Ref: 21-7651

**MEMORANDUM**

**DATE:** June 1, 2021

**TO:** Engineering Committee

**FROM:** Paul J. Bushee, General Manager

**SUBJECT:** **ADS Environmental Services Agreement for Flow Monitoring Services**

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## RECOMMENDATION:

Staff requests that the Engineering Committee (EC) recommend that the Board of Directors:

1. Authorize the General Manager to execute a sole source five-year professional services agreement with ADS Environmental Services (ADS) for a cost not to exceed $282,652.
2. Discuss and take other action as appropriate.

**Please note that this recommendation contains updated costs from the letter sent to the EC on May 28, 2021.**

## BACKGROUND:

The Leucadia Wastewater District (LWD) has been utilizing ADS flow meters since 2009. The LWD Board of Directors last approved a five-year agreement with ADS in 2016 which included the replacement of 7 flow meters with ADS's latest technology. In effort to reduce costs, the contract was structured in the form of a lease which was not subject to prevailing wage laws at the time. The contract included the equipment installation, maintenance and repair as well as the flow data collection, analysis and reporting. The seven meters were installed at the following locations:

| Meter No. | Location |
|---|---|
| L1 | Highway 101 (near La Costa Ave intersection) |
| L2 | Olivenhain Road (just east of El Camino Real) |
| L3 | El Camino Real (just north of Leucadia Blvd.) |
| L4 | La Costa Avenue (just to south of District Headquarters) |
| L5 | Gelson's Shopping Center |
| L6 | Saxony Pump Station (Clamp-on flow meter) |
| L7 | La Costa Pump Station (Clamp-on flow meter) |

## DISCUSSION

The ADS contract is up for renewal on July 1, 2021. ADS has proposed to continue providing flow monitoring services to include providing the meters, equipment maintenance, flow metering, data collection, data analysis, graphing, reporting and ADS website access.

*Reduction of Two Meter Locations*

In January 2021, staff evaluated all seven-meter locations and analyzed the flow data from each. As a result, staff determined that two meters: L2 – Olivenhain Road (L2) and L3 – El Camino

Real (L3), were not providing accurate data. The discrepancy was uncovered when the Equivalent Dwelling Unit (EDU) count for each area was compared to the flow being reported by the corresponding meter. Staff worked with ADS to determine the cause and to find a solution to correct the discrepancies. However, no solution was found. As a result, staff decided to have the L2 and L3 meters removed. The combined flow from those meters, Olivenhain Road and El Camino Real, is captured further downstream by meter L5 – Gelson's Shopping Center parking lot just outside LWD's headquarters. Therefore, the removal of the L2 and L3 meters will not significantly impact flow monitoring of the collection system.

With the removal of two meters, staff anticipated a reduction in the cost of this agreement. However, during final review of the agreement by LWD Counsel Brechtel, he determined that a recent prevailing wage ruling by the California Supreme Court is applicable to the ADS lease agreement.

ADS has updated its proposal and is proposing a five-year cost of $282,652. The proposal calls for a flat rate of $55,860 per year for the first three years and a three percent increase to $57,536 per year for the final two years. The prevailing wage impact was significant as the original proposed cost without prevailing wage was $198,000 for the five-year period. By comparison, the total cost under the existing agreement for all 7 meters was $275,442. A copy of the ADS proposal has been attached for your review.

The ADS flow metering system has been a very effective tool for monitoring storm events, evaluating infiltration/inflow impacts, and for engineering planning related studies. In addition, the system includes an automatic alarming system that can provide early warning for wastewater spills, which has a positive impact on LWD for both operational response and regulatory compliance. For these reasons, staff is recommending that the Board of Directors approve this agreement despite the cost increase.

**FISCAL IMPACT:**

The proposed Fiscal Year 2022 Budget includes $70,000 for the ADS Service Agreements which includes both flow metering and echo meter (manhole sensor) services. There is sufficient funding available to cover the costs of this recommendation.

Attachment

js:PJB

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A DIVISION OF ADS CORP

May 27, 2021

Jeff Stecker
Leucadia Wastewater District
1960 La Costa Ave
Carlsbad, CA 92009

**Re: Flow Monitoring Services**
**Leucadia Wastewater District**

Dear Mr. Stecker,

We are pleased to have the opportunity to submit this letter proposal to continue sewer flow monitoring for the Leucadia Wastewater District. ADS is uniquely qualified to assist you with this flow monitoring project, given our forty-six years of experience performing similar projects throughout the country including extensive work in southern California and for the District. Enclosed please find a detailed scope of work and pricing for your review.

We look forward to working with you on this and other future projects. Thank you for the opportunity to propose on your requirements. If you have any questions regarding this proposal, please do not hesitate to call me at (213) 393-8705.

Sincerely,

Heather McPherson PE
Business Development Manager

Enclosure

# ATTACHMENT A

## Scope of Work

ADS Environmental Services ("ADS") will perform turn-key sewer flow monitoring services at five (5) locations for the Leucadia Wastewater District ("District") in the City of Carlsbad, California. The objective of this project is to deliver highly reliable and accurate sewer flow data for the term of this contract. The work will be performed as set forth below:

### 1.0 Mobilization

ADS will utilize the ADS® Model Triton+™ flow monitor during the course of this project. This is a multiple technology monitor that is flexible enough to collect data from almost every available sensor technology that is used in wastewater applications today. The Triton+ monitor will be equipped with wireless communication which will allow for remote collection and review of all data. The ADS Triton+ Flow 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.

### 2.0 Comprehensive Service

ADS will provide professional services to maintain and operate the flow monitoring equipment (July 1, 2021 through June 30, 2026). As part of this Comprehensive Service Program, ADS will perform the following services:

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.

   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. ADS 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:

   a) Communication link failure – including control boards, modem, and modem interface;
   b) Depth sensor replacement – A depth sensor shall be replaced if either the ultrasonic or pressure depth in the sensor fails,

c) Battery replacement - Battery voltages shall be considered as being low when the voltage is less than 7.0 VDC;

d) Velocity sensor replacement - A velocity sensor shall be considered for replacement if the sensor readings are a constant value or zero, indicating a loss of sensitivity;

e) Sensor scrubbing; and

2) **Hydraulic Confirmations:** ADS will perform annual field confirmations according to ADS's current internal quality procedures for all of the ADS Triton+ flow monitors including:
   a) Verification of the depth of flow measurement;
   b) Verification of the velocity measurement;
   c) Manual field flow to monitor flow comparison;
   d) Pipe condition assessment; and
   e) Statement of confirmation with the exception of the closed pipe flow meters,

3) **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).

4) **Service Statement:** ADS shall prepare a statement of repair whenever service or site visits are performed. These forms will be made available to the District when requested.

5) **Primary Contact:** ADS shall designate a field service representative who shall be the primary contact with the District for the resolution of field problems.

## 3.0 Data Analysis, Alarming, and Reporting Services Performed

Data services will be conducted by trained Data Analysts and utilize ADS Prism® software, as well as Six Sigma quality assurance procedures to maximize data usability and ensure data up-time.

1) **Data Collection and Diagnosis:** Raw data will be uploaded from the flow monitors every twenty-four (24) hours to the Prism™ cloud-based system. ADS data analysts will review the data (e.g. bi-weekly) to verify that equipment is in working order and will dispatch ADS field crews to perform equipment repair or hydraulic confirmations as needed.

2) **Data Editing and Analysis:** A trained ADS data analyst will use ADS software to directly calculate flow using the continuity equation from recorded depth and average velocity data. Flow quantities as determined by the continuity equation will be plotted. The analyst will also utilize scatter plots (depth vs. velocity readings) and field hydraulic confirmation both to verify monitor accuracy.

3) **Data Reporting:** The Final flow data will be reported to the District on a monthly basis via our PRISM™ website no later than thirty (30) days after the end of the monthly monitoring period and will include the following.

   a) Key manhole identification, pipe diameter, pipe shape, and silt levels;
   b) Days of the week constituting the long table, up to seven (7) days;
   c) Depth of flow in fifteen (15) minute intervals from 0:00 to 23:45;
   d) Average Velocity in fifteen (15) minute increments in feet per second (fps);
   e) Flows calculated in fifteen (15) minute increments in millions of gallons per day (mgd);
   f) Minimum and maximum flows with time of occurrence measured daily in millions of gallons per day (mgd);
   g) Average weekly flow measured in millions of gallons per day (mgd);
   h) Daily and weekly flow totals in millions of gallons.

4) **Data Alarming:** The Prism™ cloud based software will send out real-time alarms (via text or emails) if any set triggers are reached at the individual flow monitors. Alarm triggers can be set for High Depth and Low Flow.

## 4.0 Exclusions

1) Civil Engineer's Stamp on any plans submitted for permitting;
2) Work conducted outside of Service Schedule;
3) ADS is not responsible for repair of the Districts owned Mag Mater;
4) Communication line work external to the flow monitoring equipment;
5) Changes or alterations in specifications;
6) Painting, refinishing or furnishing materials therefore except as damaged by ADS during service work;
7) Installation, moving, or removing of equipment unless required as part of the repair process;
8) Repairs made necessary due to the negligence of the District, its employees, agents, invitees, or contractors;
9) Repairs made necessary due to attempts by the District to repair or maintain the equipment unless authorized by ADS;

10) Maintenance and repair necessary to put equipment not under the comprehensive scheduled service contract in good repair;
11) Equipment repair or replacement outside manufacturer's design specifications when knowingly directed by the District; and
12) Repairs made necessary due to events beyond ADS's control (force majeure).

## 5.0 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.

**Five Year Service Period**
**July 1, 2021 – June 30, 2026**

**Five-Year Service Period**
**July 1, 2016- June 30, 2021**

Monthly Field Services, Analysis and Prism Reporting Costs:

| Item | QTY | Description | Monthly Unit Cost | Yearly Extended Cost |
|---|---|---|---|---|
| 1 | 3 | Sites 1-3 - Gravity Area Velocity Flow Meters, Includes Prism Software Per/Month/Meter | $ 1,025.00 | $ 36,900.00 |
| 2 | 2 | Sites 4 & 5 - Pump Station Flow Meters, Includes Prism Software | $ 790.00 | $ 18,960.00 |
| | | 1st. Year Contract Value: | | $ 55,860.00 |
| | | 2nd. Year Contract Value: | | $ 55,860.00 |
| | | 3rd. Year Contract Value: | | $ 55,860.00 |
| | | * 4th. Year Contract Value: | | $ 57,535.80 |
| | | * 5th. Year Contract Value: | | $ 57,535.80 |
| | | **2016-2021 Total Contract Value:** | | **$ 282,651.60** |

* = 3% increase to unit prices for years 4 and 5

Any applicable Federal, state, or local taxes are not included; Prevailing Wage applies.

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