

# Bel Aire Collection System Status Report

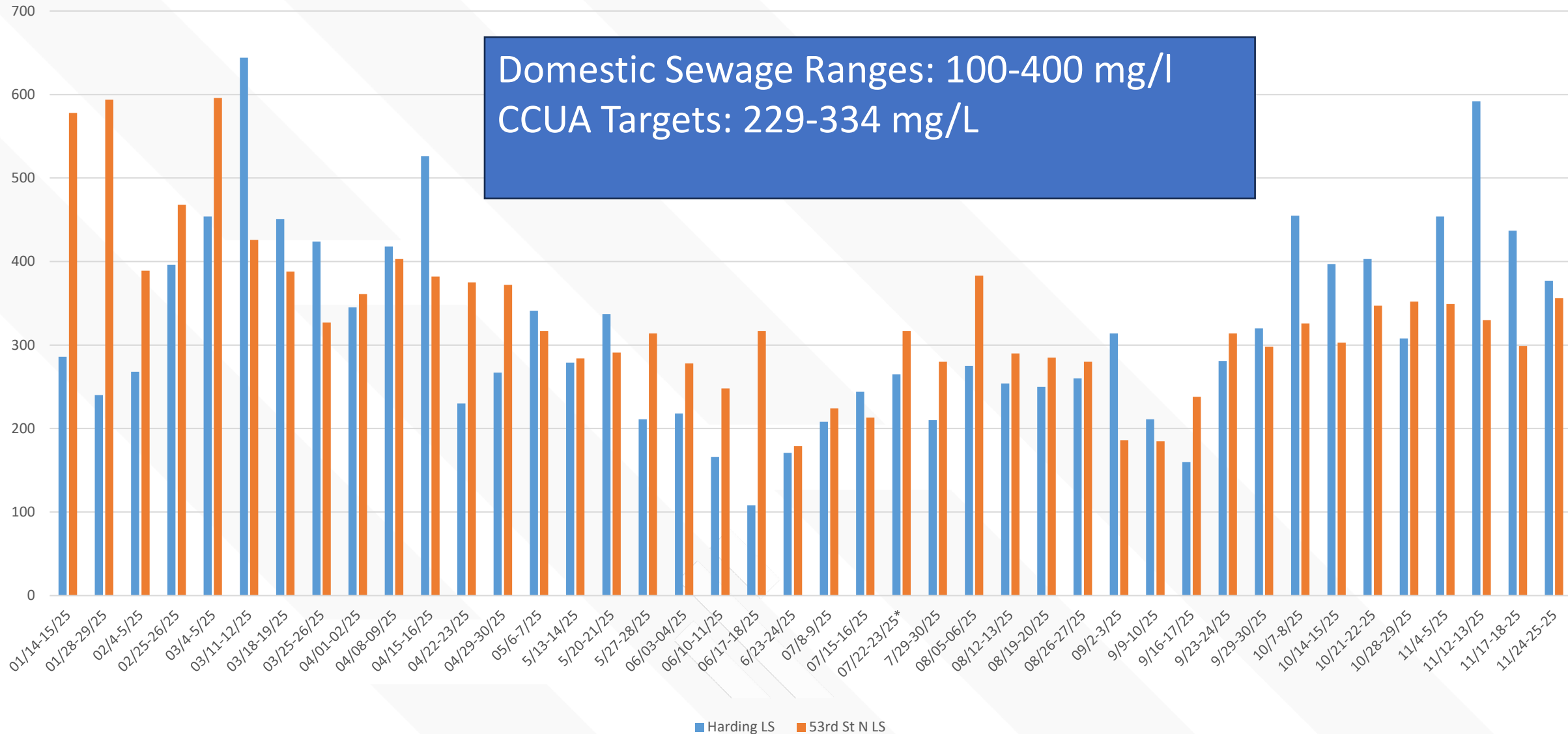
January 20, 2026

# Agenda

- Lift Station Wastewater Monitoring
- Collection System
  - Odor & Corrosion Control
- Next Steps

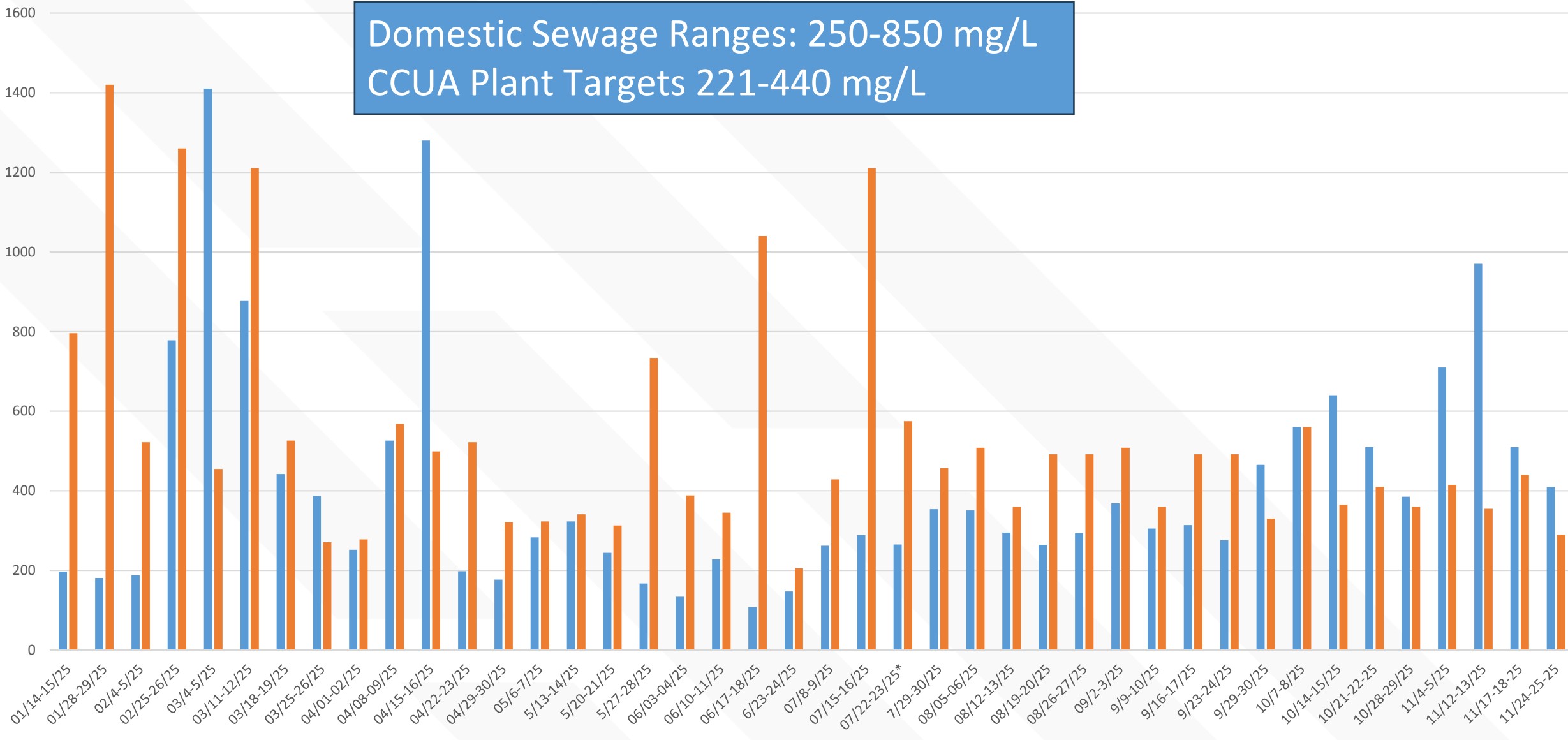
# Bel Aire Lift Station 2025 BOD Results - mg/L

Domestic Sewage Ranges: 100-400 mg/l  
CCUA Targets: 229-334 mg/L



# Bel Aire Lift Station 2025 TSS Results - mg/L

Domestic Sewage Ranges: 250-850 mg/L  
 CCUA Plant Targets 221-440 mg/L



■ Harding LS ■ 53rd St N LS

## Monthly Flow - Million Gallons

	Harding/37 <sup>th</sup> MG	53 <sup>rd</sup> St MG	Total LS Flow	CCUA Inf. MG	Percent Flow
<i>January</i>	11.64	5.156	16.796	36.3217	46.2%
<i>February</i>	11.393	4.953	16.346	36.883	44.3%
<i>March</i>	12.25	5.215	17.465	37.701	46.3%
<i>April</i>	14.318	5.407	19.725	41.264	47.8%
<i>May</i>	13.346	5.796	19.142	45.42	42.1%
<i>June</i>	20.535	6.906	27.441	63.191	43.4%
<i>July</i>	12.175	6.256	18.43	41.2	44.7%
<i>August</i>	12.474	6.842	19.32	41.75	46.3%
<i>September</i>	10.453	5.942	16.39	37.11	44.2%
<i>October</i>	12.357	7.09	19.45	49.98	38.9%
<i>November</i>	10.193	5.66	15.85	34.28	46.3%
<i><b>Total YTD</b></i>	<b>141.13</b>	<b>65.22</b>	<b>116.915</b>	<b>302.7</b>	<b>44.5%</b>

# Municipal Pollutant Loadings – YTD (to November, 2025)

	Bel Aire	Park City	Total	CCUA
<b>BOD</b>				
<b>Total Lbs.</b>	531,612	2,564,401	3,096,013	625440
<b>% of total</b>	17%	82%		
<b>TSS Total</b>				
<b>Lbs.</b>	666,522	1,116,072	1,782,594	644963
<b>% of total</b>	37%	63%		

- Differences in the BOD/TSS pounds between Lift Stations & CCUA Plant
- Confirm approach to using lift station data as the basis for determining pollutant contributions between communities

# Collection System Activities Odor/Corrosion Control Abatement



# Pilot Study

2 totes of SulFeLox cost estimate: 2 totes of SulFeLox: \$24.48/gallon \* 2 totes \* 300 gallons/tote = **\$14,904.00**

## **Includes:**

Installation of peristaltic dosing pumps

Liquid and vapor phase sampling in the collection system for total sulfide, dissolved sulfide, temperature, pH, ORP, and iron residuals (minimum of monthly frequency, more often during trial startup period)

Unlimited on-call technical applications support and guidance will be provided when requested by experienced water treatment professionals

A comprehensive report summarizing findings and recommendations will be prepared and presented at the conclusion of the trial



# Odor Control Chemical Dosing

## Webb LS



## Rock LS



# Odor Control Chemical Control

USP projected the likely dosing rates based on historical database of similar chemical applications and the likely dosing ratios of chemical to sulfide provided by published technical literature. These dosing rates were calculated to bring H<sub>2</sub>S down at least 75% but needed to be validated at full scale to confirm.

## Inputs

**Flow:** 0.1 MGD into Rock Road Pump Station  
0.015 MGD into Webb Road Pump Station  
**Sulfide Load:** 12 – 20 pounds/day Rock FM  
5 – 11 pounds/day Webb FM



## Dosing Rate Projections

SulFeLox (Low-haz Iron Solution)

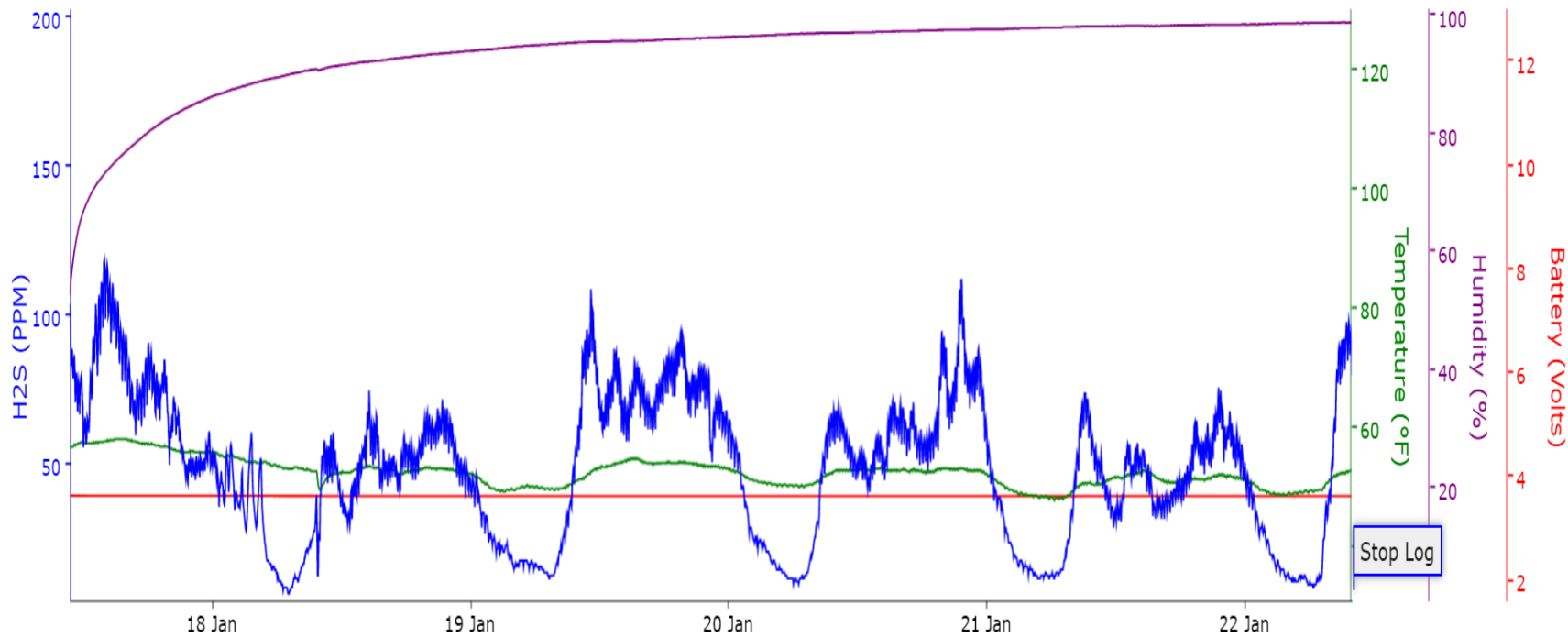
Gallons/Day at Rock PS: 12 - 21

Gallons/Day at Webb PS: 5 - 12

# LS Odalog Monitoring Results February 2025 Before Pilot

H2S (PPM)  Temperature (°F)  Humidity (%)  Battery (Volts)  [1/17/2025, 10:03:26 AM --- 1/22/2025, 10:06:26 AM] [H2S-230907642]

H2S-230907642\_1\_17\_2025, 10\_03\_26 AM --- 1\_22\_2025, 10\_06\_26 AM

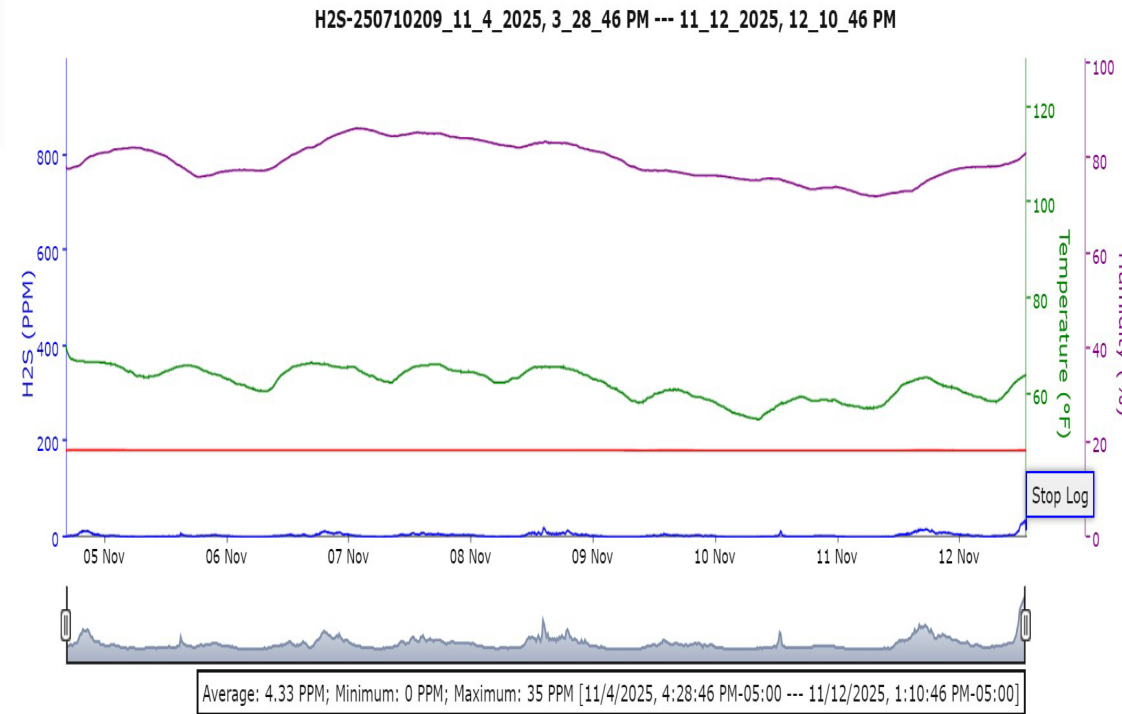


Average: 48.85 PPM; Minimum: 7 PPM; Maximum: 119 PPM [1/17/2025, 10:42:26 AM --- 1/22/2025, 9:42:26 AM]

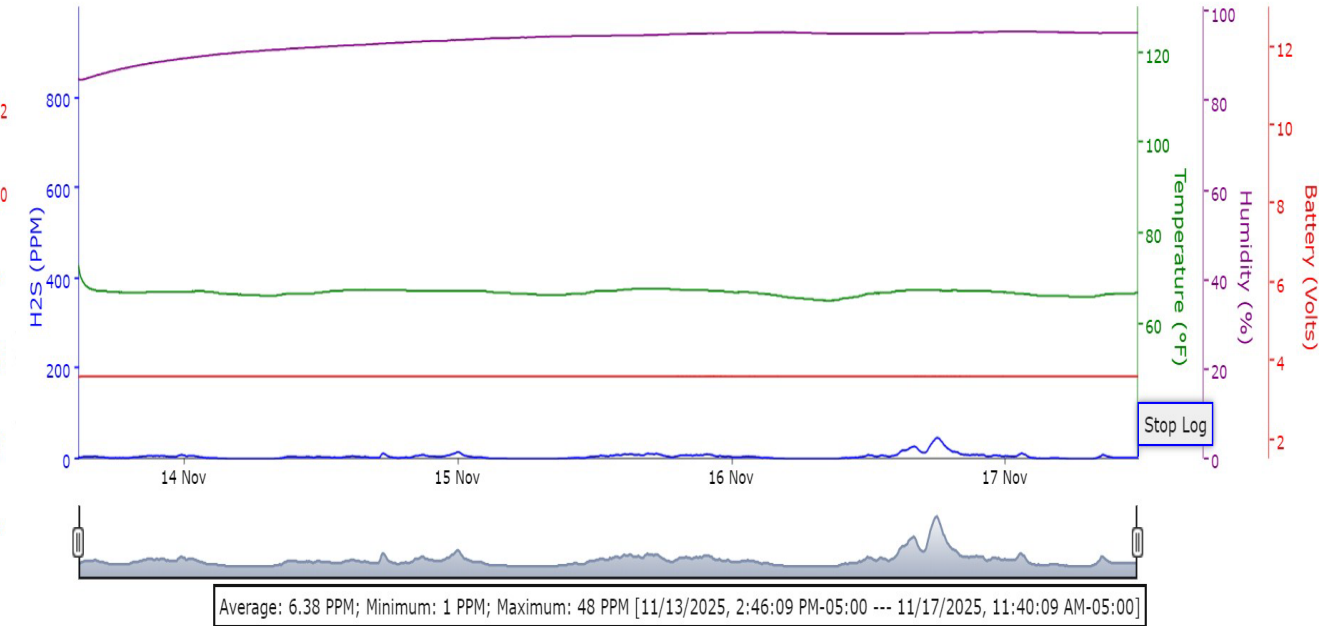
53<sup>rd</sup> St. LS

# LS Odalog Monitoring Results After SulFeLox® November 4- 17, 2025

H2S (PPM)  Temperature (°F)  Humidity (%)  Battery (Volts) [11/4/2025, 4:28:46 PM-05:00 --- 11/12/2025, 1:10:46 PM-05:00] [H2S-25071]



H2S (PPM)  Temperature (°F)  Humidity (%)  Battery (Volts) [11/13/2025, 2:46:09 PM-05:00 --- 11/17/2025, 11:40:09 AM-05:00] [H2S-250710209]

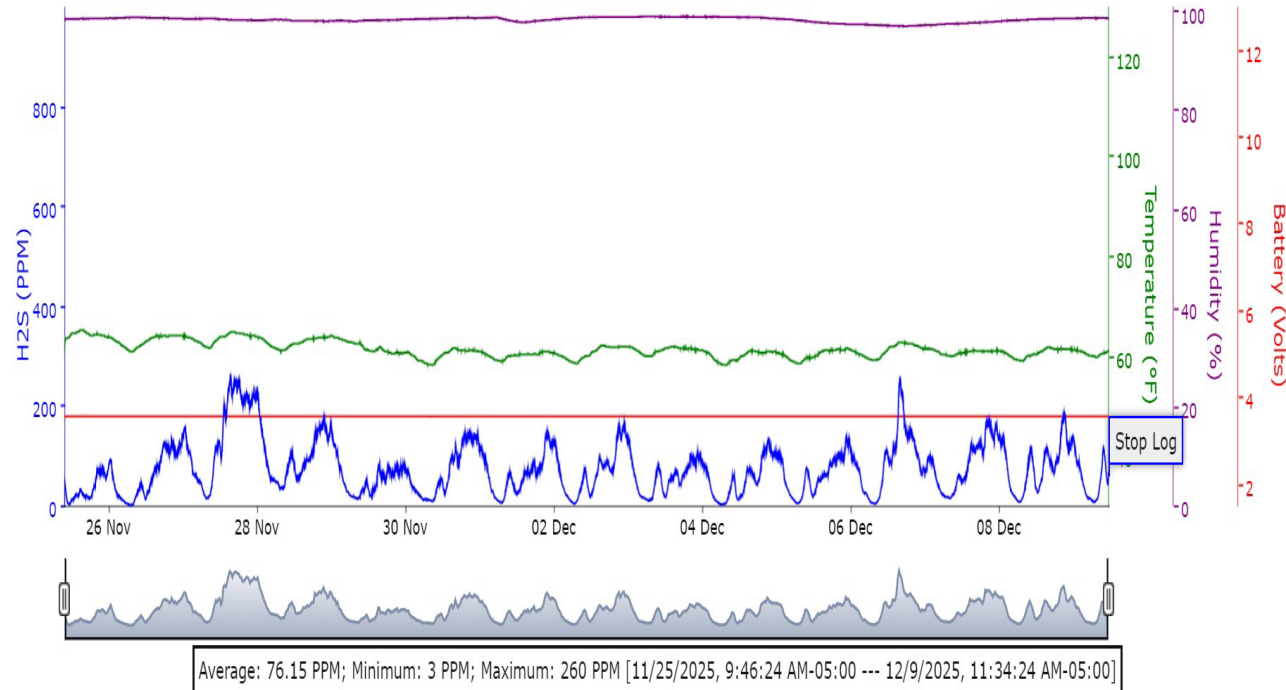


**53<sup>rd</sup> St. LS - Dosing Rate = 21 gpd**

# LS Odalog Monitoring Results After SuFeLox® Stopped - November 25- January 7, 2026, 2025

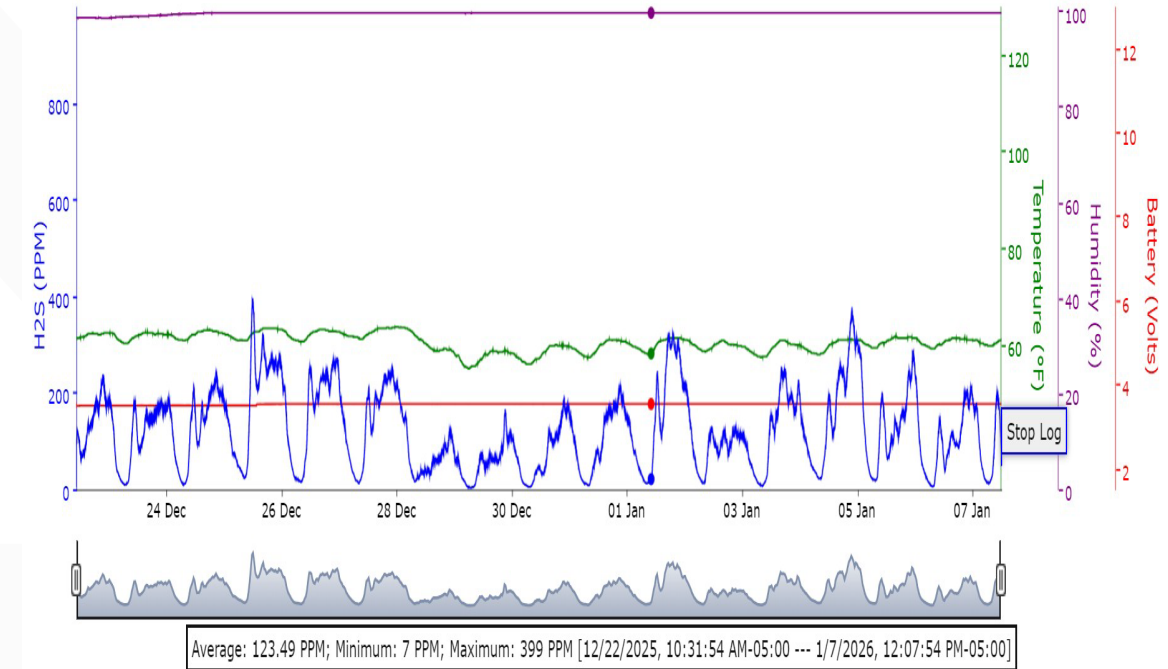
[11/25/2025, 9:46:24 AM-05:00 --- 12/9/2025, 11:34:24 AM-05:00] [H2S-250710209]

H2S-250710209\_11\_25\_2025, 8\_46\_24 AM --- 12\_9\_2025, 10\_34\_24 AM



[12/22/2025, 10:31:54 AM-05:00 --- 1/7/2026, 12:07:54 PM-05:00] [H2S-250710209]

H2S-250710209\_12\_22\_2025, 9\_31\_54 AM --- 1\_7\_2026, 11\_07\_54 AM

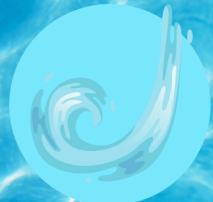


## 53<sup>rd</sup> St. LS – Chemical Feed Ceased 11/25/25

# 53<sup>rd</sup> St Lift Station Quantified Results

## What Is an Aqueous Solution?

An aqueous solution is a solution with water as the solvent.



seawater



rain



cola



wine



vinegar

sciencenotes.org

Date	Chemical Dosage Rates (gpd)	H2S gaseous Results (ppm)	Total H2S Aqueous (mg/L)	Dissolved H2S Aqueous (mg/L)
10/16 – 10/30/25	0	Not measured	2.9	2.7
10/31 – 11/17/25	21 + 12 = 33	6	0.6	0.3
11/17 – 11/25/25	17 + 5 = 22	Not Measured	1.0	0.8
11/25 – 12/30/25	0 + 5 = 5	86	1.4	1
12/30/25 – 1/7/26	0	123	1.3	1

## Percent Reduction

Feed Rate	Vapor H2S	Aqueous Total H2S	Aqueous Dissol. H2S
33 GPD	95%	79%	89%
22 GPD	-	66%	70%
5 GPD	30%	0 %	0%

# Pilot Program Outcomes

**Objective: 75 % Reduction of gaseous H<sub>2</sub>S at monitoring sites**

## PILOT PROGRAM RESULTS

- Lycee Manhole - (At Webb Road Force Main Connection Site near Broadstone Apartment Entrance)**
- 53<sup>rd</sup> Street Lift Station – (5859 E. 53<sup>rd</sup> St N)**

Site	Dosage Rate at Feed sites	Percent Reduction (either gaseous, total or dissolved H <sub>2</sub> S)
Lycee	12 gpd at Webb LS	93% Reduction
Lycee	5 gpd at Webb LS	88% Reduction
53 <sup>rd</sup> LS	12 gpd at Webb LS & 21 gpd at Rock LS (33 gpd total)	95% Reduction
53 <sup>rd</sup> LS	5 gpd at Webb LS & 17 gpd at Rock LS (22 gpd total)	70% Reduction
53 <sup>rd</sup> LS	5 gpd at Webb LS	30% Reduction

# Estimated Odor Control Chemical Annual Cost

- **Dosing Rate Needs for at least 75% reduction in H<sub>2</sub>S, Annualized Averages**
  - 5 – 9 gallons/day needed at Webb PS
  - 13 – 18 gallons/day needed at Rock PS
  - 18 – 27 gallons/day total
  - 6,570 – 9,855 gallons/year total
- **Chemical Costs**
  - 2 totes/delivery, 2 stops: \$24.48/gallon
    - \$160,833.60 - \$241,250.40/year
  - 6 totes/delivery, 2 stops: \$12.42/gallon
    - \$81,599.40 - \$122,399.10/year
  - 13 totes/delivery, 2 stops: \$10.45/gallon
    - \$68,656.50 - \$102,984.75/year

# Collection System Map

