be obtained from BAAQMD.
- Health pathways to be evaluated will be based on BAAQMD guidance.
- The Engineer shall work with BAAQMD to understand whether the District can utilize PAFs and, if so, how this can be done. This task does not include assisting the District in proving this facility meets PAF applicability criteria. This task to determine if the Alvarado WWTP meets PAF applicability is included in Task 6 because this may not need to be completed based on BAAQMD's response and the timeline for completing this work is unknown.
- The Engineer has budgeted for one, two-hour meeting for up to two of the Engineer's staff to attend the meeting.
- One round of consolidated District's comments will be incorporated into the final deliverables.

- Flare emission rates will not be revised as this information is sparse and the amount of digester gas sent to the flare is low. Therefore, a substantial benefit is not expected by adjusting these values.

**Deliverables:**

- One draft submittal TM in electronic format
- Five hard copies and one electronic copy of the final TM
- Draft and final workshop agenda and PowerPoint presentation files
- Summary meeting minutes
- AERMOD and HARP2 modeling files (provided electronically)

**Task 3: Pressure Release Valve Source Evaluation**

The Engineer performed a TAC emissions estimate for the WWTP in Task Order No. 2. For this estimate, it was assumed that pressure release valves (PRVs) can be excluded in the TAC emission estimate as these are designed to actuate only in emergency situations. However, the Engineer is aware that BAAQMD has placed permit conditions on PRV operation for other WWTPs and therefore may request information about PRV design and operation and associated emissions as part of Rule 11-18 implementation. Therefore, the Engineer recommended that the District develop an assessment of PRV design to justify exclusion of potential PRV emissions from the TAC emission estimates.

While PRVs releases should not significantly affect annual emissions and associated exposure, they may significantly impact hourly emissions and associated exposure depending on the mass emission rate of hydrogen sulfide gas from the PRVs relative to other WWTP process emission points. Therefore, the focus of PRV design assessment should be the probability of actuating any time during a given year.

The Engineer shall perform a desktop analysis to evaluate the potential for PRV emissions based on the historical pressure in the digester headspace and the PRV pressure threshold. In addition, if the probability of PRV emissions exceeds 0.01% (annual average), the Engineer shall provide an estimated digester gas emission rate, which will be included in a refined TAC emissions estimate.

The Engineer shall prepare a TM to summarize the evaluation method and the results of the evaluation. Should results show that PRVs “pop” less than 0.01% of the time, this memo will also serve as documentation that the

District can provide to BAAQMD showing that PRVs are insignificant sources.

**Assumptions:**

- The District shall provide historical digester (headspace) pressure data and digester as-builts
- The digester system has not changed significantly compared to historical operation
- This evaluation will include existing digesters only, as it is assumed that Digester No. 7 will be designed with adequate capacity so that PRVs are not “popping”
- This task will be completed prior to beginning Task 2

**Deliverables:**

- A memo summarizing evaluation and results

**Task 4: Irvington Pump Station and Newark Pump Station TAC Emission Inventories**

The Engineer will prepare TAC emission inventories for the Irvington and Newark pump stations. TAC emissions from wastewater flowing through the pump station will be estimated using the Bay Area Sewage Treatment Emissions (BASTE) model and the following approaches:

- Pump station influent wastewater TAC concentrations, except hydrogen sulfide, will be based on existing WWTP influent data and available pump station influent data
- Hydrogen sulfide emissions will be based on available dissolved sulfide data and the WATS collection system model
- Odor control scrubber exhaust rates will be used as the basis for estimating mass emissions
- It is assumed that no TAC removal is achieved in the scrubbers
- Diesel particulate emissions will be based on the EPA AP-42 Chapter 3.4 emission factor for total particulate matter (PM) unless the engine has an EPA-certified engine emission factor, or manufacturer’s data (if available)
- Estimated TAC emissions will be summarized in a table and used for the Assessment activities described in Task 4

**Assumptions:**

- The District will provide pump station flow and VOC influent data
- The Engineer shall utilize sampling data from Task Order No. 2; including dissolved sulfides, ammonia, pH and temperature
- The District will provide the pump station rated ventilation equipment exhaust rates, if any
- The District will provide pump station dimensional data, flow diagrams, and hydraulic profiles
- Emission estimates for hydrogen sulfide will be based on the WATS collection system model, developed as part of Task Order 2
- Diesel particulate matter will be used to represent all emergency engine TAC emissions per CARB and BAAQMD direction; emissions of individual diesel combustion TACs will not be modeled
- Eight hours for have been budgeted in case any site visits are required to verify data
- Task deliverables will be provided electronically only
- One round of consolidated District comments will be incorporated into the final deliverables

**Deliverables:**

- BASTE input and output files
- Spreadsheet emissions calculation for each Irvington and Newark emergency engine
- Summary table of the TAC emissions by source

**Task 5: Irvington Pump Station and Newark Pump Station Assessments**

An Assessment will be performed by the Engineer using the approaches and assumptions described in Task 2, except that only one scenario will be evaluated. The scenario to be evaluated consists of current annual pump station operation and operation of emergency standby engines based on most recent annual hour logs. TAC emissions determined in Task 3 will be used for this task.

A summary TM will be prepared by the Engineer that presents a summary of the Assessment basis and results including the AERMOD inputs, summary of HARP receptor and pathway settings, location figures, and model result isopleths. The TM will also include a tabular breakdown and discussion of the sources and TACs that are the major contributors to the aggregate values. The analysis and discussion will focus on those values

approaching or exceeding the Rule 11-18 action levels. The Engineer shall incorporate all the District's comments from the draft TM into the final TM.

Following the District review of the draft TM, the Engineer shall develop a draft agenda and PowerPoint presentation to present a summary of results and findings. Outcomes and findings of this meeting will be incorporated into the final TM.

**Assumptions:**

- One emissions scenario will be evaluated
- Emissions estimates for TACs will be as described in Task 3
- Diesel particulate matter will be used to represent all diesel emergency engine TAC emissions per CARB and BAAQMD direction; emissions of individual diesel combustion TACs will not be modeled
- Emission point characteristics will be provided by the District or determined from Google Earth. No measurements or site visits are required to determine emission point characteristics
- Meteorological files will be obtained from BAAQMD
- Health pathways to be evaluated will be based on BAAQMD guidance
- The Engineer has budgeted for one, two-hour, meeting for up to two of the Engineer's staff to attend the meeting
- One round of consolidated District's comments will be incorporated into the final deliverable

**Deliverables:**

- One draft submittal TM in electronic format
- Five hard copies and one electronic copy of the final TM
- Draft and final workshop agenda and PowerPoint presentation files
- Summary meeting minutes
- AERMOD and HARP2 modeling files (provided electronically)

**Task 6: Project Management**

The Engineer shall manage the efforts of the project team members and coordinate with the District Project Manager. The Engineer shall prepare and submit monthly invoices. Monthly invoices will be broken down by each task and list a summary of monthly work completed by the Engineer.

**Assumptions:**

- The project duration will not exceed 4 months.

**Deliverables:**

- Monthly invoices with summary of work completed

**Optional Task 7: Assessment Exemption Submittal Preparation**

The Engineer determined in Task Order No. 2 that the District's prioritization score was just above the Rule 11-18 Assessment exemption value after incorporating PAFs. However, as noted in the Engineer's Assessment Strategy TM, BAAQMD has indicated that it may not allow usage of PAFs in prioritization score calculations unless certain conditions are met. Therefore, two conditions are needed for the District to qualify for exemption to the requirement to perform an Assessment under Rule 11-18:

- BAAQMD would need to affirm applicability of PAFs in the District's calculation of its prioritization scores.
- Refinements are needed to TAC emissions that would, in conjunction with application of PAFs, result in prioritization score values below exemption criteria.

As part of Task 2, the Engineer shall communicate with BAAQMD to establish what documentation would need to be provided to support applicability of PAFs to calculation of prioritization scores and refine cogeneration engine TAC emissions. Task 8 also includes refining WWTP emissions using BASTE modeling, if necessary.

If the cogeneration engine TAC emissions are reduced sufficiently, and BAAQMD criteria for inclusion of PAFs can be achieved, the Engineer will prepare a TM in a format and content agreeable to BAAQMD, to document the District's exemption from Assessment preparation based on prioritization scores.

**Assumptions:**

- One round of consolidated District comments will be incorporated into the final deliverables

**Deliverables:**

- One draft submittal TM in electronic format
- Five hard copies and one electronic copy of the final TM

### **Optional Task 8: Wastewater Treatment Plant BASTE Modeling and Revised Assessment**

Except for hydrogen sulfide and ammonia emissions, WWTP TAC emission estimates determined in Task Order No. 2 were based on the conservative assumption of 100% volatilization. Removal mechanisms of biodegradation, sludge sorption, and emission in the effluent were ignored. As documented in the Assessment Strategy TM in Task Order No. 2, WWTP benzene and chloroform emissions estimated using the 100% volatilization model are significant contributors.

As an alternative to the conservative 100% volatilization assumption, WWTP emissions may be estimated using the Bay Area Sewage Treatment Emission (BASTE) model, which was developed to estimate emissions from WWTPs and includes these additional volatile organic compounds removal mechanisms. The Engineer will develop a BASTE model for the WWTP which will provide refined TAC emissions estimates that will be incorporated into the Assessment.

BASTE starts with influent flow data and TAC loadings into the WWTP and estimates emissions from each unit process based on various TAC physical properties and unit process characteristics. To run BASTE, the Engineer shall collect the following information:

- Existing plant design drawing set, including hydraulic profile and design criteria, mechanical and structural drawings of all the liquids processes
- Influent wastewater characteristics, including flow, pH, temp, TSS, VSS, dissolved sulfide, ammonia, VOCs
- Flow splits where there are multiple treatment trains
- Plant operating parameters including average amount of air introduced to the aeration basins, MLSS concentration, RAS ratio and WAS rate
- Chemicals used and dosing rates

BASTE results will be summarized by the Engineer in tabular format and compared with the 100% volatilization emission estimate. The Task 2 Assessment and TM will then be updated to include the refined WWTP TAC emissions estimated by BASTE and incorporate the BASTE WWTP emissions estimating basis.

The Engineer shall only pursue this task after the Assessment is completed and the results of the Assessment determine that the District is just above the exempt limit from Rule 11-18 plan requirements.

**Deliverables:**

- One draft submittal revised Task 2 TM in electronic format
- Five hard copies and one electronic copy of the final revised Task 2 TM

**Assumptions:**

- One round of consolidated the District comments will be incorporated into the final deliverables
- The District will provide hydraulic profile and design criteria data, and mechanical and structural drawings for all liquids processes
- The District will provide the average amount of air introduced into the aeration basins, TSS, VSS, VOCs, MLSS, RAS ratio (RAS flow rate/Plant flow rate), WAS rate, and chemicals usage. All other data was collected by the Engineer under Task Order Nos. 1 and 2

4. PAYMENT TO THE ENGINEER

Payment to the Engineer shall be as called for in Article 2 of the Agreement. The Multiplier for this work shall be 3.06, the profit shall be 10 percent, and the not-to-exceed amount shall be \$86,700. A summary of the anticipated distribution of cost and manpower between tasks is shown in Exhibit A.

The following table summarizes the previously-executed and proposed task orders and amendments under the Agreement:

<b>Task Order / Amendment</b>	<b>Not to Exceed Amount</b>	<b>Board Authorization Required?</b>	<b>District Staff Approval</b>
Task Order No. 1	\$139,801	Yes	Paul Eldredge
Task Order No. 2	\$190,033	Yes	Paul Eldredge
Amendment No. 1 to Task Order No. 2	\$48,924	No	Sami Ghossain
Task Order No. 3	\$86,700	Yes	Paul Eldredge
<b>Total</b>	<b>\$465,458</b>		

5. TIME OF COMPLETION

All work defined in this Task Order shall be complete in 105 calendar days after the execution of this Task Order and subject to the conditions of Article 3 of this Agreement.

<b>Milestone</b>	<b>Weeks from Notice to Proceed</b>
Kickoff meeting and data request	1
Receipt of The District data by the Engineer	3
Pump station TAC summary table	6
Alvarado WWTP Assessment Final TM	8
Alvarado WWTP Assessment Review meeting	9
Alvarado WWTP Assessment Final TM	11
Pump Station Assessment Draft TM	11
Pump Station Review meeting	12
Pump Station Assessment Final TM	15

6. KEY PERSONNEL

Engineering personnel assigned to this Task Order No. 3 are as follows:

<b>Role</b>	<b>Key Person to be Assigned</b>
Project Manager	Jay Witherspoon
Technical Director	Jeff Enzminger
QAQC Manager	John Frohning
Modeling Lead	Michelle Neumann
Senior Technologist	Scott Cowden
Engineer	Giuseppe Tomasino, Rosemarie Dimacali
Modeler	Alex Demith, Miaomiao Zhang
Environmental Scientist	Megan Moreen

Key personnel shall not be changed except in accordance with Article 8 of the Agreement.

IN WITNESS WHEREOF, the parties hereto have made and executed this Task Order No. 3 as of November \_\_\_\_\_, 2018 and therewith incorporate it as part of the Agreement.

DISTRICT

ENGINEER

UNION SANITARY DISTRICT

CH2M HILL ENGINEERS, INC.

By: \_\_\_\_\_  
Paul R. Eldredge, P.E.  
General Manager/District Engineer

By: \_\_\_\_\_  
Jay Witherspoon  
Vice President

**Exhibit A - Fee Schedule**

**Task Order No. 3**

	Project Manager	Technical Director	QAQC Manager	Modeling Lead	Senior Technologist	Engineer 2	Engineer 1	Modeler 2	Modeler 1	Environmental Scientist	Document Processing	Editor	Total Hours	Total Labor (\$)	Task Expenses (\$)	Task Totals (\$)
Rates	\$ 276.00	\$ 267.00	\$ 187.00	\$ 151.00	\$ 257.00	\$ 150.00	\$ 125.00	\$ 217.00	\$ 118.00	\$ 88.00	\$ 104.00	\$ 141.00				
Task 1 - Kickoff Meeting	2	8	0	0	0	4	0	0	0	0	0	0	14	\$ 3,288	\$ 150	\$ 3,438
Task 2 - Alvarado WWTP Assessment	1	26	8	16	4	2	0	0	0	72	8	6	143	\$ 20,472	\$ 100	\$ 20,572
Task 3 - Pressure Relief Valve Source Evaluation	1	0	0	0	0	8	0	0	0	0	0	0	9	\$ 1,476	\$ -	\$ 1,476
Task 4 - Irvington Pump Station and Newark Pump Station TAC Emission Inventories	0	8	0	0	4	4	8	30	25	0	0	0	79	\$ 14,224	\$ -	\$ 14,224
Task 5 - Irvington Pump Station and Newark Pump Station Assessments	1	12	8	16	4	4	0	0	0	64	8	6	123	\$ 16,330	\$ 100	\$ 16,430
Task 6 - Project Management	4	0	0	0	0	24	0	0	0	0	0	0	28	\$ 4,704	\$ -	\$ 4,704
Optional Task 7 - Assessment Exemption Submittal Preparation	0	10	0	0	0	2	0	0	0	40	2	4	58	\$ 7,262	\$ -	\$ 7,262
Optional Task 8 - Wastewater Treatment Plant BASTE Modelling and Revised Assessment	0	4	2	6	0	12	40	40	0	2	2	2	110	\$ 18,494	\$ 100	\$ 18,594
<b>Grand Total</b>	<b>9</b>	<b>68</b>	<b>18</b>	<b>38</b>	<b>12</b>	<b>60</b>	<b>48</b>	<b>70</b>	<b>25</b>	<b>178</b>	<b>20</b>	<b>18</b>	<b>564</b>	<b>\$ 86,250</b>	<b>\$ 450</b>	<b>\$ 86,700</b>

Notes:  
 Labor rates include direct costs, indirect costs, and profit resulting in a raw labor multiplier of 3.06  
 Expenses include Mileage and production/printing



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

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

Karen W. Murphy  
*Attorney*

**DATE:** November 5, 2018

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

**FROM:** Paul R. Eldredge, General Manager/District Engineer  
Sami E. Ghossain, Manager of Technical Services

**SUBJECT:** Agenda Item No. 15 – Meeting of November 12, 2018  
Information Item: **Status of Priority 1 Capital Improvement Program Projects**

### **Recommendation**

Information only.

### **Background**

In June 2018, the Board approved the Capital Improvement Program (CIP) budget for FY19 in the amount of \$9.29 million for the design and construction of 31 CIP projects.

These 31 projects are ranked as Priority 1, 2, or 3 projects based on criteria prepared by staff and approved by the Executive Team. A copy of the criteria used to prioritize the projects is attached for your reference.

The status of the Priority 1 CIP projects is reviewed by the Executive Team at the end of each quarter and a copy of the status report is attached for the Board's review. For FY19, 12 projects are ranked as Priority 1 projects and the remaining 19 are ranked as Priority 2 or Priority 3 projects.

Agenda Item No. 15  
Meeting of November 12, 2018  
Page 2

Also attached is a tabular summary of the number and nature of the ongoing CIP projects at the District during FY19.

PRE/SEG;dl

Attachments: Priority 1 CIP Projects for FY19 - Status Report  
Summary of CIP Projects for FY19  
Priority 1 CIP Project Criteria  
Priority 2 & 3 CIP Project Criteria

**Priority 1 CIP Projects for FY 19 – Status Report**

	<b>CIP Project</b>	<b>Planned Milestones</b>	<b>Status after 1<sup>st</sup> Quarter</b>	<b>Status after 2<sup>nd</sup> Quarter</b>	<b>Status after 3<sup>rd</sup> Quarter</b>	<b>Status after 4<sup>th</sup> Quarter</b>
<b>1</b>	Central Avenue Sanitary Sewer Relocation	Complete design by June 2019. This milestone is dependent on the City of Newark bridge design assessment and whether the force mains and trunk sewers would have to be relocated.	Force mains and trunk sewers were potholed and located. Survey information provided to the City's design consultant.			
<b>2</b>	Cherry St. PS	a) Complete predesign scope development by April 2019 b) Complete draft design-build RFP by August 2019	Consultant proposals for predesign phase received. Consultant selection in October 2018.			
<b>3</b>	Digester No. 2 Insp and Rehab	Complete condition assessment and predesign by June 2019.	Preliminary scope was reviewed by Staff.			
<b>4</b>	Digester No. 3 Insp and Rehab	a) Substantial completion by May 2019 b) Project acceptance by the Board by July 2019	Design of the mixing lines replacement was completed and RFQ was issued.			
<b>5</b>	Digester 7	a) Submit SRF Application by December 31, 2018 b) Complete design by June 2019	Value Engineering analysis was completed, and a number of project scope elements were modified.			
<b>6</b>	Force Main Corrosion Repairs – Phase 2	a) Substantial completion by August 2018	Project was substantially completed on August 17, 2018.			

		b) Project acceptance by the Board by October 2018	The Board accepted the project on October 8, 2018.			
7	Force Main Corrosion Repairs – Phase 3	Complete design by April 2019.	Design contract negotiations have begun.			
8	Headworks 3rd Bar Screen	a) Complete design by February 2019 b) Advertise for bid by March 2019	Project scope was modified to replace the two existing mechanical screens.			
9	Secondary Treatment Cap. Improv – Design	Complete process evaluation by December 2018.	On-site sampling and stress testing of the secondary clarifiers completed. Comprehend Phase Workshop was conducted.			
10	Standby Power Generation System Upgrade	a) Submit SRF Application by December 31, 2018 b) Receive draft equipment preselection RFQ package by February 2019 c) 50% design by April 2019 d) 90% design by September 2019 e) Complete design by October 2019	MBR electrical load evaluations were completed.			
11	WAS Thickeners	Complete predesign by June 2019.	RFP was issued and Carollo Engineers was			

			selected for the project predesign phase services.			
<b>12</b>	Wet Weather Flow Management	Identify project scope and budget by April 2019. This milestone is dependent on the completion of the Secondary Treatment Capacity Improvements Process Evaluation and the Plant Master Plan.	The Secondary Treatment Capacity Improvements Process Evaluation will consider processes that include wet weather management/ discharge.			

### SUMMARY OF CIP PROJECTS FOR FY19

Type of Project	Number of Projects	Names of Projects
<b>Administrative Facilities</b>	<b>One</b>	1. Plant Paving
<b>Collection System</b>	<b>Two</b>	1. Cast Iron/Pipe Lining, Phase VII 2. Central Avenue Sanitary Sewer Relocation
<b>Transport System</b>	<b>Nine</b>	1. Cathodic Protection Improvements – Transport 2. Cherry St. PS 3. Equalization Storage at Irvington 4. Equalization Storage at Newark 5. Force Main Corrosion Repairs – Phase 2 6. Force Main Corrosion Repairs – Phase 3 7. Newark and Irvington PS Chemical System Improvements 8. Newark Plant Site Security 9. Wet Weather Flow Management
<b>Treatment System</b>	<b>Nineteen</b>	1. Aeration Blower 11 (High Speed) 2. Alvarado Influent PS Improvements 3. Centrifuge Conveyance 4. Cogen Building Ventilation 5. Cogen Natural Gas and Power Meters 6. Control Box No. 1 Improvements 7. Degritter Building 2W Pipeline 8. Digester No. 2 Inspection and Rehab 9. Digester No. 3 Inspection and Rehab 10. Digester No. 7 11. Emergency Outfall Outlet Improvements

<b>Treatment System (continued)</b>		12. Headworks 3rd Bar Screen 13. Odor Scrubber System Improvements 14. Plant Grating Replacement 15. RAS Control Interim Improvements 16. Secondary Treatment Cap. Improv - Design 17. Standby Power Generation System Upgrade 18. Thickener Mechanism 19. WAS Thickeners
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**Total:**

**31**

## PRIORITY 1 CIP PROJECT CRITERIA

### Priority 1 Projects:

1. Project to repair or prevent an imminent critical infrastructure failure that could result in a threat to the public, or result in permit non-compliance.
2. A project designed to address public health and safety or employee health and safety.
3. Project to provide additional capacity in order to allow connection to the District system or to prevent a potential wet weather overflow from occurring.
4. Projects that have a deadline tied to receiving a loan or grant funding.
5. Projects where we have made a timeline commitment to a customer or other outside stakeholder.
6. A project in which the District may suffer financial losses or claims should the project be delayed.
7. A project which is part of a sequence of projects whose delay could result in delays to other projects at USD or other agencies.
8. A project in which an internal commitment has been made to provide a facility that significantly impacts another group from efficiently and effectively carrying out their core work. (Not a “nice to have” type project)

These criteria can apply to a study, design, or construction project.

## PRIORITY 2 & 3 CIP PROJECT CRITERIA

### Priority 2 Projects

1. These are planned projects related to the replacement of electrical and mechanical equipment identified by the Plant Master Plan – this equipment is not in imminent danger of failure but needs to be replaced at a future date.
2. These are planned pipeline rehab/replacement projects that are identified either by the Master Plan or by the Maintenance staff and need to be completed to improve the condition of existing sewers to safeguard against potential maintenance problems – these pipelines are not in imminent danger of failure.
3. These projects do not have any immediate negative impacts on either other agencies or other projects.
4. Examples: Blacow Road Sewer Replacement, Cast Iron Pipe Replacement, Thickener Mechanism 3&4 Replacement, Rehab of Clarifiers 5&6.

### Priority 3 Projects

1. These are capacity projects identified by the master plans that will address future capacity needs of the District.
2. These projects are place holders and need to be defined at a future date
3. The District will not suffer any financial loss or claim, if these projects are delayed.
4. Examples: Cedar Relief Sewer, Hetch Hetchy Relief Sewer, Digester No. 7, Secondary Clarifiers 7 & 8.



**Directors**

Manny Fernandez  
Tom Handley  
Pat Kite  
Anjali Lathi  
Jennifer Toy

**Officers**

Paul R. Eldredge  
*General Manager/  
District Engineer*

Karen W. Murphy  
*Attorney*

**DATE:** November 5, 2018

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

**FROM:** Paul R. Eldredge, General Manager/District Engineer  
Sami E. Ghossain, Manager of Technical Services

**SUBJECT:** Agenda Item No. 16 - Meeting of November 12, 2018  
Information Item: **First Quarterly Report on the Capital Improvement Program for FY19**

**Recommendation**

Information only.

**Background**

In June 2018, the Board approved the Capital Improvement Program (CIP) budget for FY19 in the amount of \$9.29 million for the design and construction of 31 CIP projects. The first quarter expenditures for FY19 are shown on the attached budget projection graphs. These graphs depict actual expenditures versus approved budget for the Capacity Fund 900, the Renewal and Replacement Fund 800 as well as for both funds, combined.

The total CIP expenditures up to September 30, 2018, were under the projections for the first quarter by approximately \$193,000. The main projects that had significant variances from the projected expenditures are the Digester 7, and the Force Main Corrosion Repairs – Phase 2 projects.

These primary variances are tabulated as follows:

<b>Project</b>	<b>Variance at the end of 1st Quarter (x \$1000)</b>	<b>Comments</b>
Digester 7	-83	Design has taken longer than expected due to the Value Engineering analysis and the subsequent modified scope.
Force Main Corrosion Repairs – Phase 2	-110	Progress payments made in the 4 <sup>th</sup> quarter of FY18 were higher than anticipated. Project was substantially completed on August 17, 2018.
<b>Total Variance for the 1<sup>st</sup> Qtr.</b>	<b>-193</b>	

In addition to the two (2) projects listed above, the following high-priority projects will be either in design or in construction during FY19:

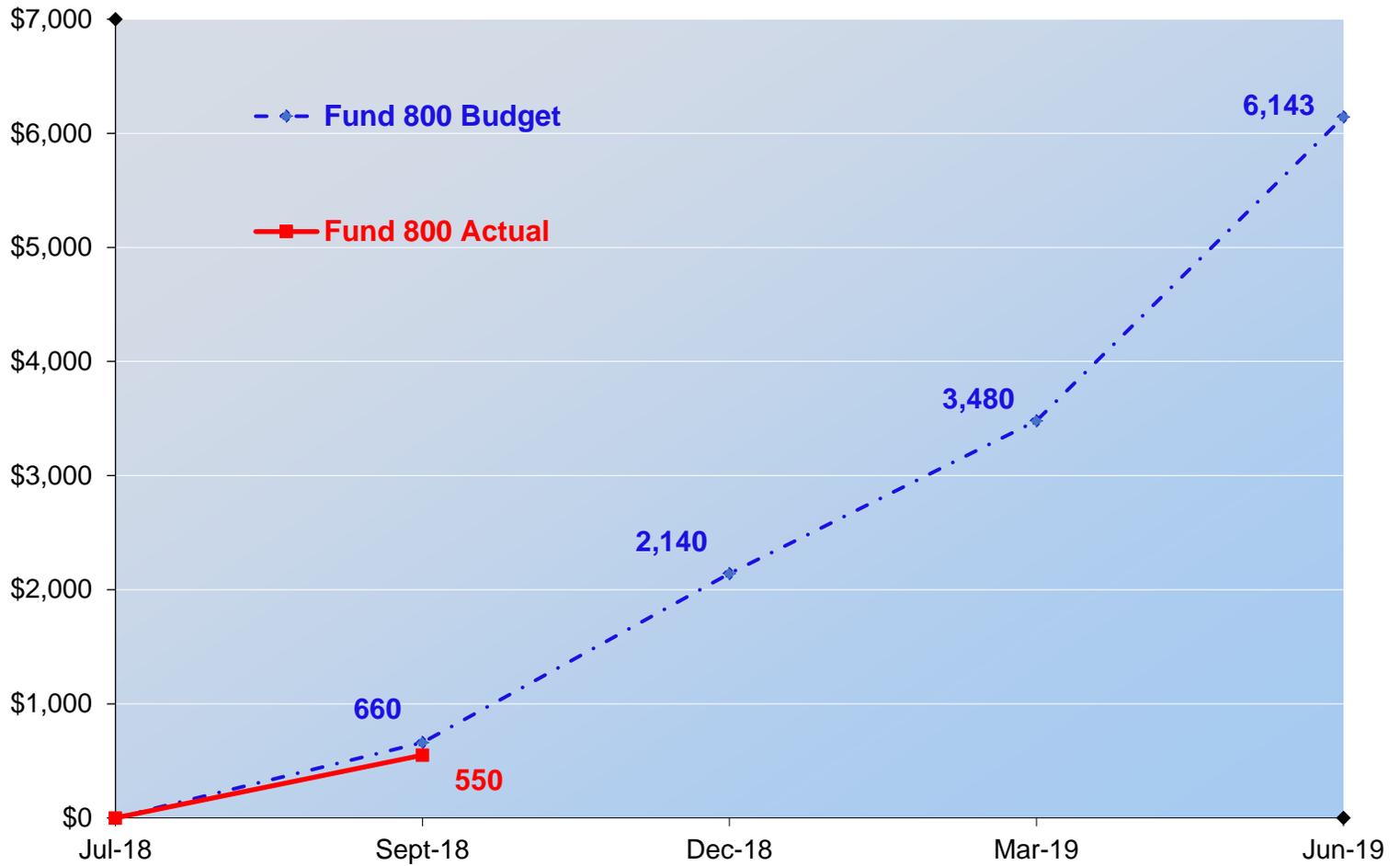
1. Central Avenue Sanitary Sewer Relocation
2. Cherry St. PS Improvements
3. Digester No. 2 Inspection and Rehabilitation
4. Digester No. 3 Inspection and Rehabilitation
5. Force Main Corrosion Repairs – Phase 3
6. Headworks 3rd Bar Screen
7. Secondary Treatment Capacity Improvements
8. Standby Power Generation System Upgrade
9. WAS Thickeners Improvements
10. Wet Weather Flow Management

Also, there are nineteen (19) other smaller projects that will be either in design or in construction during FY19.

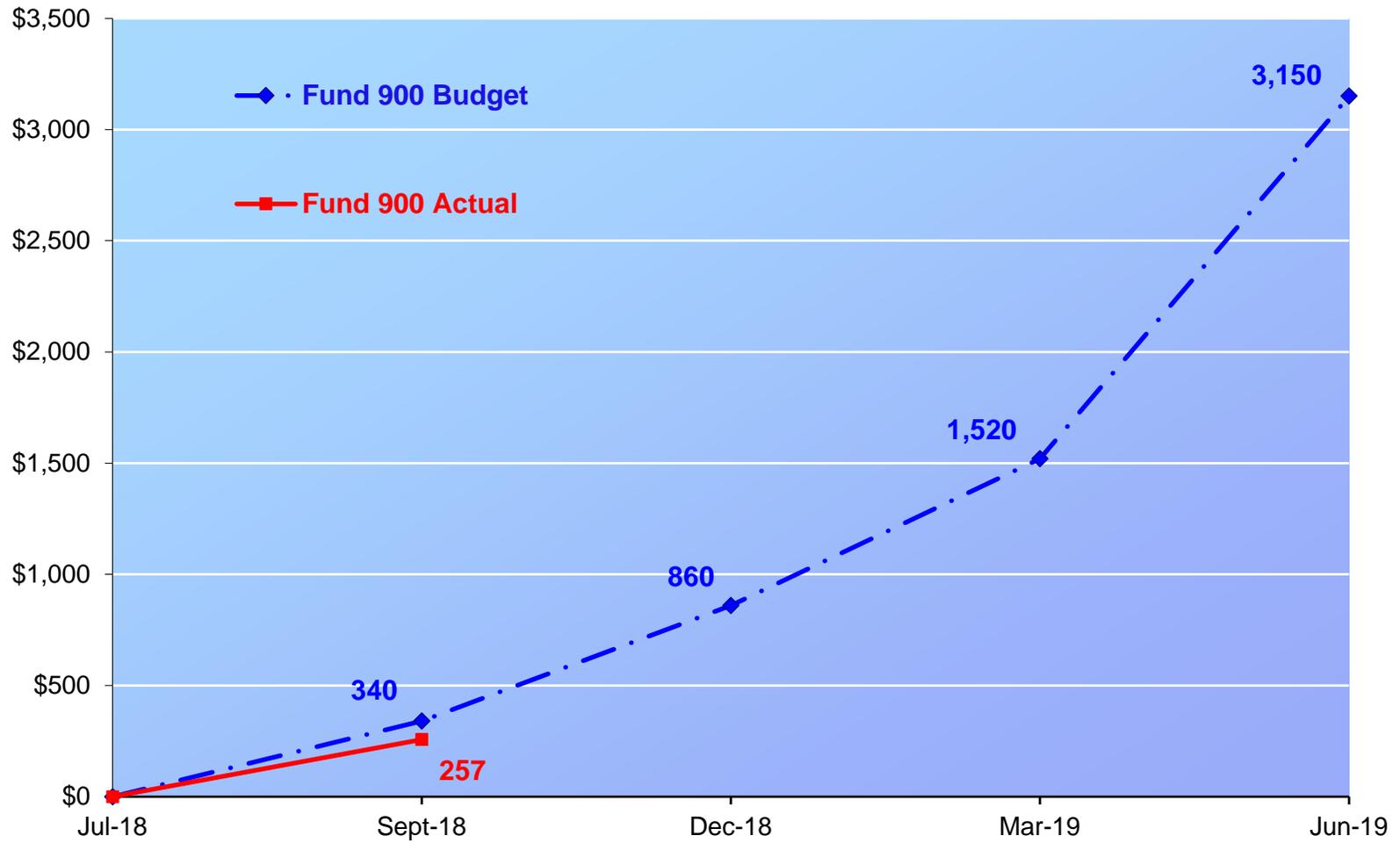
PRE/SEG;dl

Attachment: Budget Graphs

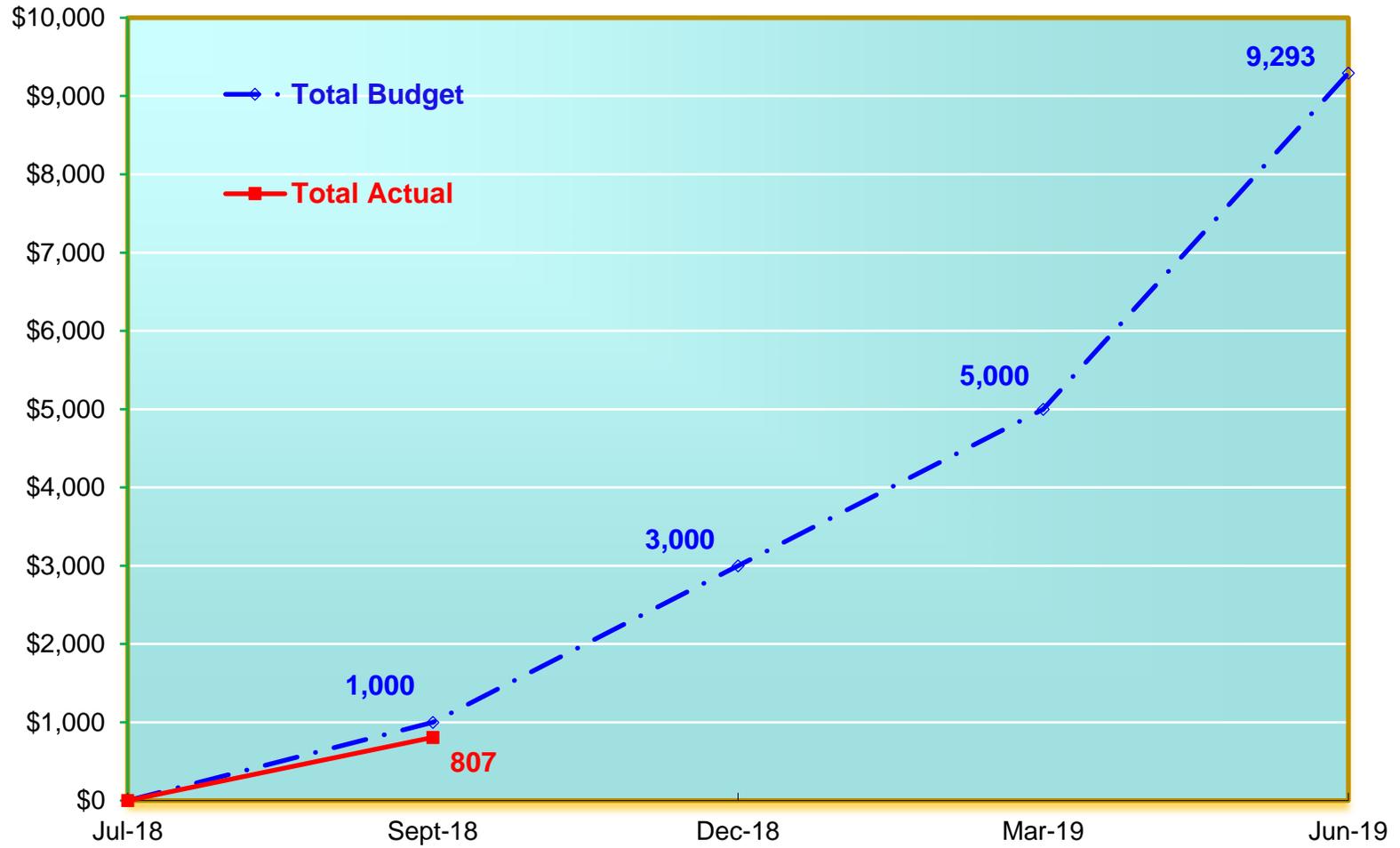
### Structural R&R



# Capacity



### Total Cumulative





## Summary of the EBDA Commission Meeting

Thursday, October 18, 2018, at 9:30 a.m.

Prepared by: P. Eldredge

- Commissioners Johnson, Cutter, Handley, Becker, and Peixoto were present.
- The Consent Calendar was approved unanimously and included the Commission Meeting Minutes, List of Disbursements, and Treasurer's Report.
- The Commission unanimously approved the reports from the Managers Advisory, Financial Management, Regulatory Affairs, Operations & Maintenance, and Personnel committees. The following items were discussed:
  - **General Managers Report** - The General Manager attended a Consequences of Conservation workshop which addressed the impacts of water conservation on wastewater systems, including flow and velocity as well as the changing characteristics of what is coming into the plant. She will also attend the ReNUWit Industrial Advisory Board Meeting today. ReNUWit is a research consortium including Stanford, Berkeley, Colorado School of Mines and New Mexico State Universities looking at water reuse and innovative ways to treat wastewater. BACWA is a member, and EBDA will look to partner on pilots and research that will benefit EBDA agencies.
  - **Manager's Advisory Committee** met with the General Manager on October 17, 2018. The General Manager reported that the MAC discussed the nutrients watershed permit, JPA cost allocation ideas, and issues related to emerging contaminants. In particular, the MAC discussed participating in a monitoring program for pesticides managed by the California Department of Pesticide Regulation (DPR). An example of a pesticide typically found in wastewater is the flea and tick treatment Fipronil. The monitoring program will help identify different pathways for compounds getting into the wastestream and provide DPR with data to support regulation of pesticides.
  - **Financial Management Committee** met with the General Manager on October 15, 2018. The General Manager reviewed the amended expense summary report, directing attention to the credits that will be applied to the final 2017-18 billings. The overall budget was under by 14%, due mostly to dry winter weather conditions, management of bacterial contamination, and operational savings. An item that was over budget was benefits, but that was due to the deliberate decision by the Commission to apply \$100K toward EBDA's unfunded pension liability. There was a discussion regarding whether to return year-end credits to the Member Agencies in the future or pay down EBDA's unfunded liability. The final LAVWMA principal and interest payoff payments have been issued to the Member Agencies.

- **Regulatory Affairs Committee** met with the General Manager on October 16, 2018. The General Manager reviewed the quarterly reporting checklist. The Nutrients Group Annual report on trends in nutrient loads and flows was discussed including how the data might be used to calculate future load caps. There will be a survey for BACWA member agencies to provide information on population growth in their respective areas, as well as nutrient reduction project planning status. Target loads in the next permit will be based on current loads because the science has not yet concluded whether nutrient reductions will be needed, and if so, how much.
- **Operations and Maintenance (O&M) Committee** - The Operations and Maintenance Manager met with the O&M Committee on October 15, 2018. The O&M Manager reported out on the status of the HEPS MCC project, and he reported that EBDA had come to an agreement with the County to share costs for repair of a break in the Skywest line under the County's Bockman Canal widening project. The O&M Manager also stated that in two weeks, the Asset Management Plan Update kick-off and tabletop assessment with GHD would take place. The Committee discussed Bay Area AQPI Project, which aims to improve storm and precipitation predictions for better allocation of resources. EBDA is being asked to help fund and East Bay radar site.
- **Resolution to Become a Party to the California Water/Wastewater Agency Response Network WARN 2007 Omnibus Mutual Assistance Agreement**

The General Manager presented information pertaining to the purpose of CalWARN - statewide mutual aid. By signing the agreement, EBDA would become eligible for utilizing resources in an emergency. Staff is also working on other elements of EBDA's emergency response and business continuity planning.

Commissioner Peixoto moved to approve the resolution. The motion was seconded by Commissioner Becker and carried unanimously, 5-0.

Ayes: Commissioners Johnson, Cutter, Peixoto, Becker, and Chair Handley  
 Noes: None  
 Absent: None  
 Abstain: None

- **Personnel Committee** met with the General Manager on October 16, 2018. The Committee discussed Commissioner compensation and agreed that moving along in small increments is preferred rather than a one-time large percentage increase. The Commission agreed in concept on the Committee's recommendation of a 2.6% increase from \$234 per meeting to \$240 per meeting. There was also discussion about whether the Commission had the authority to change the maximum number of meetings per month, and the source of the regulation limiting payment to one meeting per day and whether it applies to EBDA. It was agreed that a Resolution will be brought back at the next Commission meeting, along with a Staff Report summarizing the legal sources of the meeting and payment limitations and whether the Commission has flexibility to make changes.

- **Resolution Approving Revisions to the Authority’s Personnel Policy**

The Committee discussed updated wording regarding reporting unauthorized interviews to the General Manager. The General Manager explained that this wording is not intended to prevent whistleblowing. In addition, a lot of benefit language has been moved to the Compensation Policy because it makes more sense there, and avoids duplicate information in two policies. A consultant will be used to assist staff in developing formal language regarding the cafeteria plan for incorporation in the Compensation Plan, which will be brought to the Commission for consideration next Spring.

Commissioner Cutter moved to approve the resolution. The motion was seconded by Commissioner Becker, and approved unanimously, 5-0.

Ayes: Commissioners Johnson, Cutter, Peixoto, Becker, and Chair Handley  
Noes: None  
Absent: None  
Abstain: None

- **Items from the Commission and Staff**

The Commission requested that AQPI and DPR be included in the EBDA glossary. The Commission also suggested and agreed that the Pledge of Allegiance should be added to the Agenda.

**UNION SANITARY DISTRICT  
CHECK REGISTER  
10/13/2018-11/02/2018**

Check No.	Date	Dept	Invoice No.	Vendor	Description	Invoice Amt	Check Amt
169305	11/1/2018	143	506.3	CRATUS INC	FORCE MAIN CORROSION REPAIRS - PHASE 2		
						\$212,990.00	\$212,990.00
169177	10/18/2018	143	201180002	HAZEN AND SAWYER	SECONDARY TREATMENT CAP. IMPROV - DESIGN		
						\$76,207.23	\$76,207.23
169201	10/18/2018	110	30105006	SYNAGRO WEST LLC	AUGUST 2018 BIOSOLIDS DISPOSAL		
						\$70,573.86	\$70,573.86
169263	10/25/2018	170	013720181010	PACIFIC GAS AND ELECTRIC	SERV TO 10/03/18 BOYCE RD PS		
						\$2,466.15	\$66,006.45
	10/25/2018	110	170120181011		SERV TO 09/21/2018 PLANT		
						\$63,540.30	
169179	10/18/2018	143	20188104	IER ENVIRONMENTAL SERVICES INC	TEMPORARY SUPER OXYGENATION SYSTEM PILOT SYSTEM		
						\$58,642.40	\$58,642.40
169332	11/1/2018	110	1286020	POLYDYNE INC	40,720 LBS CLARIFLOC WE-539		
						\$5,362.82	\$46,943.58
	11/1/2018	110	1288200		38,660 LBS CLARIFLOC C-6267		
						\$41,580.76	
169238	10/25/2018	143	10565	DW NICHOLSON CORP	HYPO TANKS AND PIPING REPLACEMENT		
						\$38,616.60	\$38,616.60
169202	10/18/2018	120	39435	TOYOTA MATERIAL HANDLING N CA	(1) FORKLIFT		
						\$33,952.58	\$33,952.58
169159	10/18/2018	143	170710	CAROLLO ENGINEERS	PLANT ASSET CONDITION ASSESSMENT UPDATE		
						\$9,892.64	\$32,604.42
	10/18/2018		170714		DIGESTER NO. 3 INSP & REHAB		
						\$22,711.78	
169205	10/18/2018		533620180924	US BANK CORP PAYMENT SYSTEM	MONTHLY CAL-CARD STMT - SEPT 2018		
						\$26,769.45	\$26,769.45

**UNION SANITARY DISTRICT  
CHECK REGISTER  
10/13/2018-11/02/2018**

Check No.	Date	Dept	Invoice No.	Vendor	Description	Invoice Amt	Check Amt
169264	10/25/2018	170	359324	PENN TOOL CO INC	ASTD PARTS & MATERIALS	\$171.50	\$25,855.96
	10/25/2018	170	359497		ASTD PARTS & MATERIALS	\$199.50	
	10/25/2018	170	359498		(1) CLAMP KIT	\$84.50	
	10/25/2018	170	359499		ASTD PARTS & MATERIALS	\$582.50	
	10/25/2018	171	358659		(1) LATHE	\$24,817.96	
169222	10/25/2018	143	11324587	BROWN & CALDWELL CONSULTANTS	STANDBY POWER SYSTEM UPGRADE	\$21,335.11	
169204	10/18/2018	110	904673	UNIVAR USA INC	4798.3 GALS SODIUM HYPOCHLORITE	\$3,443.53	\$21,026.24
	10/18/2018	110	904958		4799.6 GALS SODIUM HYPOCHLORITE	\$3,444.46	
	10/18/2018	110	905265		4949 GALS SODIUM HYPOCHLORITE	\$3,551.67	
	10/18/2018	110	904170		4949.5 GALS SODIUM HYPOCHLORITE	\$3,552.04	
	10/18/2018	110	904419		4851.3 GALS SODIUM HYPOCHLORITE	\$3,481.57	
	10/18/2018	110	904180		4950.8 GALS SODIUM HYPOCHLORITE	\$3,552.97	
						\$3,480.41	
169352	11/1/2018	110	906798	UNIVAR USA INC	4849.7 GALS SODIUM HYPOCHLORITE	\$3,480.41	\$20,818.23
	11/1/2018	110	906964		4848.6 GALS SODIUM HYPOCHLORITE	\$3,479.62	
	11/1/2018	110	907610		4698.7 GALS SODIUM HYPOCHLORITE	\$3,372.05	
	11/1/2018	110	907653		4810.8 GALS SODIUM HYPOCHLORITE	\$3,452.49	
	11/1/2018	110	907382		4849.4 GALS SODIUM HYPOCHLORITE	\$3,480.19	
	11/1/2018	110	907629		4951.5 GALS SODIUM HYPOCHLORITE	\$3,553.47	
						\$19,904.41	
169252	10/25/2018	122	180274	MANSFIELD OIL CO OF GAINSVILLE	6000 GALS ULSD CARB DIESEL	\$19,904.41	\$19,904.41

**UNION SANITARY DISTRICT  
CHECK REGISTER  
10/13/2018-11/02/2018**

Check No.	Date	Dept	Invoice No.	Vendor	Description	Invoice Amt	Check Amt
169196	10/18/2018	122	3713855	SC FUELS	5,929 GALS UNLEADED REGULAR GASOLINE	\$18,484.43	\$18,484.43
169143	10/18/2018	171	2000116798	AECOM TECHNICAL SERVICES INC	HAZMAT CONSULTING SERVICES	\$16,715.04	\$16,715.04
169210	10/18/2018	143	154553	WOODARD & CURRAN INC	NEWARK BASIN MASTER PLAN/PACP UPDATE	\$15,570.14	\$15,570.14
169259	10/25/2018	132	10	MUSGRAVES CONSULTING SERVICES	SPECIALTY FINANCIAL SERVICES CONSULTANT	\$14,921.70	\$14,921.70
169273	10/25/2018	110	905893	UNIVAR USA INC	4850 GALS SODIUM HYPOCHLORITE	\$3,480.63	\$13,847.10
	10/25/2018	110	905628		4798.6 GALS SODIUM HYPOCHLORITE	\$3,443.74	
	10/25/2018	110	906568		4798.3 GALS SODIUM HYPOCHLORITE	\$3,443.53	
	10/25/2018	110	906344		4848 GALS SODIUM HYPOCHLORITE	\$3,479.20	
169152	10/18/2018		6497	BAY AREA COATING CONSULTANT	COATING & LINING INSPECTION SERVICES	\$12,373.50	\$12,373.50
169282	11/1/2018	172	205262	ADVANCED CHEMICAL TRANSPORT	HAZARDOUS MATERIAL MANAGEMENT	\$329.02	\$12,347.46
	11/1/2018	172	205325		HAZARDOUS MATERIAL MANAGEMENT	\$12,018.44	
169293	11/1/2018	141	228003	BADGER DAYLIGHTING CORP	FORCE MAIN POTHOLING - CENTRAL AVE SANITARY SEWER RELO	\$5,937.86	\$10,923.97
	11/1/2018	141	229339		FORCE MAIN POTHOLING - CENTRAL AVE SANITARY SEWER RELO	\$4,986.11	
169156	10/18/2018		33956	CALIFORNIA WATER TECHNOLOGIES	41,300 LBS FERROUS CHLORIDE	\$5,285.82	\$10,646.56
	10/18/2018	110	33985		42,640 LBS FERROUS CHLORIDE	\$5,360.74	
169229	10/25/2018	141	183418092	CIVIL ENGINEERING ASSOC. INC	PREPARE LEGALS & PLATS FOR QUITCLAIM OF 4 SS EASEMENTS	\$10,300.00	\$10,350.97
	10/25/2018	141	183418091		PREPARE LEGALS & PLATS FOR QUITCLAIM OF 4 SS EASEMENTS	\$50.97	

**UNION SANITARY DISTRICT  
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10/13/2018-11/02/2018**

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169244	10/25/2018	170	9910307512	GRAINGER INC	(1) WEATHERPROOF HORN	\$172.72	\$9,789.14
	10/25/2018	171	9911453356		ASTD HAND TOOLS	\$359.20	
	10/25/2018	171	9918822470		CREDIT HAND TOOLS INV 9911453356	\$-130.61	
	10/25/2018		9904456135		36 PR SAFETY GLASSES	\$105.89	
	10/25/2018	122	9911326693		5 HITCH PINS, BENT	\$16.90	
	10/25/2018	170	9907594718		1 COMPRESSOR	\$9,265.04	
169155	10/18/2018		231927	BURKE, WILLIAMS & SORENSON LLP	CIP - SEPTEMBER 2018	\$4,750.20	\$9,780.68
	10/18/2018	150	231925		EBDA - AUGUST 2018	\$2,227.68	
	10/18/2018	150	231926		GENERAL LEGAL - SEPTEMBER 2018	\$2,802.80	
169311	11/1/2018	170	241192	FRANK A OLSEN COMPANY	IPS PUMP 5 DISCHARGE VLV NEW ROTORK	\$9,198.73	\$9,198.73
169308	11/1/2018	143	10627	DW NICHOLSON CORP	NEWARK PS MOD VALVE & BOOST LINE MODS	\$7,702.86	\$7,702.86
169356	11/1/2018	143	155083	WOODARD & CURRAN INC	HEADWORKS SCREEN NO. 3	\$6,884.90	\$6,884.90
169190	10/18/2018	170	8474689	OVIVO USA LLC	OVIVO SECONDARY CLAIRIFIER 6 RAS SEAL	\$6,511.29	\$6,511.29
169248	10/25/2018	132	22306	IEDA INC	LABOR RELATIONS CONSULTING 10/01/18 - 12/31/2018	\$6,057.00	\$6,057.00
169241	10/25/2018	170	241137	FRANK A OLSEN COMPANY	PUMP ROOM - 3 SWING CHECKS SLUDGE PUMPS	\$5,935.94	\$5,935.94

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169146	10/18/2018		4107393120180930	ALAMEDA COUNTY WATER DISTRICT	SERV TO: 09/28/18-MTR HYD 16435270		
						\$1,045.70	\$5,582.52
	10/18/2018		4107393420180930		SERV TO: 09/28/18-MTR HYD 15952331	\$616.55	
	10/18/2018		4107393220180930		SERV TO: 09/28/18-MTR HYD 16435275	\$544.32	
	10/18/2018		4107393020180930		SERV TO: 09/28/18-MTR HYD 15141193	\$1,130.68	
	10/18/2018		4107361120180930		SERV TO: 09/28/18-MTR HYD 15001101	\$552.82	
	10/18/2018		4107393520180930		SERV TO: 09/28/18-MTR HYD 16435269	\$671.79	
	10/18/2018		4107361320180930		SERV TO: 09/30/18-MTR HYD 16320037	\$506.08	
	10/18/2018		4108253920180930		SERV TO: 09/28/18-MTR HYD 32896061	\$514.58	
169171	10/18/2018	172	1121252	FLUID COMPONENTS INTERNATIONAL	1 INSERTION AIR/GAS MASS FLOW METER	\$5,558.50	\$5,558.50
169235	10/25/2018	173	10267469502	DELL MARKETING LP C/O DELL USA	NETWORK ADAPTER	\$746.26	\$5,492.18
	10/25/2018		10267918218		IT WORKSTATION	\$4,745.92	
169296	11/1/2018	110	34043	CALIFORNIA WATER TECHNOLOGIES	40,180 LBS FERROUS CHLORIDE	\$4,945.28	\$4,945.28
169322	11/1/2018	170	967826	KAMAN INDUSTRIAL TECHNOLOGIES	ASTD PARTS & MATERIALS	\$708.41	\$4,807.44
	11/1/2018		429473		TEFLEX FOR FAN JOINTS	\$4,099.03	
169320	11/1/2018	132	23029	ICE SAFETY SOLUTIONS INC	FIRST AID TRAINING	\$4,575.00	\$4,575.00
169283	11/1/2018	122	181002197	AIRTECH MECHANICAL INC	INSTALLATION OF AIR VENTILATORS	\$3,992.00	\$3,992.00
169300	11/1/2018		PNB0737	CDW GOVERNMENT LLC	60 ADOBE ACROBAT PRO LICENSES	\$3,900.00	\$3,900.00
169299	11/1/2018	143	171143	CAROLLO ENGINEERS	PLANT ASSET CONDITION ASSESSMENT UPDATE	\$3,886.11	\$3,886.11

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169193	10/18/2018	171	258931	PRESTIGE LENS LAB	SAFETY GLASSES - SIMMONS, PAUL		
						\$325.96	\$3,787.14
	10/18/2018	122	258916		SAFETY GLASSES - RODRIGUES, J	\$259.50	
	10/18/2018	121	259019		SAFETY GLASSES - SHENK, R	\$268.89	
	10/18/2018	172	259022		SAFETY GLASSES - PACHMAYER, C	\$268.89	
	10/18/2018	121	259119		SAFETY GLASSES - PORTEOUS, T	\$273.27	
	10/18/2018	123	258921		SAFETY GLASSES - DIOSDADO, A	\$211.82	
	10/18/2018	122	258920		SAFETY GLASSES - LUNA, M	\$211.82	
	10/18/2018	172	258925		SAFETY GLASSES - AGBUYA, R	\$268.89	
	10/18/2018	141	259026		SAFETY GLASSES - RODRIGUEZ, T	\$292.43	
	10/18/2018	141	259029		SAFETY GLASSES - ESTRADA, B	\$292.43	
	10/18/2018	111	258914		SAFETY GLASSES - COGGINS, W	\$292.43	
	10/18/2018	141	258908		SAFETY GLASSES - SILVA, K	\$292.43	
	10/18/2018	141	259121		SAFETY GLASSES - PETROSYAN, L	\$268.88	
	10/18/2018	136	259034		SAFETY GLASSES - ROJO, J	\$259.50	
169142	10/18/2018	144	53297	ABACUS PRODUCTS INC	5000 RULERS	\$3,708.88	\$3,708.88
169224	10/25/2018		20181015	STATE OF CALIFORNIA	SALES & USE TAX 7/18 - 9/18	\$3,701.00	\$3,701.00
169185	10/18/2018	123	45	DAVID MICHAEL MOUTRAY	LATERAL OUTREACH VIDEO PROJECT	\$3,693.75	\$3,693.75
169331	11/1/2018	111	104237	PIIAN SYSTEMS LLC	6 5-GAL ODOR NEUTRALIZER	\$3,669.21	\$3,669.21

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169353	11/1/2018		42020	WECO INDUSTRIES LLC	TRACTOR CAMERA PARTS		
						\$952.82	\$3,471.33
	11/1/2018	121	42034		CAMERA REPAIRS		
						\$286.22	
	11/1/2018	121	42021		(2) CABLE ADAPTERS		
						\$1,269.68	
	11/1/2018	121	42017		CAMERA REPAIRS		
						\$962.61	
169318	11/1/2018		3M7487	HARRINGTON INDUSTRIAL PLASTICS	ASTD PVC FITTINGS		
						\$3,360.55	\$3,360.55
169262	10/25/2018		8923	OLD REPUBLIC TITLE COMPANY	REFUND # 21430		
						\$3,300.00	\$3,300.00
169174	10/18/2018	170	9902338673	GRAINGER INC	8 AIR FILTERS		
						\$662.72	\$3,234.55
	10/18/2018	170	9900650582		4 BATTERIES		
						\$190.57	
	10/18/2018	111	9899221296		1 EYE WASH CARTRIDGE		
						\$192.54	
	10/18/2018	170	9900650574		1 Y STRAINER		
						\$43.06	
	10/18/2018		9901017104		ASTD PARTS & MATERIALS		
						\$2,145.66	
169336	11/1/2018	143	26538	RMC WATER AND ENVIRONMENT	USD PLANT MASTER PLAN		
						\$3,175.87	\$3,175.87
169298	11/1/2018		19330481	CANON SOLUTIONS AMERICA INC	LEASE 6 CANON COLOR COPIERS		
						\$3,154.15	\$3,154.15
169260	10/25/2018	141	9180000482	NBS	SEWER SERVICE CHARGE DATA SERV OCT - DEC 2018		
						\$3,149.55	\$3,149.55
169160	10/18/2018		PKQ3929	CDW GOVERNMENT LLC	1 COLOR PRINTER FOR ELECTRIC SHOP		
						\$3,068.07	\$3,068.07
169183	10/18/2018	123	680085	MISSION CLAY PRODUCTS LLC	ASTD CLAY FITTINGS		
						\$3,056.53	\$3,056.53

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169315	11/1/2018	122	9913356185	GRAINGER INC	ASTD PARTS & MATERIALS	\$27.11	\$2,997.27
	11/1/2018	170	9913356177		1 FIRE EXTINGUISHER SIGN	\$12.76	
	11/1/2018	170	9915141452		1 TORQUE MULTIPLIER	\$1,105.99	
	11/1/2018		9915733670		ASTD PARTS & MATERIALS	\$1,775.79	
	11/1/2018	122	9917338908		1 GROMMET	\$2.75	
	11/1/2018		9915418579		1 Y STRAINER	\$72.87	
169165	10/18/2018		20180925	DALE HARDWARE INC	09/18 - ASTD PARTS & MATERIALS	\$2,278.96	\$2,789.49
	10/18/2018		301992		48 PAINT ROLLERS	\$510.53	
169167	10/18/2018		1129008	ENTHALPY ANALYTICAL LLC	10 LAB SAMPLE ANALYSIS	\$185.00	\$2,760.00
	10/18/2018		1129007		12 LAB SAMPLE ANALYSIS	\$305.00	
	10/18/2018		1129264		75 LAB SAMPLE ANALYSIS	\$1,990.00	
	10/18/2018		1128939		14 LAB SAMPLE ANALYSIS	\$220.00	
	10/18/2018		1129413		1 LAB SAMPLE ANALYSIS	\$60.00	
169151	10/18/2018		9672	ARDENBROOK INC	REFUND # 21404	\$2,500.00	\$2,500.00
169189	10/18/2018		9865	OC JONES & SONS	REFUND # 21411	\$2,500.00	\$2,500.00
169276	10/25/2018		7761	VIKING CONSTRUCTION COMPANY	REFUND # 21420	\$2,500.00	\$2,500.00
169291	11/1/2018		9833	ARMSTRONG PLUMBING	REFUND # 21457	\$2,500.00	\$2,500.00
169312	11/1/2018		9819	CITY OF FREMONT	REFUND # 21455	\$2,500.00	\$2,500.00
169319	11/1/2018		9715859	HF&H CONSULTANTS, LLC	FINANCE MASTER PLAN	\$2,362.50	\$2,362.50

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169221	10/25/2018	144	12923681	BLAISDELL'S	ASTD OFFICE SUPPLIES		
						\$64.34	\$2,270.51
	10/25/2018	120	12920280		ASTD OFFICE SUPPLIES	\$56.97	
	10/25/2018	144	12923680		ASTD OFFICE SUPPLIES	\$152.63	
	10/25/2018	130	12919980		ASTD OFFICE SUPPLIES	\$58.15	
	10/25/2018	143	12926030		1 PK LEAD PENCILS	\$6.36	
	10/25/2018	113	12926840		ASTD OFFICE SUPPLIES	\$180.78	
	10/25/2018	113	12927280		ASTD OFFICE SUPPLIES	\$22.83	
	10/25/2018		12931670		ASTD OFFICE SUPPLIES	\$1,728.45	
169340	11/1/2018	110	18100913	S&S TRUCKING	GRIT HAULING 09/30/2018	\$750.00	\$2,251.97
	11/1/2018	110	18100907		GRIT HAULING 09/27/2018	\$712.55	
	11/1/2018	110	18101209		GRIT HAULING 10/09/2018	\$789.42	
169226	10/25/2018	173	PLD1784	CDW GOVERNMENT LLC	SCADA SERVER ROOM UPS BATTERIES REPLACEMENT	\$2,229.47	\$2,229.47
169208	10/18/2018	143	2036273	WEST YOST ASSOCIATES	3RD SLUDGE DEGRITTER SYSTEM	\$2,045.50	\$2,045.50
169231	10/25/2018		70772697	COMCAST OF CALIFORNIA,	FIBER INTERNET BACKUP - OCTOBER 2018	\$1,999.38	\$1,999.38
169292	11/1/2018		12019080	AT&T	SERV: 09/10/18 - 10/09/18	\$1,995.55	\$1,995.55
169357	11/1/2018		4853	ZELAYA DESIGNS	PUBLIC OUTREACH	\$742.50	\$1,890.00
	11/1/2018		4854		PUBLIC OUTREACH	\$1,147.50	
169250	10/25/2018	141	AFVJ612	IRON MOUNTAIN	OFF-SITE STORAGE AND SERVICE - SEPT 2018	\$1,428.77	\$1,767.30
	10/25/2018	141	AFSL248		OFF-SITE STORAGE AND SERVICE - SEPT 2018	\$338.53	

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169225	10/25/2018	143	170883	CAROLLO ENGINEERS	PLANT SOLIDS SYSTEM/CAPACITY ASSESSMENT	\$1,543.77	\$1,543.77
169301	11/1/2018	144	53588054	CHANNING BETE COMPANY, INC.	2000 SCHOOL OUTREACH PLACEMATS	\$1,507.15	\$1,507.15
169195	10/18/2018	110	18092616	S&S TRUCKING	GRIT HAULING 09/20, 9/24/2018	\$1,489.67	\$1,489.67
169223	10/25/2018	170	4399198001	CALIFORNIA SERVICE TOOL INC	1 KNAACK TOOL BENCH	\$1,482.81	\$1,482.81
169184	10/18/2018	170	24044828	MOTION INDUSTRIES INC	ASTD NUTS & BOLTS	\$799.57	\$1,445.12
	10/18/2018		24044680		5 EA BATTERY PACKS	\$321.01	
	10/18/2018		24044775		3 FLOW METERS	\$324.54	
169254	10/25/2018		76377643	MCMASTER SUPPLY INC	ASTD PARTS & MATERIALS	\$513.68	\$1,439.25
	10/25/2018	170	76340343		ASTD PARTS & MATERIALS	\$296.62	
	10/25/2018	122	76331273		6 PACKS DISPOSABLE BATTERIES	\$82.64	
	10/25/2018	170	75332360		2 OIL-LEVEL INDICATORS	\$37.02	
	10/25/2018	123	76399142		2 55-GAL STEEL DRUMS WITH FAUCET	\$509.29	
169234	10/25/2018	122	41046	DEL CONTE'S LANDSCAPING INC	LANDSCAPE MAINTENANCE SERVICES - OCTOBER 2018	\$1,405.00	\$1,405.00

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169325	11/1/2018		77684175	MCMASTER SUPPLY INC	ASTD PARTS & MATERIALS		
						\$629.96	\$1,396.38
	11/1/2018	170	77107332		4 TOGGLE SWITCHES	\$46.41	
	11/1/2018	120	77262883		ASTD PARTS & MATERIALS	\$268.48	
	11/1/2018	170	77092068		2 EASY-SLIDE CLIP-RAIL SOCKET ORGANIZERS	\$30.21	
	11/1/2018	170	76842822		ASTD PARTS & MATERIALS	\$144.45	
	11/1/2018	111	76842821		ASTD PARTS & MATERIALS	\$222.21	
	11/1/2018	170	77684176		ASTD PARTS & MATERIALS	\$54.66	
169289	11/1/2018		96214	AMERICAN TEXTILE & SUPPLY INC	51 RAGS	\$1,337.74	\$1,337.74
169288	11/1/2018	121	11388	AMERICAN DISCOUNT SECURITY	09/04/18 - 09/28/18 GUARD AT DISTRICT GATE	\$1,311.00	\$1,311.00
169256	10/25/2018	171	1760491	MOBILE MODULAR MANAGEMENT CORP	MONTHLY FMC BREAK TRAILER RENTAL - OCT 2018	\$1,245.43	\$1,245.43
169269	10/25/2018	170	966060	SWAGELOK NORTHERN CA	ASTD PARTS & MATERIALS	\$1,243.12	\$1,243.12
169251	10/25/2018	173	16906	LOOKINGPOINT INC	ANNUAL PHONE AND NETWORK SUPPORT	\$1,225.00	\$1,225.00
169213	10/25/2018	172	201522	ADVANCED CHEMICAL TRANSPORT	HAZARDOUS MATERIAL MANAGEMENT	\$1,201.75	\$1,201.75
169342	11/1/2018		1873562003	SAN LEANDRO ELECTRIC SUPPLY	ASTD ELECTRICAL SUPPLIES	\$19.93	\$1,172.24
	11/1/2018		1873562002		ASTD ELECTRICAL SUPPLIES	\$1,152.31	
169279	10/25/2018	132	29051	WILEY PRICE & RADULOVICH LLP	LABOR & EMPLOYMENT LAW FEES	\$1,149.00	\$1,149.00
169354	11/1/2018	136	20181030	SHARON WEST	TRAVEL REIMB: PER DIEM, LODGING, MILEAGE-CA PAYROLL CONF	\$1,052.17	\$1,135.20
	11/1/2018	130	20181023		EXP REIMB: ASTD SUPPLIES FOR TEAM BUILDING EVENT	\$83.03	
169203	10/18/2018	122	124854	TRI-SIGNAL INTEGRATION INC	ANNUAL FIRE ALARM TEST & INSPECTION	\$1,130.40	\$1,130.40

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169182	10/18/2018	170	75590617	MCMASTER SUPPLY INC	12 VIBRATION-DAMPING STRUT-MOUNT CLAMPS	\$54.22	\$1,108.38
	10/18/2018	170	76082614		ASTD SOCKET ORGANIZERS	\$69.74	
	10/18/2018	170	74277608		10 EA VIBRATION-DAMPING STRUT-MOUNT CLAMPS	\$86.55	
	10/18/2018	120	75979581		ASTD TARPS & CARABINERS	\$618.36	
	10/18/2018	170	74512465		15 STRUTS	\$254.73	
	10/18/2018	170	74684060		ASTD PARTS & MATERIALS	\$24.78	
169247	10/25/2018		603146370	HILLYARD/SAN FRANCISCO	ASTD JANITORIAL SUPPLIES	\$846.39	\$1,104.67
	10/25/2018		603147907		ASTD JANITORIAL SUPPLIES	\$136.62	
	10/25/2018	122	603172361		ASTD JANITORIAL SUPPLIES	\$121.66	
169192	10/18/2018	171	357194	PENN TOOL CO INC	(1) KURT CROSS OVER VISE / (1) SWIVEL BASE ASSEMBLY	\$1,099.50	\$1,099.50
169173	10/18/2018	122	1841084667	GOODYEAR COMM TIRE & SERV CTRS	8 TIRES	\$1,054.39	\$1,054.39
169232	10/25/2018	132	47496	CPS HR CONSULTING	OPC TEST MATERIALS	\$1,050.50	\$1,050.50
169181	10/18/2018	111	20181017	MARCUS LEE	EXP REIMB: WEF - LODGING/TAXI/PER DIEM	\$1,026.70	\$1,026.70
169163	10/18/2018		20180928	COMMUNICATION & CONTROL INC	UTILITY FEE/ANTENNA RENTAL	\$1,013.21	\$1,013.21
169266	10/25/2018		8751	ROOTER HERO	REFUND # 21427	\$500.00	\$1,000.00
	10/25/2018		8788		REFUND # 21428	\$500.00	
169329	11/1/2018		9659	NUVERA HOMES	REFUND # 21432	\$1,000.00	\$1,000.00

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169334	11/1/2018	120	820148053	RED WING BUS ADVANTAGE ACCT	SAFETY SHOES: M. LUNA	\$196.64	\$995.68
	11/1/2018	121	820148111		SAFETY SHOES: M. MINCHACA	\$196.64	
	11/1/2018	136	820147262		SAFETY SHOES: P. JOHNSON	\$203.14	
	11/1/2018	136	820147641		SAFETY SHOES: E. KULL	\$204.27	
	11/1/2018	111	820147778		SAFETY SHOES: T. HUGHES	\$194.99	
169307	11/1/2018		41045	DEL CONTE'S LANDSCAPING INC	WEED ABATEMENT WORK OCTOBER 2018	\$970.00	\$970.00
169349	11/1/2018	170	966441	SWAGELOK NORTHERN CA	ASTD PARTS & MATERIALS	\$966.72	\$966.72
169212	10/25/2018	143	20422088	ABC IMAGING, INC.	PLANT SOLIDS SYSTEM/CAPACITY ASSESSMENT	\$954.69	\$954.69
169323	11/1/2018		4532366	MALLORY SAFETY AND SUPPLY LLC	60 PR GLOVES	\$216.15	\$890.80
	11/1/2018		4537046		ASTD CAL-GASES	\$674.65	
169343	11/1/2018	136	20181031	SEFNCO COMMUNICATIONS INC	THIRD PARTY CLAIM	\$888.16	\$888.16
169218	10/25/2018	144	507455	ARCHER NORRIS	LEGAL SERVICES MARCH 2018	\$850.50	\$850.50
169188	10/18/2018	120	20181015	SHAWN NESGIS	EXP REIMB: MSA ANNUAL CONF - LODGING/AIRFARE/PER DIEM/PAF	\$840.23	\$840.23
169172	10/18/2018	111	20181011	MICHAEL FULKERSON	TRAVEL REIMB: WEFTEC CONF LODGING/PER DIEM/TAXI/TIPS	\$840.14	\$840.14
169310	11/1/2018		20181025	MARIELA ESPINOSA	TRAVEL REIMB: TIPS/PARKING/MILEAGE/LODGING/TRANSPORTATI	\$838.76	\$838.76
169158	10/18/2018		4027109667	CANON SOLUTIONS AMERICA INC	MTHLY MAINTENANCE BASED ON USE	\$830.31	\$830.31
169261	10/25/2018		27599	NIXON-EGLI EQUIP OF S. CAL	6 EA ROOT SAW BLADES	\$818.03	\$818.03
169176	10/18/2018	123	1944698	HANSON AGGREGATES INC	10.08 TONS 1/2 MED TYPE A AC-R	\$779.06	\$779.06

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169191	10/18/2018	170	898220181005	PACIFIC GAS AND ELECTRIC	SERV TO 09/30/18 FREMONT PS		
						\$320.27	\$749.56
	10/18/2018	110	892820181005		SERV TO 09/30/18 HAYWARD MARSH	\$61.85	
	10/18/2018	170	666720181005		SERV TO 09/30/18 PASEO PADRE PS	\$342.55	
	10/18/2018	170	140120181004		SERV TO 10/02/18 IRVINGTON PS	\$24.89	
169180	10/18/2018	132	20181015	KATHLEEN KING	EXP REIMB: NEO-GOV CONF EXPS - LODGING/TAXI/PER DIEM	\$746.06	\$746.06
169242	10/25/2018	141	10206	FREMONT EXPRESS COURIER SVC	COURIER SVCS: SEP 2018 DAILY MAIL/2 BOARDMEMBER DELIVERIE	\$725.00	\$725.00
169214	10/25/2018	170	9956785823	AIRGAS NCN	CYLINDER RENTAL	\$720.25	\$720.25
169285	11/1/2018		5194061	ALL INDUSTRIAL ELECTRIC SUPPLY	10 CORD CR-10/4SO	\$16.88	\$710.45
	11/1/2018		5194143		ASTD PARTS & MATERIALS	\$693.57	
169198	10/18/2018		720440988501	STAPLES CONTRACT & COMMERCIAL	JANITORIAL & BREAK ROOM SUPPLIES	\$708.20	\$708.20
169211	10/18/2018	173	16F6E38220181220	WIN-911 SOFTWARE	WIN911 ANNUAL SUPPORT RENEWAL	\$695.00	\$695.00
169337	11/1/2018	170	78592	ROCHESTER MIDLAND CORPORATION	HOT WATER LOOP SERVICE	\$687.46	\$687.46
169347	11/1/2018		72865	STARLINE SUPPLY COMPANY	COMPOSTABLE UTENSILS	\$687.06	\$687.06
169350	11/1/2018	141	218135	TANNER PACIFIC INC	PROJ: TWIN FORCE MAIN RELOCATION - PHASE 1	\$662.50	\$662.50
169207	10/18/2018	123	41934	WECO INDUSTRIES LLC	ASTD PARTS & MATERIALS	\$524.25	\$639.25
	10/18/2018	121	41945		CAMERA REPAIRS	\$115.00	
169341	11/1/2018	170	85340220181022	SAN FRANCISCO WATER DEPT	SERVICE 09/21/2018 TO 10/22/2018	\$408.46	\$636.39
	11/1/2018	170	85340220181022.1		SERVICE 08/22/2018 TO 09/20/2018 - REPLACEMENT CK	\$227.93	
169230	10/25/2018		43483	CLAREMONT BEHAVIORAL SERVICES	NOV 2018 EAP PREMIUMS	\$634.80	\$634.80

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169219	10/25/2018	136	2522143016	BANK OF NEW YORK	SEP 2018 SERVICE FEES	\$600.51	\$600.51
169255	10/25/2018	170	181054	METROMOBILE COMMUNICATIONS INC	ANNUAL RADIO SERVICE - OCTOBER 2018	\$599.08	\$599.08
169187	10/18/2018	132	2451	NCCIPMA	REGIS FEE - ANNUAL NCCIPMA-HR CONF - K. KING	\$599.00	\$599.00
169246	10/25/2018	170	3M7273	HARRINGTON INDUSTRIAL PLASTICS	ASTD PVC PARTS & MATERIALS	\$594.60	\$594.60
169194	10/18/2018	120	08J0036018380	NESTLE WATERS NO. AMERICA READYREFRESHWATER SERVICE 09/07/18 - 10/06/18		\$585.01	\$585.01
169220	10/25/2018		21705100	BECK'S SHOES	SAFETY SHOES: R. CULBERTSON/M. GILL/J. ARROYO	\$579.42	\$579.42
169243	10/25/2018	122	1841084694	GOODYEAR COMM TIRE & SERV CTRS	3 TIRES	\$565.87	\$565.87
169268	10/25/2018	144	20181018	JOSE SOTO	TRAVEL REIMB: LODGING, PER DIEM, PARKING, SHUTTLE-CASQA C	\$546.44	\$546.44
169166	10/18/2018	173	407376	DLT SOLUTIONS, LLC	AWS CLOUD STORAGE - AUGUST 2018	\$533.07	\$533.07
169278	10/25/2018	170	15569	WESTERN MACHINE & FAB INC	STRAIGHTEN BRASS ROD / MFG BRONZE BOLT	\$528.51	\$528.51
169271	10/25/2018		1087667270	TPX COMMUNICATIONS	WIRELESS INTERNET BACKUP - OCTOBER	\$528.30	\$528.30
169227	10/25/2018		54K138984	CINTAS CORPORATION NO. 2	UNIFORM LAUNDERING SERVICE	\$240.34	\$519.60
	10/25/2018	122	54K138985		ASTD DUST MOPS, WET MOPS & TERRY TOWEL	\$17.22	
	10/25/2018		54K138986		UNIFORM LAUNDERING & RUGS	\$262.04	
169149	10/18/2018		9008	ALEXANDER ANGKAWIJAYA	REFUND # 21416	\$500.00	\$500.00
169236	10/25/2018		9822	DELTA PLUMBING AND ROOTER	REFUND # 21421	\$500.00	\$500.00
169281	11/1/2018		9778	ABOVE ALL PLUMBING, INC.	REFUND # 21453	\$500.00	\$500.00
169294	11/1/2018		9829	BENJAMIN FRANKLIN PLUMBING	REFUND # 21456	\$500.00	\$500.00
169324	11/1/2018		8970	MARTI'S PLUMBING SERVICE	REFUND # 21431	\$500.00	\$500.00

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Check No.	Date	Dept	Invoice No.	Vendor	Description	Invoice Amt	Check Amt
169333	11/1/2018		9759	QUALITY PLUMBING & ROOTER INC	REFUND # 21452		
						\$500.00	\$500.00
169339	11/1/2018		9788	ROOTER HERO	REFUND # 21454		
						\$500.00	\$500.00
169346	11/1/2018		9800	PARMVIR SINGH	REFUND # 21444		
						\$500.00	\$500.00
169327	11/1/2018		3725	M-I-C INC	6 GASKET FLAME ARRESTOR		
						\$494.57	\$494.57
169297	11/1/2018	113	590804	CALTEST ANALYTICAL LABORATORY	12 LAB SAMPLE ANALYSIS		
						\$453.60	\$453.60
169295	11/1/2018	130	12932610	BLAISDELL'S	ASTD OFFICE SUPPLIES		
						\$143.60	\$452.82
	11/1/2018	141	12932750		ASTD OFFICE SUPPLIES		
						\$92.70	
	11/1/2018	130	12945210		1 WALL CALENDAR/1 PLANNER		
						\$25.23	
	11/1/2018	130	12934310		1 WALL CALENDAR		
						\$25.23	
	11/1/2018		12945990		6 RM PAPER		
						\$38.39	
	11/1/2018	144	12945080		ASTD OFFICE SUPPLIES		
						\$105.73	
	11/1/2018	130	12945211		1 PLANNER		
						\$21.94	
169154	10/18/2018	120	12909851	BLAISDELL'S	2 PK FRAMES		
						\$21.93	\$452.63
	10/18/2018	120	12909850		ASTD OFFICE SUPPLIES		
						\$81.76	
	10/18/2018	150	12905610		1 TONER		
						\$264.11	
	10/18/2018	122	12896601		1 TALL USER EXTENSION		
						\$74.63	
	10/18/2018		12903300		1 FILE ORGANIZER		
						\$10.20	
169338	11/1/2018		20181025	THERESA RODRIGUEZ	1ST QTR FY19 ALT COMP SPECIAL RECOGNITION		
						\$450.00	\$450.00
169228	10/25/2018	150	70782	CITYLEAF INC	PLANT MAINTENANCE - OCT 2018		
						\$431.86	\$431.86

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169328	11/1/2018	170	24045965	MOTION INDUSTRIES INC	ASTD NUTS & BOLTS		
						\$431.32	\$431.32
169162	10/18/2018		54K137847	CINTAS CORPORATION NO. 2	UNIFORM LAUNDERING SERVICE		
						\$214.00	\$425.48
	10/18/2018		54K137848		ASTD DUST MOPS, WET MOPS & TERRY TOWEL		
						\$17.22	
	10/18/2018		54K137849		UNIFORM LAUNDERING & RUGS		
						\$194.26	
169303	11/1/2018		54K140084	CINTAS CORPORATION NO. 2	UNIFORM LAUNDERING & RUGS		
						\$192.35	\$423.57
	11/1/2018	122	54K140083		ASTD DUST MOPS, WET MOPS & TERRY TOWEL		
						\$17.22	
	11/1/2018		54K140082		UNIFORM LAUNDERING SERVICE		
						\$214.00	
169265	10/25/2018		142554	PREFERRED ALLIANCE INC	SEPTEMBER 2018 SERVICE FEE		
						\$404.04	\$404.04
169145	10/18/2018		26113	AIRSCENT INTERNATIONAL	1 ODOR COUNTERACTANT		
						\$392.41	\$392.41
169258	10/25/2018	123	132069	MUNICIPAL MAINT EQUIPMENT INC	13 CERAMIC INSERTS/NOZZLES		
						\$388.38	\$388.38
169275	10/25/2018		9815580263	VERIZON WIRELESS	WIRELESS SERV 09/02/18-10/01/18 & (6) IPADS		
						\$375.71	\$375.71
169348	11/1/2018		92054844	SUBSITE ELECTRONICS	TRACTOR CAMERA PARTS		
						\$360.71	\$360.71
169240	10/25/2018	170	903730655	EVOQUA WATER TECHNOLOGIES	DI WATER SYSTEM		
						\$360.00	\$360.00
169153	10/18/2018	110	20181011	ALAN BERLING	TRAVEL REIMB: GRADE 5 EXAM TRAINING		
						\$351.76	\$351.76
169306	11/1/2018	150	20181031	RICHARD CZAPKAY	LONGEVITY AWARD - 30 YEARS OF SERVICE		
						\$350.00	\$350.00
169206	10/18/2018		8083831517	VWR INTERNATIONAL LLC	LAB SUPPLIES		
						\$339.83	\$339.83
169199	10/18/2018	171	20181016	DUSTIN STRASBURG	PER DIEM ADVANCE - SMRP ANNUAL CONFERENCE		
						\$315.00	\$315.00
169304	11/1/2018		20181031	SOL COOPER	TRAVEL EXP: PER DIEM SMRP CONFERENCE		
						\$315.00	\$315.00
169321	11/1/2018	173	201709273	IRON MOUNTAIN	DATA/MEDIA OFF-SITE STORAGE - SEPT 2018		
						\$304.92	\$304.92

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169157	10/18/2018	113	590333	CALTEST ANALYTICAL LABORATORY	8 LAB SAMPLE ANALYSIS	\$302.40	\$302.40
169345	11/1/2018	150	20181031	ROBERT SIMONICH	LONGEVITY AWARD - 30 YEARS OF SERVICE	\$300.00	\$300.00
169169	10/18/2018		20180926.1	MARIELA ESPINOSA	PER DIEM - CALPERS CONFERENCE	\$252.00	\$252.00
169314	11/1/2018	150	20181031	SAMI GHOSSAIN	LONGEVITY AWARD - 25 YEARS OF SERVICE	\$250.00	\$250.00
169170	10/18/2018		149514	FITGUARD, INC.	PREVENTATIVE MAINTENANCE - EXERCISE CLUB EQUIPMENT	\$249.00	\$249.00
169239	10/25/2018		90106909757	ENTERPRISE GOV 43-1514861	RENTAL: D. LU, AUSTIN, TX	\$229.56	\$229.56
169309	11/1/2018	113	1132374	ENTHALPY ANALYTICAL LLC	5 LAB SAMPLE ANALYSIS	\$225.00	\$225.00
169217	10/25/2018		20180910	AMAZON.COM LLC	09/18 - ASTD OFFICE SUPPLIES	\$218.42	\$218.42
169286	11/1/2018		26952	ALLIED FLUID PRODUCTS CORP	31 GARLOCK FLANGE GASKETS	\$210.81	\$210.81
169257	10/25/2018		24045658	MOTION INDUSTRIES INC	10 MESH VESTS	\$210.68	\$210.68
169233	10/25/2018	113	20181024	CWEA	MEMBERSHIP RENEWAL - CALANOG, MG	\$188.00	\$188.00
169351	11/1/2018	171	20181029	EDWARD TATOLA	EXP REIMB: PER DIEM, MILEAGE, PARKING - ABB TURBO TRAINING	\$175.11	\$175.11
169355	11/1/2018	170	15585	WESTERN MACHINE & FAB INC	(1) BORE & CUT OF PLATE	\$160.00	\$160.00
169287	11/1/2018	113	8102363	ALPHA ANALYTICAL LABORATORIES	7 LAB SAMPLE ANALYSIS	\$157.50	\$157.50
169270	10/25/2018	110	21081018	SWRCB - STATE WATER RESOURCES	GRADE V OPERATOR CERTIFICATE RENEWAL - T. GRILLO	\$150.00	\$150.00
169313	11/1/2018	136	126914	GFOA-GOV FIN OFFICERS ASSOC	MEMBERSHIP RENEWAL - L. MORENO 11/1/18 - 10/31/19	\$150.00	\$150.00
169302	11/1/2018		20181029	PETE CHAPARRO	TRAVEL REIMB: PER DIEM/TRANSPORTATION	\$140.50	\$140.50
169161	10/18/2018	113	210021	CHEMETRICS INC	4 NITRITE VACU-VIALS	\$135.77	\$135.77
169216	10/25/2018		26846	ALLIED FLUID PRODUCTS CORP	1 SHEET NATURAL VIRGIN PTFE	\$135.14	\$135.14

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169272	10/25/2018	122	125104	TRI-SIGNAL INTEGRATION INC	FIRE PROTECTION SERVICE - MONTHLY CHARGE MONITORING AGI	\$133.33	\$133.33
169330	11/1/2018	170	359500	PENN TOOL CO INC	ASTD PARTS & MATERIALS	\$132.50	\$132.50
169277	10/25/2018	113	8083901665	VWR INTERNATIONAL LLC	LAB SUPPLIES	\$131.66	\$131.66
169197	10/18/2018	141	20180930	SPOK INC	OCTOBER 2018 PAGER SERVICE	\$124.08	\$124.08
169249	10/25/2018	131	20668347	INFOR PUBLIC SECTOR, INC	INFOR SERVICES TO UPGRADE PACP TO V7	\$117.50	\$117.50
169316	11/1/2018	110	20181031	TIMOTHY GRILLO	EXP REIMB: LUNCH FOR HAZEN WASTEWATER CHARACTERIZATIC	\$114.89	\$114.89
169335	11/1/2018		97047	REMOTE SATELLITE SYSTEMS INT'L	IRIDIUM SVC FEE NOVEMBER 2018	\$112.00	\$112.00
169215	10/25/2018	130	5375552832019	ALAMEDA COUNTY TREASURER	PROPERTY TAXES 37159 HICKORY ST	\$108.44	\$108.44
169148	10/18/2018		5193041	ALL INDUSTRIAL ELECTRIC SUPPLY	1 LITHONIA REPLACEMENT DRIVER	\$108.04	\$108.04
169267	10/25/2018	141	20181018	KRISTINA SILVA	EXP REIMB: FLOWERS - RODRIGUEZ	\$106.56	\$106.56
169326	11/1/2018	136	20181022	MERCURY INSURANCE COMPANY	THIRD PARTY CLAIM	\$105.00	\$105.00
169164	10/18/2018	150	20180926	CSDA CAL SPECIAL DIST ASSOC	MEMBERSHIP DUES 7/01/18-6/30/19	\$100.00	\$100.00
169344	11/1/2018	171	20181026	PAUL SIMMONS	EXP REIMB: MILEAGE NORTHERN SAFETY DAY WOODLAND CA	\$93.85	\$93.85
169200	10/18/2018	170	966786	SWAGELOK NORTHERN CA	ASTD PARTS & MATERIALS	\$90.33	\$90.33
169253	10/25/2018	170	77908651	MATHESON TRI-GAS INC	MONTHLY CYLINDER RENTAL - SEPT 2018	\$82.92	\$82.92
169245	10/25/2018	150	20181024	TOM HANDLEY	EXP REIMB: BOARD DINNER	\$74.71	\$74.71
169178	10/18/2018	122	603162900	HILLYARD/SAN FRANCISCO	3 PACKS DISP SEAT COVER BLACK 1/2 FOLD	\$74.10	\$74.10
169284	11/1/2018		4088644120181024	ALAMEDA COUNTY WATER DISTRICT	SERV TO: 10/23/18 - BOYCE ROAD	\$69.33	\$69.33
169237	10/25/2018		615320181020	DISH NETWORK	NOV 2018 - SERVICE FEE	\$60.90	\$60.90

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169147	10/18/2018	170	4047286120181002	ALAMEDA COUNTY WATER DISTRICT	SERV TO: 10/01/18 - PASEO PADRE	\$60.83	\$60.83
169168	10/18/2018	113	1000525049	ENVIRONMENTAL EXPRESS	1 YTTRIUM STD	\$57.91	\$57.91
169175	10/18/2018	144	270661	HANIGAN COMPANY INC	BUSINESS CARDS - J SOTO	\$40.78	\$40.78
169317	11/1/2018	122	270769	HANIGAN COMPANY INC	BUSINESS CARDS - M. LUBINA	\$39.68	\$39.68
169290	11/1/2018	170	7014590557	APPLIED INDUSTRIAL TECHNOLOGIE	2 CONTINENTAL A61	\$23.03	\$23.03
169280	10/25/2018		4838	ZELAYA DESIGNS	PUBLIC OUTREACH	\$20.00	\$20.00
169274	10/25/2018	136	98XW53398	UPS - UNITED PARCEL SERVICE	SHIPPING CHARGES W/E 09/29/18	\$19.08	\$19.08
169144	10/18/2018		69478	AIR & TOOL ENGINEERING COMPANY	2 3/4" MALE NPT FITTINGS	\$15.59	\$15.59
169150	10/18/2018		7014453085	APPLIED INDUSTRIAL TECHNOLOGIE	ASTD PARTS & MATERIALS	\$14.51	\$14.51
169186	10/18/2018	122	198160	NAYLOR STEEL INC	ASTD METAL, STEEL, STAINLESS & ALUMINUM	\$3.02	\$3.02

Invoices:			Checks:		
<b>Credit Memos :</b>	<b>1</b>	<b>-130.61</b>			
<b>\$0 - \$1,000 :</b>	<b>231</b>	<b>73,471.57</b>	<b>\$0 - \$1,000 :</b>	<b>117</b>	<b>47,592.54</b>
<b>\$1,000 - \$10,000 :</b>	<b>93</b>	<b>293,959.75</b>	<b>\$1,000 - \$10,000 :</b>	<b>73</b>	<b>223,306.47</b>
<b>\$10,000 - \$100,000 :</b>	<b>19</b>	<b>599,035.69</b>	<b>\$10,000 - \$100,000 :</b>	<b>24</b>	<b>695,437.39</b>
<b>Over \$100,000 :</b>	<b>1</b>	<b>212,990.00</b>	<b>Over \$100,000 :</b>	<b>1</b>	<b>212,990.00</b>
<b>Total:</b>	<b>345</b>	<b>1,179,326.40</b>	<b>Total:</b>	<b>215</b>	<b>1,179,326.40</b>

## Divers swim through 90 ft of raw sewage to unclog 'flushable wipes' mess

By: [Alexa Mae Asperin](#)

Posted: Oct 17, 2018 12:32 PM PDT



*Photo: Charleston Water System*

CHARLESTON, S.C. (KRON) - Do you know what happens when you flush wipes down the toilet?

Charleston Water System in South Carolina wants to show you and perhaps prevent you from doing so again!

The agency posted a series of photos on social media showing the downright dirty job that crews had to do to get the mess under control.

The divers had to swim through raw sewage to unclog the pipes blocked by "flushable" wipes, according to officials.

Officials say they began the attack last Thursday.

"Since then, we worked 24/7 to get them out," the agency tweeted. "We started by using a series of bypass pumps to handle the normal daily flow."



**Charleston Water** ✓  
@ChasWaterSystem

Follow



You know wipes clog pipes, right? If not, baby wipes clogged a series of large pumps at our Plum Island Wastewater Treatment Plant on Thursday afternoon. Since then, we worked 24/7 to get them out. We started by using a series of bypass pumps to handle the normal daily flow.



11:54 AM - 15 Oct 2018

The agency said the pumps were back to normal levels after three days, but that's in part due to the divers who had to travel 90 feet down, in the dark, using their bare hands to "find and identify the obstruction."

"As we expected, they came up with these large masses of wipes in their first two loads, with more to come," Charleston Water tweeted. "They also found a baseball and a big piece of metal. Don't flush stuff like this. Joking of course, but you should only flush #1, #2 and toilet paper.

Final dives were conducted on Tuesday and the divers were rinsed off with bleach after the "nice long swim."

"Glad to report that we've returned to normal operation today," the agency tweeted.

Andy Fairey, the agency's chief operating officer, told the Charleston Post and Courier that other items like tampons, string, hair and makeup pads contributed to the fatberg of baby wipes, oil, fat and grease.

Fairey said the wipes are a "huge portion of the material we pull out."

Fatbergs are classified as lumps or masses in a sewer system formed by the combination of non-biodegradable solid matter like wipes and oils.

So before you flush, think twice!