

AGENDA

**ENGINEERING COMMITTEE MEETING
LEUCADIA WASTEWATER DISTRICT**

Wednesday, May 6, 2020 – 9:00 a.m.
Via Teleconference

Pursuant to the State of California Executive Order N-29-20, and in the interest of public health, the District is temporarily taking actions to mitigate the COVID-19 pandemic by holding meetings by teleconference. The general public may not attend this meeting at the District's office due to social distancing requirements.

Members of the public attending via teleconference will be provided with an opportunity to comment on each agenda item prior to Committee discussion.

To join this meeting via Teleconference, please dial: 1-669-900-6833

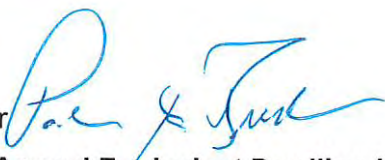
Meeting ID: 873 4315 7818 **Password:** 847880

1. **Call to Order**
2. **Roll Call**
3. **Public Comment**
4. **New Business**
 - A. Adopt Ordinance No. 141 – An Ordinance of the Board of Directors of the Leucadia Wastewater District Establishing the District's Capacity Fee and Amending the EDU Factors Capacity Fee Schedule. (Pages 3-18)
 - B. Authorize the General Manager to execute a two-year extension to the Infrastructure Engineering Corporation (IEC) contract for as needed engineering design services. (Pages 19-27)
 - C. Authorize the General Manager to execute a sole source five-year professional services agreement with ADS Environmental Service, Corporation (ADS) for equipment maintenance and analysis of data for ten (10) ECHO depth meters in an amount not to exceed \$80,400. (Pages 28-32)
 - D. Authorize the General Manager to execute Amendment No. 1 to the agreement with Evoqua Water Technologies, LLC to furnish and deliver Ferrous Chloride to include Bioxide in an amount not to exceed \$2.33 per gallon or an estimated \$122,000 per year. (Pages 33-37)
5. **Information Items**
 - A. Batiquitos (B3) Discharge Section Replacement Project Update (verbal)
 - B. Impacts of the April 10th Major Storm Event (Pages 38-48)

6. **Directors' Comments**
7. **General Manager's Comments**
8. **Adjournment**

MEMORANDUM

Ref: 20-7129

DATE: April 30, 2020
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: **Proposed Ordinance No. 141 - Amend Equivalent Dwelling Unit (EDU) Factors Capacity Fee Schedule**

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Adopt Ordinance No. 141 – An Ordinance of the Board of Directors of the Leucadia Wastewater District Establishing the District's Capacity Fee and Amending the EDU Factors Capacity Fee Schedule.
2. Discuss and take other action as appropriate.

BACKGROUND:

The State of California has continued to pass major housing legislation in an effort to battle the state's ongoing housing and housing affordability crisis. One tool the state is using to resolve this issue is the promotion of Accessory Dwelling Units (ADUs) and Junior Accessory Dwelling Units (JADUs). These units are constructed by property owners on the same property as a single-family or multi-family residence.

An ADU is defined as an attached or detached residential dwelling unit with an individual kitchen and bathroom that is located on the same parcel as an existing single-family dwelling. These units can be a maximum of 1,200 square feet. An ADU constructed outside of an existing structure remains subject to sewer capacity fees. An ADU that is constructed within an existing structure (i.e. single-family dwelling or garage), attached or detached, is generally exempt from sewer capacity fees.

A JADU is defined as a unit created within the walls of a proposed or existing single-family residence that is 500 square feet or smaller. A JADU may share a kitchen and bathroom with the primary dwelling. A JADU can only be constructed within an existing structure, therefore, the JADU is exempt from sewer capacity fees. However, appropriate sewer service fees still apply to the JADU.

The development of Ordinance No. 141 is a result of recent legislation that is designed to further encourage development of new ADUs and JADUs. EDU factors are used to calculate capacity and sewer service fees for District customers. An ADU or JADU must be assessed according to the proportionate burden placed upon the sewer system. Therefore, it is critical that these factors comply with new state laws and are evaluated to ensure they are established on a well-founded, logical, and justifiable basis. This will ensure the District is in compliance with the current laws and will withstand legal challenges of its fees.

DISCUSSION:

As of January 1, 2020, updated state legislation took effect to further clarify and ease various provisions to promote for the construction of ADUs and JADUs. The updates include:

- Allows a single-family residence to have both an ADU and JADU.
- Further limits and provides exemptions or reductions in impact fees.

- Reduced parking requirements.
- Expanding zoning areas for ADU construction.

Staff anticipates that the new legislation will result in an increasing number of new JADUs. As a result, staff chose to further evaluate the ADU/JADU categories to ensure consistent and appropriate standards for determination of EDU factors for ADUs and JADUs

The District's current ordinance provides for ADUs that are 1000 square feet or less to be assessed 0.5 EDUs. The current assessment does not change for smaller units that are 500 square feet or less. Staff recommends the assessment be changed to provide that JADUs, which are by definition no larger than 500 square feet, and ADUs that are 500 square feet or less, be assessed 0.25 EDUs. This reduced EDU rate takes into consideration the limited occupancy of the smaller sized units. Also, the lower EDU factor for ADUs and JADUs recognizes that they are unique residential units, which may not be separately owned, and may not always be consistently rented or occupied as independently owned apartments and condominiums. The new categories would be as follows:

1. An ADU or JADU that is 500 square feet or less be assessed 0.25 EDU.
2. An ADU or JADU that is 501-1,000 square feet be assessed 0.5 EDU.
3. JADUs that do not have independent kitchen and bath facilities would not be assessed any EDUs and would be covered by the EDU assessed to the primary residence.
4. The current standard of ADU's over 1,000 square feet be assessed 1.0 EDU would remain unchanged.

Staff believes the updated ADU/JADU category would provide a more equitable assessment for units 500 square feet or smaller and fully address the development scenarios for JADUs. The recommended changes are relatively minor both in administrative and financial impact. The overall impact of these updates will result in a reduction of approximately 25 EDUs for existing ADU's that are less than 500 square feet with a corresponding reduction in sewer services of approximately \$9,500 per year.

Therefore, staff is recommending minor changes to the current ordinance to further clarify the language and eliminate the potential for inconsistent interpretation of how fees are assessed. The recommended changes are in the following areas:

- Clarify the ADU category to include JADU's
- Create an additional sub-category for ADUs that are less than 500 square feet and JADUs
- Clarify that only a JADU with an individual kitchen and bathroom will be assessed EDUs

Attached please find a copy of Ordinance No. 141 for your review. Staff will present a detailed overview of the changes at the upcoming meeting.

FISCAL IMPACT:

The overall fiscal impact of Ordinance No. 141 will be a reduction of approximately \$9,500 per year in sewer service fees and is not expected to significantly impact LWD's annual revenues or operations.

ier:PJB

Attachment

ORDINANCE NO. 141

**AN ORDINANCE OF THE BOARD OF DIRECTORS
OF THE LEUCADIA WASTEWATER DISTRICT
ESTABLISHING THE DISTRICT'S CAPACITY FEE AND AMENDING THE
EQUIVALENT DWELLING UNIT FACTORS CAPACITY FEE SCHEDULE**

WHEREAS, the Leucadia Wastewater District (LWD) is a county water district that operates as a special district in accordance with Government Code Section 56036; and,

WHEREAS, the LWD Board of Directors has determined that a capacity fee is appropriate; and,

WHEREAS, the Capacity Fee has been set by Ordinance No. 137 at \$5,089 per Equivalent Dwelling Unit (EDU); and,

WHEREAS, the LWD Board of Directors has determined that the EDU Factors Capacity Fee Schedule should be amended to clarify how an Accessory Dwelling Unit (ADU) or a Junior Accessory Dwelling Unit (JADU) is assessed; and

WHEREAS, an additional category for smaller ADUs and JADUs (attached) has been added to the EDU Factors Capacity Schedule; and

WHEREAS, a public hearing to consider a reduced capacity fee for smaller ADUs and JADUs was duly noticed and held in accordance with Government Code Section 66016 on the date hereof,

NOW, THEREFORE, BE IT ORDAINED:

1. That the capacity fee charges shall be assessed in accordance with the EDU Factors established by the District and incorporated herein as "Exhibit A".
2. That the revised capacity fee charges and sewer service fees resulting from the new EDU Factors set forth on Exhibit A shall be prospective only and take effect on July 1, 2020
3. That the provisions of this ordinance shall be effective immediately after its adoption, and thereafter, Ordinance No. 137 shall be void and of no further force and effect.

PASSED AND ADOPTED this 13th day of May 2020, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Allan Juliussen
President

ATTEST:

Paul J. Bushee
Board Secretary

**LEUCADIA WASTEWATER DISTRICT
EDU FACTORS**

CAPACITY FEE SCHEDULE

WASTEWATER USE CATEGORIES			
NO.	DESCRIPTION	EDU FACTORS	
1	<u>Single-Family Residence</u>	1.0	
2	<u>Accessory Dwelling Unit & Junior Accessory Dwelling Unit</u>		
a	500 square feet or smaller	0.25	
b	501-1000 square feet or larger	0.5	
c	1,001 square feet or larger	1.0	
	Capacity Fees do not apply to Accessory Dwelling Units (ADUs) and Junior Accessory Dwelling Units (JADUs) that are exempt from such fees under State Law (generally new units contained within the existing space of a single-family residence or accessory structure). Sewer Service Fees still apply, and they are determined by the applicable EDU Factor for the ADU and JADU. Only JADUs with an individual kitchen and bathroom will be independently assessed an EDU factor. JADUs that do not have independent kitchen and bath facilities will be covered by the EDU already assessed to the primary property.		
3	<u>Multiple Dwelling</u> (apartments, duplexes, condominiums and townhouses) Each living unit	1.0	
4	<u>Mobile Home or Trailer Park</u> Each mobile home or trailer space	1.0	
5	<u>Motel or Hotel</u>		
a	Each unit without a kitchen	0.33	
b	Each unit with a kitchen	0.55	
6	<u>Medical Care or Elder Care</u> (hospitals, skilled nursing homes, convalescent homes, retirement homes, assisted living homes and similar facilities) Each plumbed facility must have a 1.0 EDU minimum. If the EDU calculation below is less than 1.0, the base minimum of 1.0 will apply	1.0 min.	
a	Multiple dwellings without individual kitchen & with on-site community eating facilities, per individual bed	0.4	
b	Multiple dwellings with individual kitchen and on-site community eating facilities, per living unit	0.8	
c	Multiple dwellings with individual kitchen and no on-site community eating facility, per living unit	1.0	
d	Single dwellings with individual kitchen regardless of community facilities, per living unit	1.0	

7	<u>Churches, Theaters, and Auditoriums</u> Each unit of 115 persons or fraction thereof	1.0
8	<u>Schools</u>	
a	Each Elementary School per 60 pupils or fraction thereof	1.0
b	Each Junior High School per 50 pupils or fraction thereof	1.0
c	Each High School per 30 pupils or fraction thereof	1.0
d	Each Trade, Vocational, University or College per 30 pupils or fraction thereof	1.0
9	<u>Laundries - Self Service</u> Per each washer	0.75
10	<u>Food Services Establishments</u>	
a	<i>Limited Food Preparation Establishments.</i> Facilities that only engage in the reheating, hot-holding or assembly of ready to eat products and the incidental sale of beverages. See "Other Commercial or Industrial Users"	(See Category 15)
b	<i>Low Food Preparation Establishments.</i> Facilities that prepare food, but have equipment and/or uses deemed to have a low risk of FOG ¹ , BOD ² or TSS ³ discharge (microwave, toaster, toaster oven, bread oven, combi-oven, steamers, freezers for serving frozen products, and other similar equipment) ⁴ . Includes facilities for which the preparation and sale of specialized beverages, such as coffees and smoothies, is an incidental part of the business. Minimum allows for up to 14 seats with multi-use utensils or up to 30 seats with single-use utensils	2.0 min.
1)	Additional for each unit of 7 seats or portion thereof with multi-use utensils that exceeds minimum seating	1.0
2)	Additional for each unit of 15 seats or portion thereof with single-use utensils that exceeds minimum seating	1.0
c	<i>High Food Preparation Establishments.</i> Facilities that prepare food and have equipment and/or uses deemed to have a high risk of FOG ¹ , BOD ² or TSS ³ discharge (char-broiler, griddle, grill, stove (range), oven (range), deep fryer, kettle, rotisserie, smoker, tilt skillet, pizza oven and other similar equipment) ⁴ . Includes facilities for which the preparation and sale of specialized beverages, such as coffees, is the primary focus of the business. Minimum allows for up to 21 seats with multi-use utensils or up to 45 seats with single-use utensils	3.0 min.
1)	Additional for each unit of 7 seats or portion thereof with multi-use utensils that exceeds minimum seating	1.0
2)	Additional for each unit of 15 seats or portion thereof with single-use utensils that exceeds minimum seating	1.0

1 Fats, Oils, and Grease

2 Biochemical Oxygen Demand, 5 day

3 Total Suspended Solids

4 The type of equipment alone is not dispositive. A final determination regarding a facility's classification is made after considering its specific equipment and use characteristics.

11	<u>Commercial Facilities With Food Preparation</u>	
a	For Food Preparation Area, See "Food Services Establishments"	(See Category 10)
b	For Commercial Area, See "Other Commercial or Industrial Users"	(See Category 15)
12	<u>Ballrooms, Banquet Facilities and Convention Facilities</u> Per block of 40 seats	1.0
13	<u>Automobile Service Stations</u>	
a	Not more than four (4) gasoline pumps	2.0
b	More than four (4) gasoline pumps	3.0
c	Additional for each washing rack, pit or floor drain (Drains subject to collecting toxic, hazardous, or potentially explosive waste are not allowed to be connected to sewer)	2.0
d	Car washes shall be individually evaluated by LWD District Engineer based on peak net discharge rate of specific equipment to be used with internal water recycling required	(Per Review)
14	<u>Banks and Savings and Loan Associations</u> Each 3,000 square feet or portion thereof	1.0
15	<u>Other Commercial or Industrial Users</u>	
a	Up to 1,000 square feet	1.0
b	Plus for each additional 1,000 square feet or portion thereof up to 5,000 square feet	0.6
c	Plus for each additional 1,000 square feet or portion thereof over 5,000 square feet	0.4
d	The Capacity Fees for establishments with unusual sewer characteristics or for any commercial use not described in the categories above shall be fixed by the Board of Directors by motion, resolution, or ordinance when each specific application is submitted	(Per Case)
At any time the District may review the current standards of practice of any commercial or industrial customer with regard to sewer use during the previous year. If such use is not within the limits of the previous classification, the service may be reclassified accordingly and any additional capacity charges shall become due and payable immediately on request.		

Ordinance No. 141 – Amend Equivalent Dwelling Unit Factors Capacity Fee Schedule

Leucadia Wastewater District



Why Are We Here?

- State of California passed new housing legislation updates due to ongoing housing and housing affordability crisis
- State tool: promote the construction of Accessory Dwelling Units (ADUs) & Junior Accessory Dwelling Units (JADUs)
- Replaces Ordinance No. 137 adopted in June 2018



ADU vs. JADU

ADU

- Attached or detached residential unit on same parcel as an existing single-family residence
- Individual kitchen
- Individual bathroom
- Maximum of 1,200 sf

JADU

- Unit created within the walls of a proposed or existing single-family residence
- May share a kitchen and bathroom with primary dwelling
- 500 sf or smaller



Importance of an EDU Factor

- An EDU is a factor used to assess the proportion of wastewater from a home, office, or restaurant contributes to the LWD sewer system
- EDU factors determine appropriate capacity fee charges (if applicable) and sewer service fees
- An ADU or JADU assessed an EDU factor according to the proportionate burden placed on the sewer system



New State Legislation

- As of January 1, 2020 – updates took effect to ease construction of ADUs & JADUs
- Updates will result in increasing number of ADUs & JADUs
- Staff chose to further evaluate the ADU/JADU category to ensure consistent standards

Recommendations

Current Ordinance

ADU & JADU

- 1,001 sf or larger
- 1,000 sf or smaller

EDU Factor

1.0

0.5



Proposed Ordinance



- 501 - 1,000 sf
- 500 sf or smaller

0.5

0.25



Recommendations Con'd

- Clarify the ADU category to include a JADU
- Create an additional sub-category for an ADU or JADU 500 sf or less
- Clarify only a JADU with individual kitchen and bathroom will be assessed an EDU factor



Impact

- Minor administrative changes
- Results in a reduction of 25 EDUs for existing ADUs that are 500 sf or smaller
- Reduction of about \$9,500 per year in sewer service fees



Questions or Comments?



MEMORANDUM

DATE: April 30, 2020
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Infrastructure Engineering Corporation Contract Extension for Engineering Design Services

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Authorize the General Manager to execute a two year extension to the Infrastructure Engineering Corporation (IEC) contract for as needed engineering design services.
2. Discuss and provide direction as appropriate.

DISCUSSION:

In May 2017, the District entered into a Professional Services Agreement with Infrastructure Engineering Corporation (IEC) for as needed engineering design services. The initial contract period was for 3 years with an option to extend the agreement for 2 additional years. These terms were selected for efficiency and to allow for continuity of service beyond the initial term should it be warranted by staff and IEC.

The initial three-year period of the IEC agreement expired on May 1, 2020. IEC verbally agreed to extend their current services past May 1st and until the District approves a formal extension. This verbal extension was made as a result of the cancellation of the April Board of Director's meeting as a result of COVID-19 restrictions. Based on their performance and commitment to the District, staff is recommending that the option for a two-year contract extension be executed.

The amendment to the basic agreement will extend the engineering design services until May 2022. As is the case with the basic contract, this extension does not have a specific compensation amount associated with it. Each design project will be issued using task orders to the agreement containing a negotiated compensation amount. If the compensation amount of an individual task order exceeds the thresholds established in the District's Procurement Policy, the task order will require Board approval prior to execution.

Staff requests that the Engineering Committee recommend that the Board of Directors authorize the General Manager to execute a two-year extension to the Infrastructure Engineering Corporation (IEC) contract for as needed engineering design services and discuss and provide direction, as appropriate.

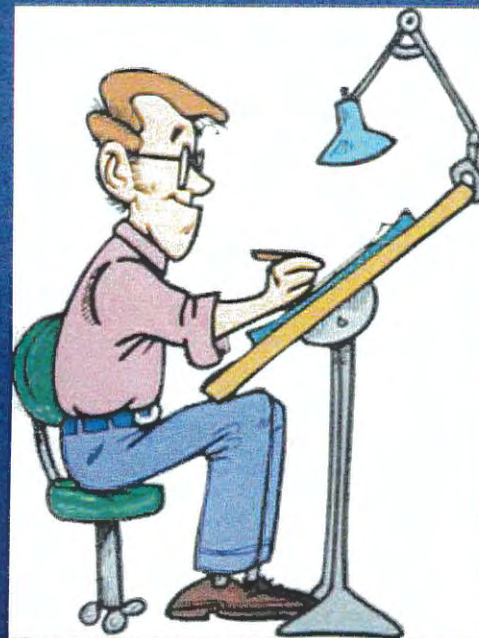
rym:PJB

INFRASTRUCTURE ENGINEERING CORPORATION (IEC) CONTRACT EXTENSION

(May 2020)

Recommendation

Authorize the General Manager to execute a two year extension to the Infrastructure Engineering Corporation (IEC) contract for as needed engineering design services.



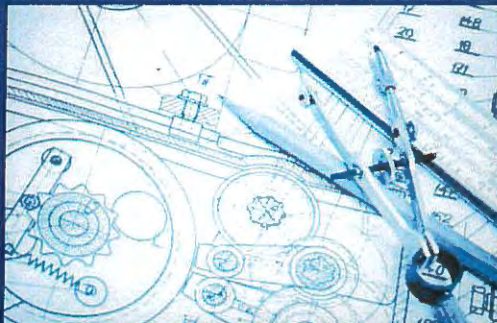
Discussion

- May 2017 executed contract for as needed design service
- Initial period for 3 years
- Option to extend for 2 additional years – based on performance
- Terms for efficiency and continuity of service



Discussion (cont.)

- Initial 3 year period expired on May 1st
- Cancellation of April 2020 Board Meeting due to COVID-19
- Verbal agreement to extend initial period beyond May 1st - pending amendment approval
- Design / Construction Support - 13 projects



Discussion (cont.)



- L1 FM West Section Replacement
- VP5 Pump Station Replacement
- Gafner Improvements
- B1 FM North Section Replacement (design only)
- FY18 Gravity Pipeline CIPP Lining
- La Costa Golf Course Pipeline Realignment
- 2019 Pump Stations Assessment
- B3 FM Discharge Section Replacement
- Leucadia Pump Station Rehabilitation
- Orchard Wood Road Gravity Line Repair
- Encinitas Estates Pump Station Replacement
- FY 20 Gravity Sewer Repairs
- Diana Pump Station Generator

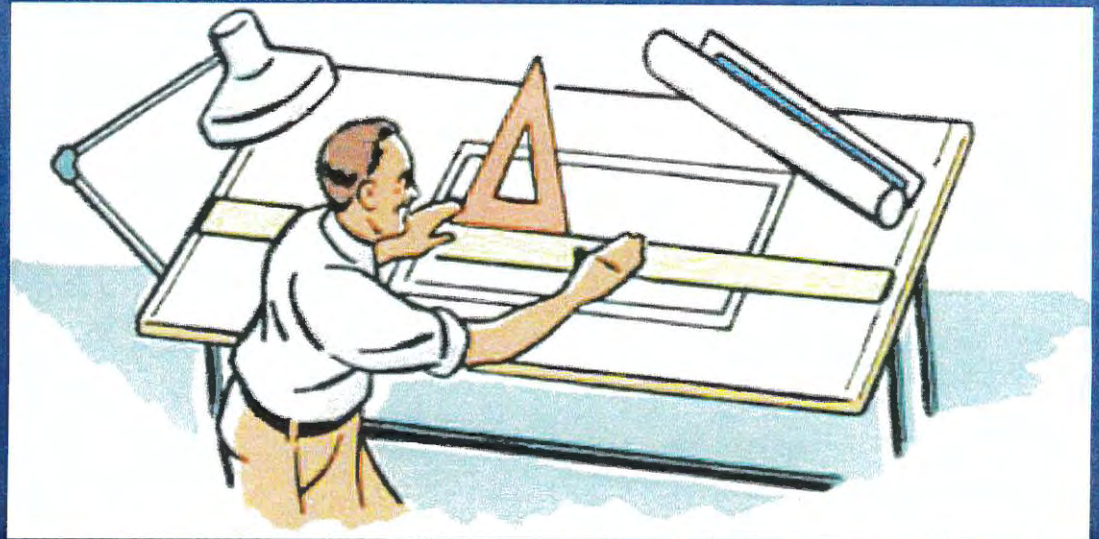


Discussion (cont.)

- Extension to 01 MAY 2022
- No specific compensation amount
- Task Order issued for each project
- Procurement Policy thresholds applies for individual task order / task order amendment(s)

Recommendation

Authorize the General Manager to execute a two year extension to the Infrastructure Engineering Corporation (IEC) contract for as needed engineering design services.



Questions / Comments

MEMORANDUM

DATE: April 30, 2020
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: **ADS Environmental Services Lease for ECHO SSO/Depth Meters for Monitoring, Data Analysis and Presentation, and Maintenance**

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Authorize the General Manager to execute a sole source five-year professional services agreement with ADS Environmental Service, Corporation (ADS) for equipment maintenance and analysis of data for ten (10) ECHO depth meters in an amount not to exceed \$80,400 (\$16,080 annually), effective July 1, 2020.
2. Discuss and take other action as appropriate.

DISCUSSION:

In August 2017, the Leucadia Wastewater District (District) entered into a Professional Services Agreement with ADS Environmental Service, Corporation (ADS) to operate a level monitoring network of ten (10) ECHO SSO/depth monitors for the District. The initial contract period was for three-years and will expire on June 30, 2020.

For the past three years, the District has utilized ADS's ECHO monitoring system, to monitor areas of concern in the collection system on a trial basis. The ECHO meters are essentially a sensor that is mounted on the inside cover of the manhole that alerts District staff if the flow starts to surcharge and/or potentially overflow. In addition, the ECHO meters have also proven effective at optimizing operations by tracking grit buildup in major pipelines and pinpointing areas with high infiltration/inflow.

As you may recall, the District also utilizes an ADS flow monitoring (FM) system that monitors flow from seven sub-basin pipeline locations throughout the service area. The FM system provides an early alert alarm system that sends a text message and email to the operators in case of a pipeline surcharge and utilizes an ADS proprietary computer software system that allows easy graphical viewing of the flow data. It should be noted that the agreement for the ADS FM system is separate from the ECHO monitoring agreement. The FM agreement is for five-years and expires on June 30, 2021.

During the three-year trial period, staff observed several beneficial factors provided by the ECHO meters. One of the benefits is that it integrates seamlessly into the existing ADS FM software so that staff can access both the FM information and ECHO meter depth information in one program making it efficient and user friendly for staff. Another is the flexibility of the ECHO meters. The meters can be moved with ease throughout the collection system to help identify areas with high inflow or infiltration, as needed.

At staff's request, ADS submitted both a three-year and a five-year fixed cost proposal for the lease of ten (10) ECHO meters for the District's collection system. Both proposals include maintenance and repair of the meters. Additionally, the contract includes services for data collection, analysis and reporting. Both proposals are presented in the following chart.

ECHO Meter Lease Pricing				
	Monthly	Meters	Cost /Year	Total Cost
3-year lease	\$ 1,668.00	10	\$ 16,680.00	\$ 50,040.00
5-year lease	\$ 1,608.00	10	\$ 16,080.00	\$ 80,400.00
Savings per meter / month	\$60.00			

As presented in the chart, the District will save \$720 (\$60 X 12) annually or a total of \$3,600 (\$60 X 60) with the five-year lease when compared to the three-year lease for maintenance and monitoring of the ECHO meters. Another advantage of this arrangement is that ADS has offered a fixed price for the entire 5 year period with no cost escalators.

The proprietary nature of the combined FM and ECHO depth meter monitoring program and the successful use of the ECHO meters satisfy the District Procurement Policy's requirements for a sole source purchase.

Based on the analysis above and ADS's successful performance with the District, staff requests that the Engineering Committee recommend that the Board of Directors authorize the General Manager to execute a sole source five-year lease agreement with ADS Environmental Service, Corporation (ADS) to operate and maintain ten (10) ECHO SSO/depth monitors. The attached scope of work is provided for your review.

FISCAL IMPACT:

If approved, staff will propose sufficient funds in the FY 21 Operating Budget to cover the first year's expense of this agreement. Staff plans to annually propose sufficient funds to cover these costs in the ensuing fiscal years.

jms:PJB

Attachments

ATTACHMENT A

SCOPE OF WORK

CONSULTANT will operate a level monitoring network of ten (10) ECHO SSO/depth monitors for DISTRICT in the Cities of Carlsbad and Encinitas, California. The work will be performed as set forth below:

Phase I – Mobilization

Equipment. CONSULTANT will supply ADS ECHO depth meter technology which is CONSULTANT's newest monitor. The ECHO will be equipped with wireless communication which will allow for remote collection, review and alarming of all data. The ECHO equipment will stay the property of CONSULTANT.

ECHO meters are certified under IECEx (International Electrotechnical Commission Explosion Proof) Intrinsic Safety standards for use in Zone 0/Class I, Div. 1, Groups C&D rated hazardous areas.

CONSULTANT will be responsible for all parts replacements and warranty items for the duration of the contract.

Phase II – Comprehensive Service - CONSULTANT will provide services to maintain and operate the depth monitoring equipment during the Agreement period (July 1, 2020 through June 30, 2025).

- 1) **Diagnostics:** Remote diagnostic inspection of all equipment using the most current procedures and programs from its facilities in San Diego, CA or other service locations.
- 2) **Repair:** Repair and preventative maintenance services, including battery replacement (assuming a 15-minute sample rate), necessary to keep the equipment operating in accordance with the manufacturer's design specifications.

CONSULTANT will respond to a malfunction within two (2) business days and perform repairs or temporary repairs within (2) business days thereafter. The types of conditions to be repaired and repair services to be performed under this Agreement include but are not limited to the following:

- Communication link failure - including control boards, modem, and modem interface;
- Hardware replacement – sensor malfunction;
- Low battery voltages - Battery voltages shall be considered as being low when the voltage is less than 5.5V; and

3) **Depth Confirmations:**

CONSULTANT will perform as needed field confirmations according to CONSULTANT's current internal quality procedures for all of the ADS ECHO™ depth monitors including:

- Verification of the depth of flow within manhole channel, topside only.
- Statement of confirmation

4) Service Schedule:

The field service shall occur during the normal operating hours of 8:00 a.m. to 12:00 noon and 1:00 p.m. to 5:00 p.m. Monday through Friday (excluding holidays).

5) Service Statement:

CONSULTANT shall prepare a statement of repair service whenever service or diagnostic functions are performed. These forms shall be submitted to DISTRICT upon request.

6) Primary Contact:

CONSULTANT shall designate a field service representative who shall be the primary contact with DISTRICT for the resolution of field problems.

ARTICLE 3.

Data Collection, Data Review, and Alarming Services (July 1, 2020 through June 30, 2025)

Data services will be conducted from CONSULTANT's National Data Center where trained Data Analysts utilize Flowview software, as well as Six Sigma quality assurance procedures to maximize data usability and ensure data up-time.

7) Data Collection and Diagnosis:

Data will be uploaded from the depth meters every twenty-four (24) hours to the Flowview Operations web hosted system. CONSULTANT's data analysts will review the data (e.g. bi-weekly) to verify that equipment is in working order and will dispatch CONSULTANT field crews to perform equipment repair as needed.

8) Data Alarming:

The Flowview web hosting system will send out real-time alarms (via the web, pagers, cell phones, emails) if any set triggers are reached at the individual depth meters. Alarm triggers can be set for Loss of Depth, Pipe Height, High, High High, and Overflow.

Exclusions:

The types of services excluded under this comprehensive service agreement include the following:

- Civil Engineer's Stamp on any plans for submitted for permitting;
- Work conducted outside of Service Schedule;
- Communication line work external to depth monitoring equipment;
- Changes or alterations in specifications;
- Painting or refinishing or furnishing materials therefore except as damaged by CONSULTANT during service work;
- Installation, moving, or removing of equipment unless required as part of the repair process;
- Repairs made necessary due to the negligence of DISTRICT, its employees, agents, invitees, or contractors;
- Repairs made necessary due to attempts by DISTRICT to repair or maintain the equipment unless authorized by CONSULTANT;
- Maintenance and repair necessary to put equipment not under the comprehensive scheduled service contract in good repair;
- Equipment repair or replacement outside manufacturer's design specifications when knowingly directed by DISTRICT; and

- Repairs made necessary due to events beyond CONSULTANT's control (force majeure).

DISTRICT Responsibilities

- 1) Access to the site of work with sufficient area for placement of personnel and equipment, including all right-of-way and ramps, if required. This includes, but is not limited to, exposing manholes, clearing easements and/or constructing roads or ramps suitable for truck/van, if necessary;
- 2) Pay all local licenses and permits fees, if required;
- 3) Assist in obtaining and complying with any special permits;
- 4) Ensure that selected sites have been jet cleaned to minimize hydraulic deficiencies; and
- 5) Provide any information concerning bypasses, overflows, base flows, critical surcharge areas, and maintenance habits.

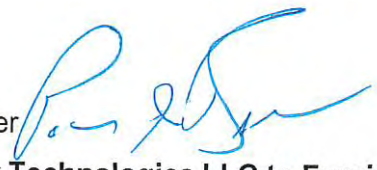
Pricing:

Five-Year Service Period July 1, 2020 - June 30, 2025

Monthly Field Services, Analysis and Web Reporting Costs:				
Item	QTY	Description	Unit Cost meter/year	Yearly Extended Cost
1	10	ADS D-Site Level Only Monitoring Program (5 Year Option). ECHO Monitor Lease (ADS Owned Meter), Maintenance, and FlowView Prism with blockage prediction Setup/Hosting for sixty (60) Calendar Months.	\$ 1,608.00	\$ 16,080.00
			1 st Year Contract Value:	\$ 16,080.00
			2 nd Year Contract Value:	\$ 16,080.00
			3 rd Year Contract Value:	\$ 16,080.00
			4 th Year Contract Value:	\$ 16,080.00
			5 th Year Contract Value:	\$ 16,080.00
			2020-2025 Total Contract Value:	\$ 80,400.00

*Additional sites can be added for the unit rate price listed above with additional installation fee of \$500.

MEMORANDUM

DATE: April 30, 2020
TO: Engineering Committee
FROM: Paul J. Bushee, General Manager 
SUBJECT: Agreement with Evoqua Water Technologies LLC to Furnish and Deliver Bioxide on Interim Basis

RECOMMENDATION:

Staff requests that the Engineering Committee recommend that the Board of Directors:

1. Authorize the General Manager to execute Amendment No. 1 to the agreement with Evoqua Water Technologies, LLC to furnish Bioxide on interim basis in an amount not to exceed \$2.33 per gallon or an estimated \$122,000 per year.
2. Discuss and take other action as appropriate.

BACKGROUND:

In 2006, the Leucadia Wastewater District (District) partnered with Evoqua Water Technologies, LLC (EWT), to provide Bioxide to help prevent and control the formation of hydrogen sulfide (H_2S) in the Leucadia Pump Station Force Mains (LPSFM). Control of H_2S is critical because it is a lethal gas, creates odors, and causes internal corrosion of metal pipes. While the injection of Bioxide in the LPSFM was effective, over time the efficacy of the Bioxide was reduced and the cost for the chemical was quite high.

As a result, staff looked for better ways to control H_2S and, working with the District Engineer, identified Ferrous Chloride (Ferrous) as a possible solution. In March 2018, staff executed an agreement with EWT and began a 120-day trial period using Ferrous to control H_2S . The results demonstrated that Ferrous was more effective at reducing H_2S levels than Bioxide and was more cost effective. The District subsequently executed a contract with EWT to continue to provide Ferrous.

In December 2019, staff began noticing issues with the District's air/vacuum relief valves (air vacs) as they performed routine maintenance. The air vacs' flapper valves were being compromised by an unknown substance causing leakage and the potential for a spill. Staff tested and evaluated the substance over the next few months but was unable to identify the substance. Staff eventually concluded that the Ferrous could be causing the unknown substance and turned off the Ferrous for a brief period and the unknown substance went away.

Based on this, staff stopped using Ferrous to avoid the potential for a spill. However, the H_2S levels in Leucadia and Batiquitos forcemains have become unacceptably high as a result. Concurrently, the Leucadia Pump Station upgrade project has identified super-oxygenation as the long-term solution to control H_2S , but the upgrade is under construction and the system will not be in place for another year and half.

DISCUSSION:

To control the H₂S to some level during the interim period, staff is recommending that we return to using Bioxide.

On February 28, 2020 the District sent out a Request for Bids to two (2) known suppliers that furnish and deliver Bioxide. Bids were due April 6, 2020 and were received as follows:

	Cost per gallon	1 Year Cost
Evoqua	\$2.33	\$121,346
USP Technologies	\$2.95	\$153,636

The bids were submitted on a cost per gallon basis with EWT submitting the lowest bid. Staff used its previous dosing history for Bioxide, to estimate the cost over a one-year period. As a result of staff's evaluation, EWT was determined to be the lowest responsive bidder to satisfy the bid requirements and recommends the award of the agreement to EWT. Attached is a copy of the Scope of Work to furnish and deliver Bioxide for your review.

Therefore, staff requests that the Engineering Committee recommend that the Board of Directors authorize the General Manager to execute Amendment No.1 to furnish and deliver Bioxide to Evoqua Water Technologies, LLC as the lowest responsive and responsible bidder in an amount not to exceed \$2.33 per gallon or an estimated \$122,000 over a one-year period.

FISCAL IMPACT:

Sufficient funds will be appropriated in the FY21 Operating Budget to cover the cost associated with this agreement.

jms:PJB

ATTACHMENT A

SCOPE OF WORK FOR FURNISHING AND DELIVERING BIOXIDE

1. SCOPE OF SUPPLY

1.1 Equipment

- (1) 6,650 Nominal Gallon, Double Wall, High-Density Cross-Linked Polyethylene Chemical Storage Tank (10'2" Diameter, 14' 9 1/2" Tall, Specific Gravity 1.65) for chemical storage
- (1) Complete UL Approved, Stainless Steel Control and Calibration Unit to Independently Control Two Feed Pumps. The Control Unit shall consist of:
 - (2) 24-Hour Time Clocks
 - (1) 316 SS Control Enclosure
 - (1) 15 Amp Circuit Breaker, 115 volt
 - (1) Ground Fault Convenience Receptacle
 - (5) On/Off Switches with LED Indicator Lights
 - (1) Calibration Cylinder with Flow Control Valves
 - (2) Dry Contacts to Receive Signal from Remote Source
- (2) M-15908-001 1.5" Evoqua Water Technologies Bellows Pumps with an adjustable feed rate from 63 to 630 mL/min and a maximum discharge pressure of 20 psi.
- (1) Single Wall Piping Kit shall consist of:
 - 40 ft of 1/2" schedule 80 PVC Pipe.
 - (1) 2" Stainless Steel Male Camlock
 - (1) 2" Plastic Female Camlock Cap.
 - (1) 2" Schedule 80 PVC Tank Fill Piping

Evoqua shall retain ownership of all provided equipment. Some of the above items provided as a loaner may be refurbished (used). Evoqua will maintain spare parts for the equipment for emergency replacement.

Evoqua shall be responsible for the following installation activities:

- 1. Deliver tank and feed system
- 2. Fill and suction piping installation
- 3. Removal and disposal of old tank (optional adder)

1.2 Chemical

Evoqua shall provide minimum 3,800-gallon bulk loads of Bioxide solution.

1.3 Preventive Maintenance and Routine Sampling

An Evoqua service technician will perform routine maintenance and sampling for the chemical feed site at a *minimum of four (4) times per year*. These visits will be conducted at a frequency *not more than 3 months apart* and shall consist of odor control point liquid phase sampling. A written report will be provided within a week of site visit. Sampling and routine maintenance services will be scheduled in advance and include, but not be limited to the following:

- Liquid phase testing for performance evaluation and feed rate adjustments. The parameters measured shall be:

Parameter Monitored	Method
Dissolved Sulfide	Methylene Blue, pre-flocced to remove insoluble sulfides
pH	Combination Glass Electrode
Temperature	NIST calibrated Thermometer
Residual Nitrate	HACH Nitrate Strips

Table 1 – Performance Sampling Methods.

- A report will be issued to Leucadia WD each month noting the following:
 1. Beginning feed rate in ml/min, gal/day
 2. Liquid and Vapor phase data collected
 3. Adjusted feed rate in mL/min, gal/day
 4. Tank Levels
 5. General Condition of the feed and storage equipment

Sampling and optimization visits are crucial so that seasonal temperature changes and chemical demand changes in the waste water may be accounted for. System optimization minimize long periods of time where chemical overfeeding or underfeeding might be occurring and will lead to overall cost savings and increased system performance.

2. SITE, UTILITIES AND CUSTOMER REQUIREMENTS

The Leucadia WD shall be responsible for having certain facets of site preparation completed prior to Evoqua's mechanical installation of the feed equipment. This includes, but is not limited to dewatering, concrete work, trenching, containment piping, excavation, backfill, piping and electrical. Additionally, the customer shall be required to supply the following for each chemical feed system:

- Power – 15A / 120VAC / 1PH (provided within 10' of equipment)
- Floor Space – 12' x 12' Level ground (concrete pad preferred)
- Site Security
- Tanker Access for chemical delivery
- Verify discharge line in tact to chemical delivery location
- Force main tap for chemical injection (if required)
- Lift Station Contacts to operate equipment on LS mode (if required)
- Site Permits (as required)

3. SCHEDULE

Evoqua can begin the program within 2 - 3 weeks of authorization to proceed after Evoqua contract approval and depending on scheduling.

4. PRICING

Evoqua is pleased to offer the following price for chemical, equipment and services for a one-year period from date of contract acceptance. Pricing shall be subject to annual review:

Mobilization Fee:	\$ 6,750 one-time fee for the delivery and installation of chemical storage tank and feed system
BIOXIDE:	\$ 2.33 / gallon. Price includes delivery, Prepaid (PPD).
Equipment and Quarterly Service:	Included in the price of chemical
Demobilization Fee:	\$ 5,250 one-time fee for the removal of chemical storage tank and feed system
Optional Tank Removal Adder:	\$ 3,750 one-time fee for the removal and disposal of old tank

The Services to be performed under this contract can be extended with mutual agreement from both parties at the end of the contract date. Price increase requests for the extended period of the contract will be considered based on the local CPI-U.

* Pricing is valid for the one-year contract period. Evoqua reserves the right to request reasonable pricing increases for contract extensions for periods after June 30, 2021.

** Payment due within 15 days of receipt of quarterly invoice.

ANALYSIS OF DISTRICT FLOW FRIDAY 4-10-2020

DEXTER WILSON ENGINEERING INC.

May 6, 2020

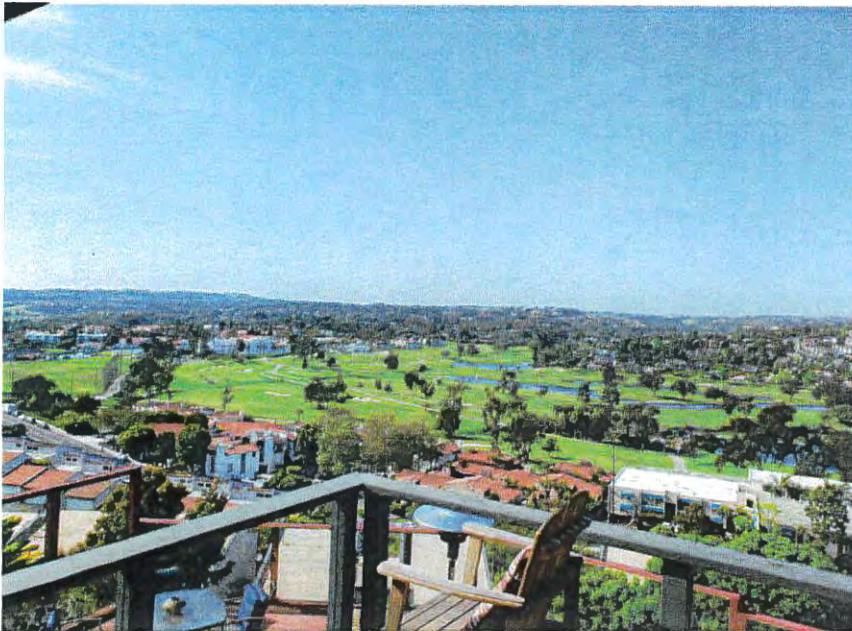




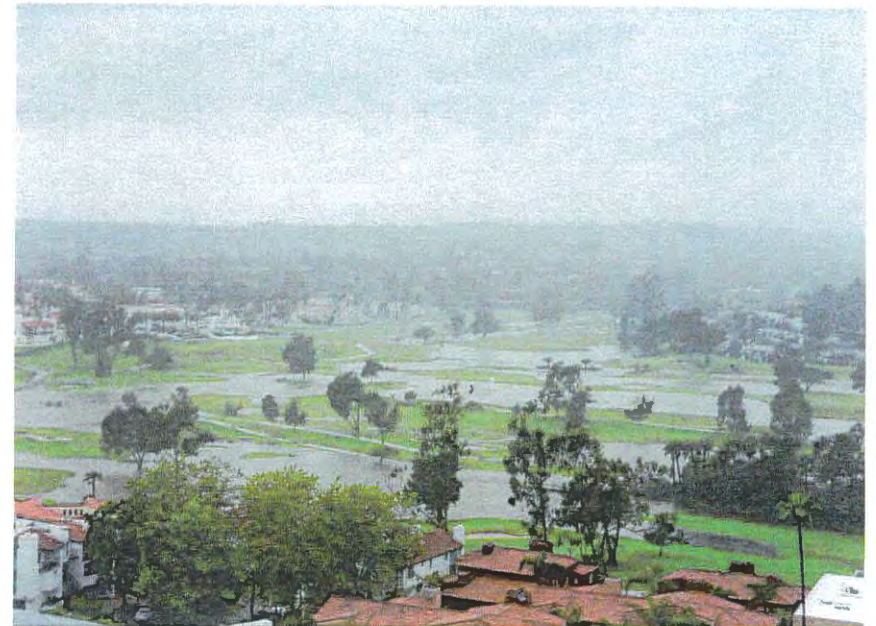
WHAT HAPPENED

WHAT HAPPENED

Golf Course Normally



Golf Course on 4/10/2020



FLOW AND RAINFALL

- Daily rainfall within District on 4/10/20 approximately 1.65" to 1.78"

District Flow ¹	Typical Dry Weather Day ²	4/10/20
Average	3.7 mgd	8.2 mgd
Hourly Peak	5.5 mgd	11.1 mgd
15 Minute Peak	6.0 mgd	12.6 mgd

1. Based on subtracting Encina's Encinitas Moonlight meter from the Batiquitos meter

2. Based on data from July 2019

COMPARISON TO OTHER PEAK EVENTS

District Flow	April 2020	December 2014	February 2017	Design ¹	Batiquitos PS Design ²
Annual Average	3.8 mgd	3.9 mgd	3.7 mgd	6.1 mgd	-
Peak Hour Flow	11.1mgd	9.7 mgd	9.9 mgd	13.7mgd	21.7 mgd
Peak Hour Factor ³	2.93	2.49	2.66	2.22	-

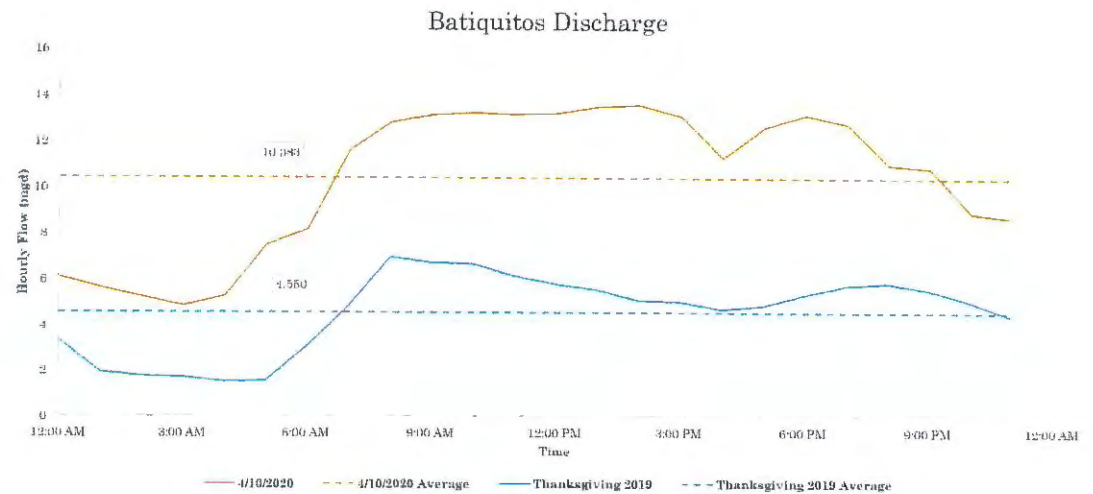
1. Based on 2018 LWD Asset Management Plan and 2018 Standard Specifications

2. Based on 3 pumps on and 2 force mains open

3. For reference the peak hour factor on a dry weather day is 1.74.

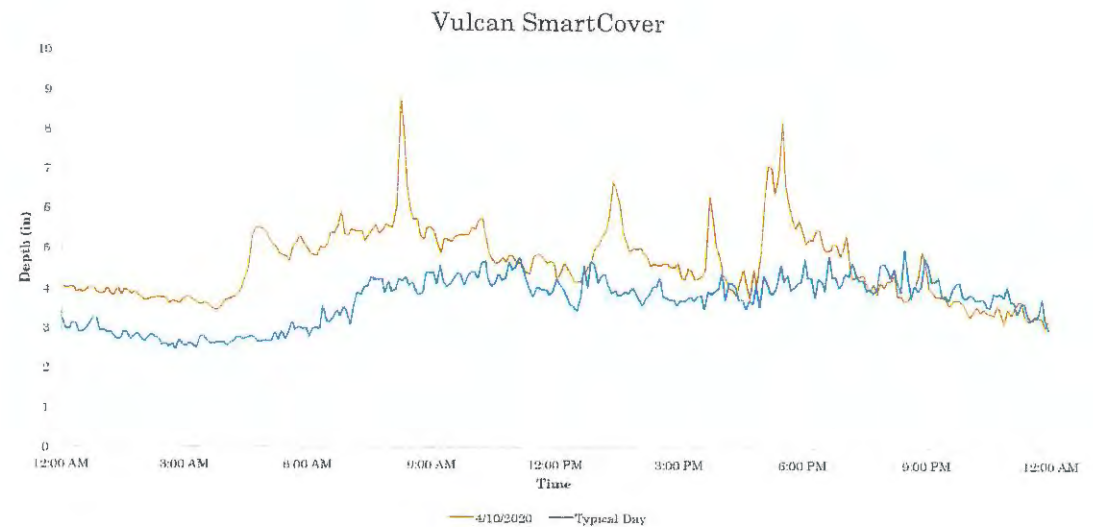
IMPACTS ON LWD

- No spills
- Many alarms
- Batiquitos PS used more efficiently because we learned from the Thanksgiving Spill (Two force mains open)

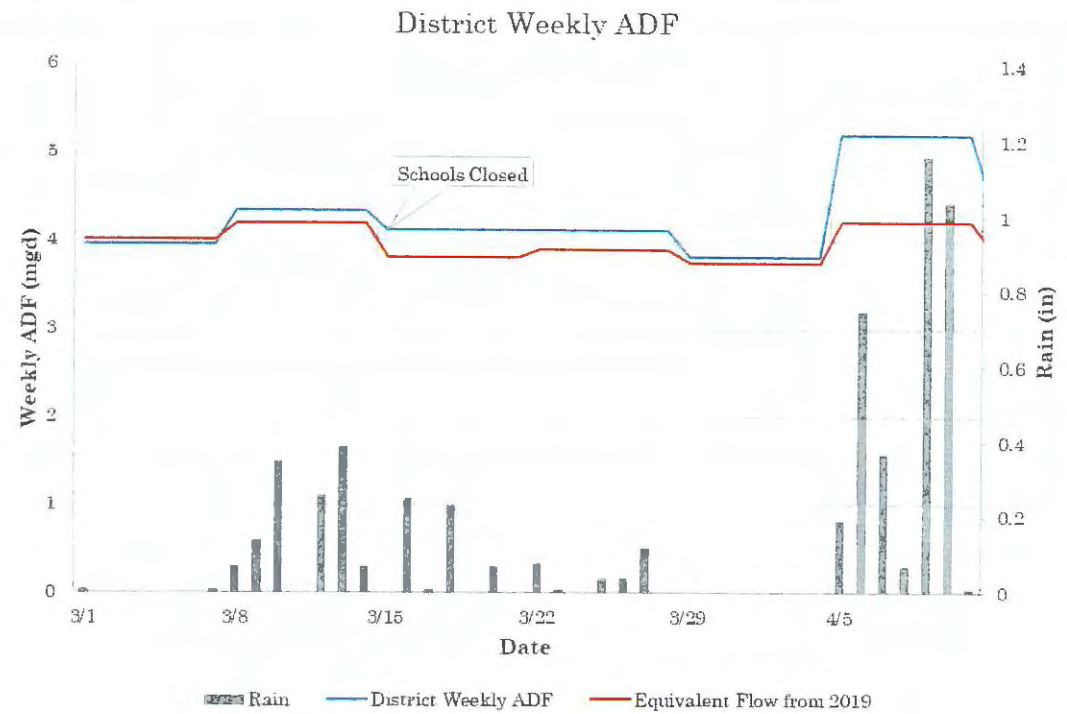


IMPACTS ON LWD CONTINUED

- Spills from other Agencies on 4/10/2020
 - City of San Diego (4) – 12 MG, 9,850 gal, 10,000 gal, and 1,495 gal
 - City of Encinitas (2) – 700 gal and 2,240 gal
 - City of Oceanside (2) – 38,250 gal and 1,210,000 gal
 - Rancho Santa Fe CFD – 600 gal
 - Rainbow (2) – 2,300 gal and 2,500 gal
- SmartCovers show where smoke testing is needed

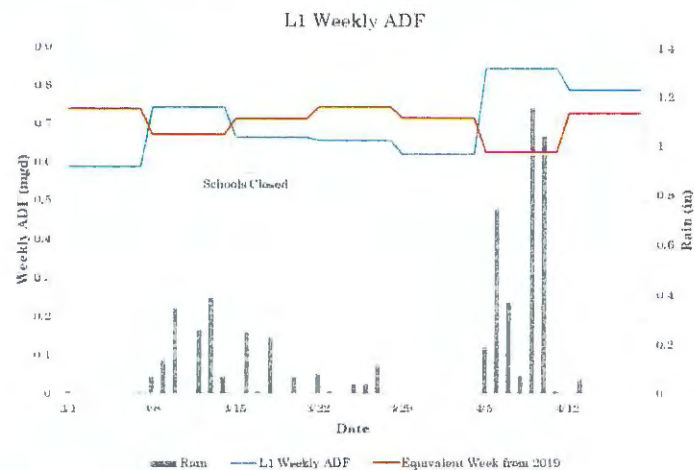


DID COVID 19
MAKE THIS WORSE

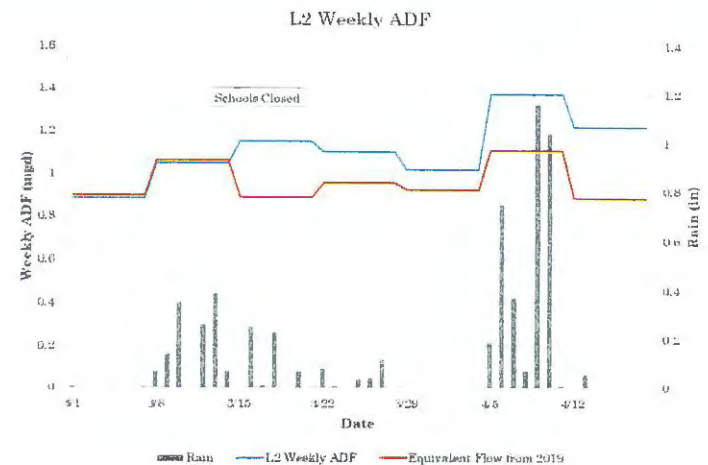


DID COVID 19 MAKE THIS WORSE

More Commercial Old Leucadia



More Residential East of El Camino Real





Questions / Comments