



Senna Hills Municipal Utility District

14050 Summit Drive Suite 113A

Austin, Texas 78728

512-844-1041



INFRAMARK

WATER & INFRASTRUCTURE SERVICES



Senna Hills Municipal Utility District
General Managers Report for the Month of
April 2021
Board Meeting: May 28th, 2021

Reviewed By: Kristi Hester

Date: 5.20.21



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www.inframark.com

Memorandum for: Senna Hills MUD Board of Directors

From: Kristi Hester

Date: 5.28.2021

Subject: General Manager's Executive Summary Report

Below is a summary of activities since the last board meeting:

1) Wastewater Treatment Plant

- a) 2,403,000 gallons of wastewater treated for the month of April.
- b) 80,000 gallons average daily flow for the month of April at 80% plant capacity.
- c) All facilities are in compliance for the month of April.
- d) Mixer failed and replaced with spare. Currently at the shop and waiting for a quote.
- e) Gear motors on drum screens needed to be replaced.
The parts ordered are a total of \$3,580.00.
- f) Repaired polymer pump and feed system.
- g) Installed new process pump and repaired old one to use as spare.

2) Distribution System – Billing

- a) Several leaks found during leak survey - work is scheduled for the week of May 24th
- b) Water accountability this month 72%.
- c) Ami meters have been ordered.

3) Collection System

- a) Lift Station 1 pump needs repair.
Total repair cost is \$13,492, the replacement cost is \$23,927.
- b) Annual preventive maintenance completed on all lift stations pumps - no issues noted
- c) Pulled pump 2 at LS 1 for repair.
- d) Replaced several 6" caps.
- e) We found that one of the pumps at the Weaver lift station is failing.
Working on replacement price.

6) Drainage/Ponds

- a) Several items noted on last inspection report - report included in the packet for review

Current Items Requiring Board Approval:

Vendor	Amount	WO#	Budget Amount	Description
Hamilton	\$13,492			Repair 20HP Flygt Pump LS 1
Clean Tek	\$3,580			Drum Screen Gear Motors
Inframark	\$8,000			Pond Repairs

Delivering Professional Grade Leak Detection

SAMCO FINAL LEAK DETECTION REPORT

Prepared for: **Inframark – Senna Hills MUD**

May 7, 2021

Zach Willeford
Operations Manager

Its time to call
SAMCO
LEAK DETECTION
Delivering proven results since 1985.

901 Mopac Expressway South
Barton Oaks One, Suite 300
Austin, TX 78746

☎ (512) 263-7043
💻 samco-leakservice.com
✉ sgodfrey@samco-leakservice.com

The purpose of the survey was to perform acoustic leak detection in order to identify water leaks and help reduce water loss. The locations and descriptions of the leaks identified during the survey are listed below. The work performed during the project consisted of the following:

- Acoustically inspected water system for leaks and other water loss problems
- Walked and visually inspected water system for potential leaks or other water loss problems
- Performed chlorine residual tests on water located on the ground or in close proximity of the distribution system in order to determine if chlorine was present and leaks exist
- Used Trimble sub-meter GPS to collect leak locations for maintenance mapping updates

During the project (8) leaks consisting of; (2) service line leaks, (1) one fire hydrant leak, (4) four meter box leaks, and (1) one customer side leak; were identified. The leak locations and descriptions are listed below. Please do not hesitate to contact Hunter Skelton at 512-809-3461 if you have any questions or need assistance with the location of the following leaks or water loss issues listed below. All items identified as critical are considered to be in need of immediate attention.

Service Line Leaks			
Leak #	Leak Location	Critical	Date Located
1	10501 Indigo Broom Loop	Yes	05/06/21
2	10309 Indigo Broom Loop	Yes	05/06/21

Meter Box Leaks			
Leak #	Leak Location	Critical	Date Located
1	10705 Spiderling Court	Yes	05/06/21
2	10804 Straw Flower	Yes	05/06/21
3	10612 Periza Drive	Yes	05/06/21
4	10620 Indigo Broom Loop	Yes	05/06/21



Fire Hydrant Leak			
Leak #	Leak Location	Critical	Date Located
1	10501 Prezia Drive	Yes	05/06/21

Customer Side Leak			
Leak #	Leak Location	Critical	Date Located
1	10700 Spiderling Court	-	05/06/21

SUMMARY

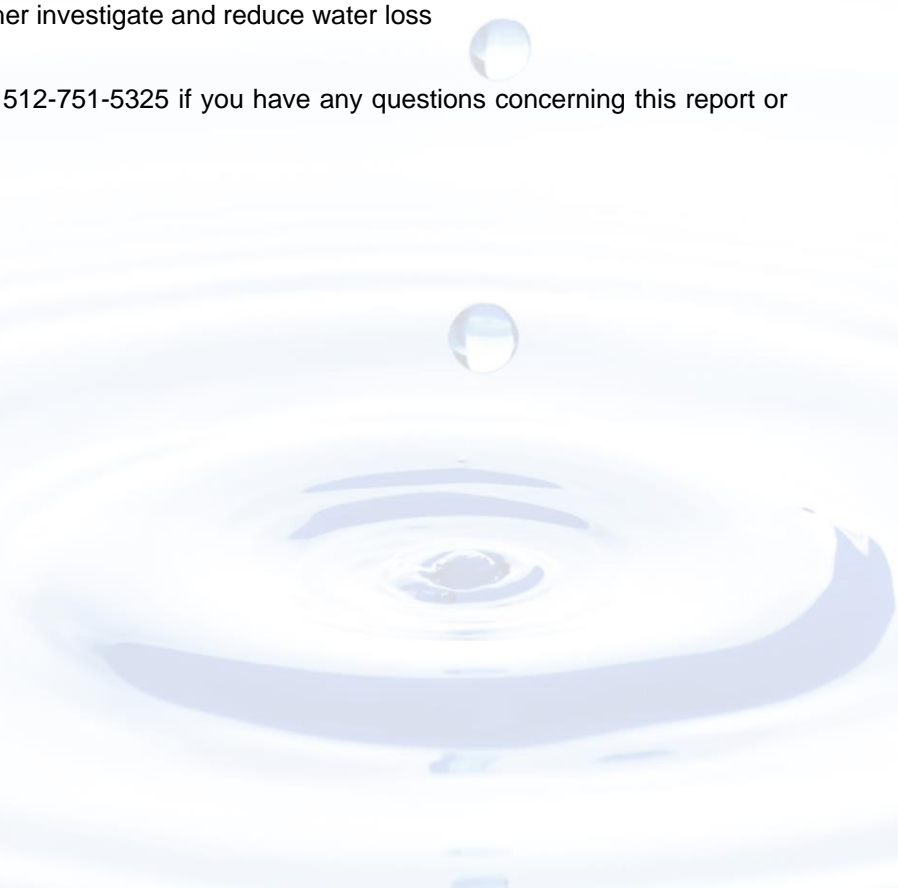
After reviewing the system survey results, SAMCO Leak Detection Services recommends the Inframark – Senna Hills undertake the following activities to achieve more efficient water use and accountability.

- Investigate and repair service side leaks
- Investigate and repair meter box leaks
- Investigate, flush, reseal and repair if necessary fire hydrant leaks
- Investigate and recommend customer repair customer side leak
- Continue leak detection to further investigate and reduce water loss

Please do not hesitate to contact me @ 512-751-5325 if you have any questions concerning this report or need my further assistance.

Sincerely,

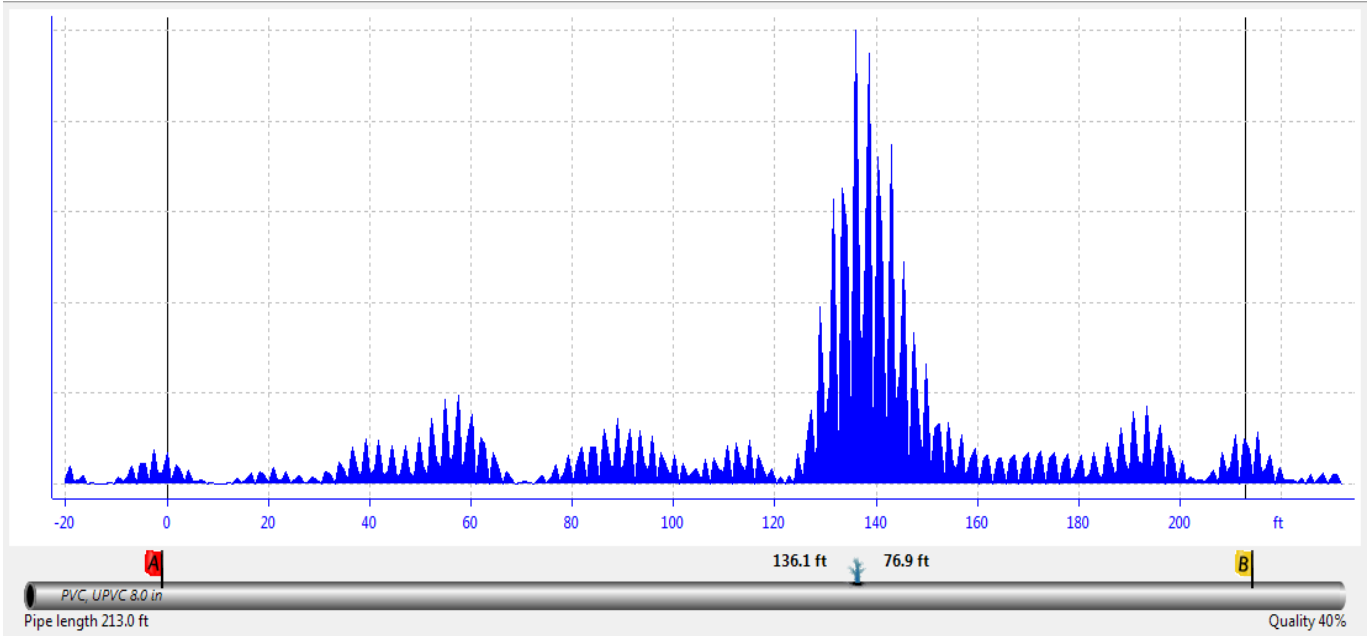
Sam Godfrey



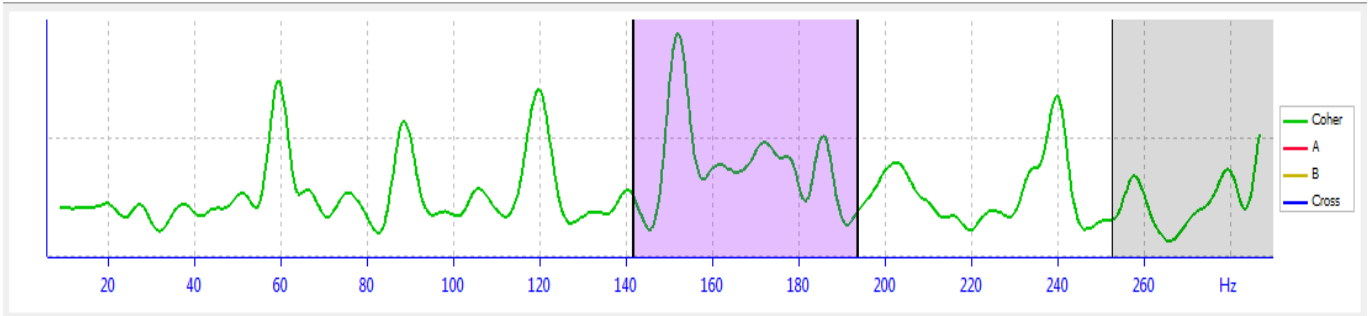
Pipe Sections:

No.	Velocity	Length	Diameter	Material
1	1,585 ft/s	213.0 ft	7.874 in	PVC, UPVC

Correlation



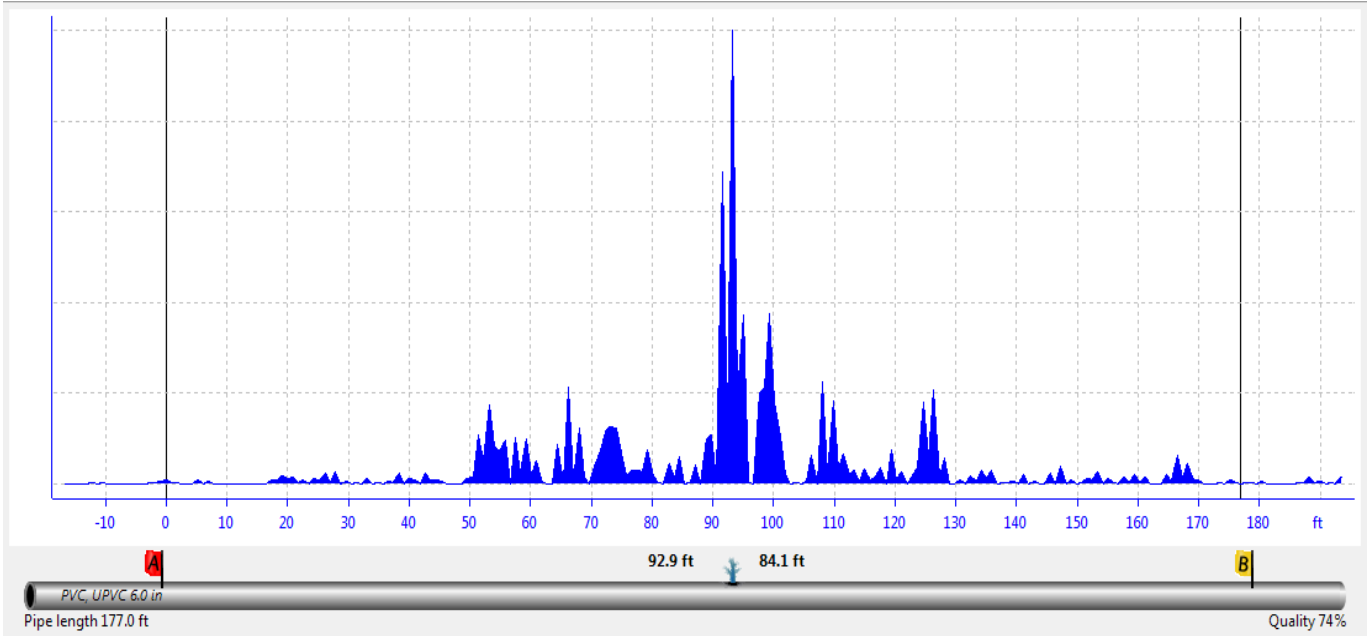
Spectrum



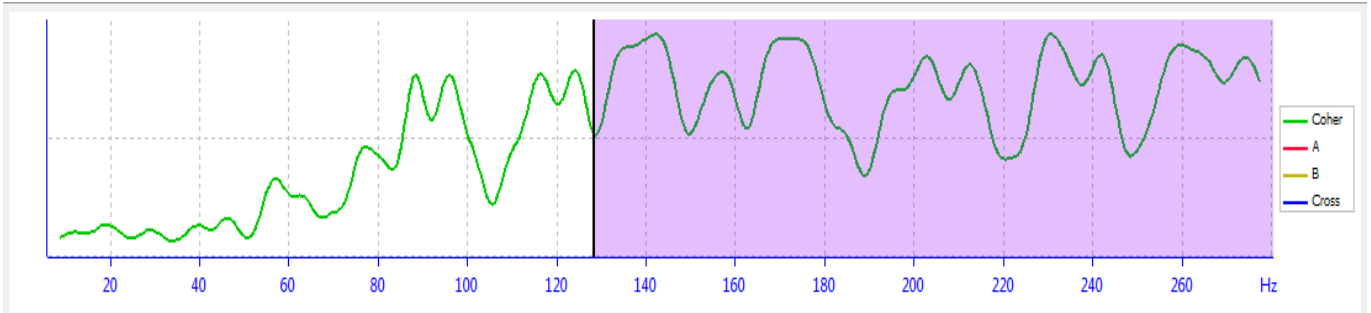
Pipe Sections:

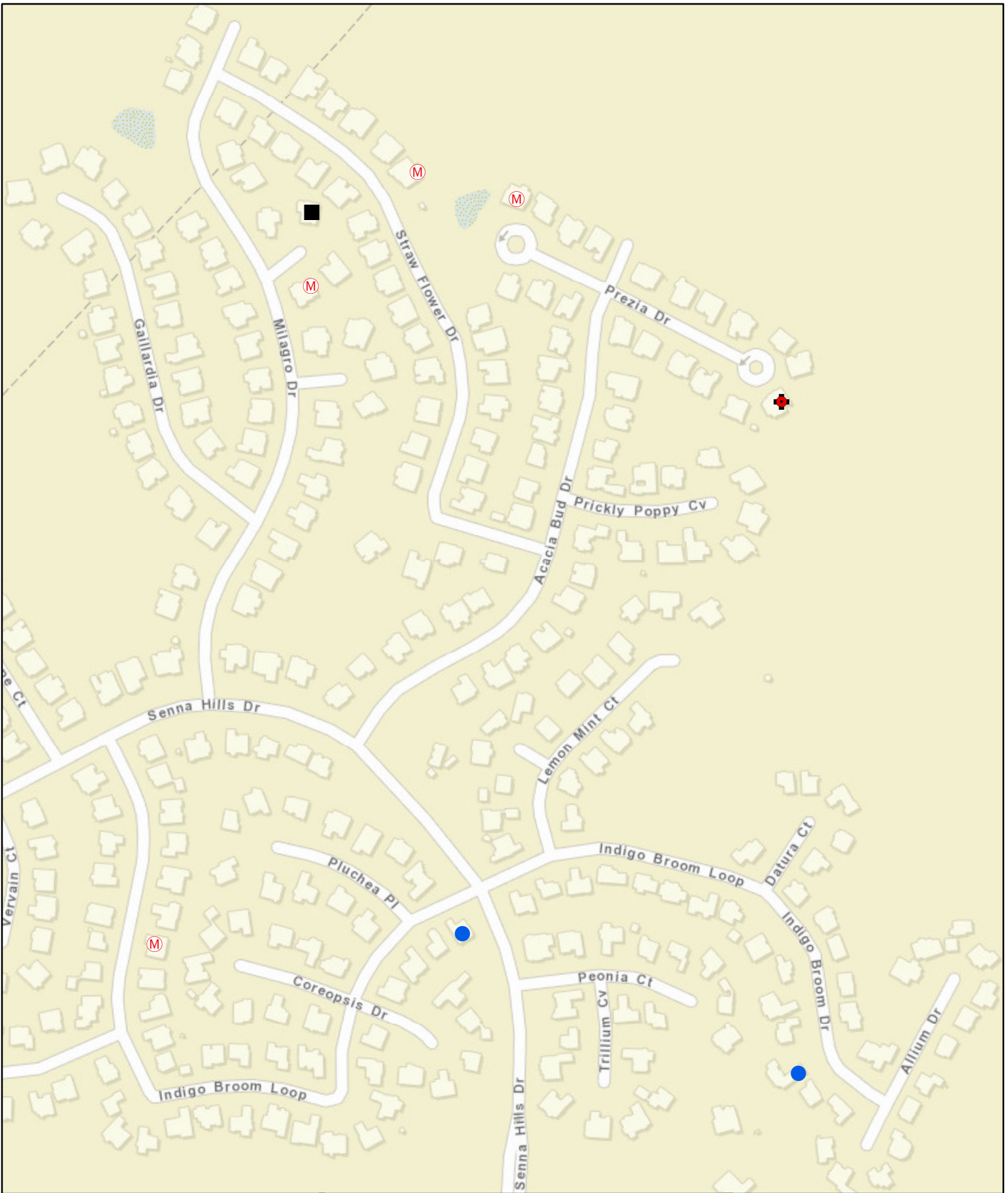
No.	Velocity	Length	Diameter	Material
1	1,585 ft/s	177.0 ft	5.906 in	PVC, UPVC

Correlation



Spectrum





- Service Line Leak
- ⊕ Fire Hydrant
- M Meter Box Leak
- Customer Side Leak



Inframark

Senna Hills MUD

Leak Identification Map, 2021



901 Maple Expressway South | Benton Oaks, Okla. 74702 | Austin, TX 78740 | 800-444-1122 | 505-221-1325
www.samco.com

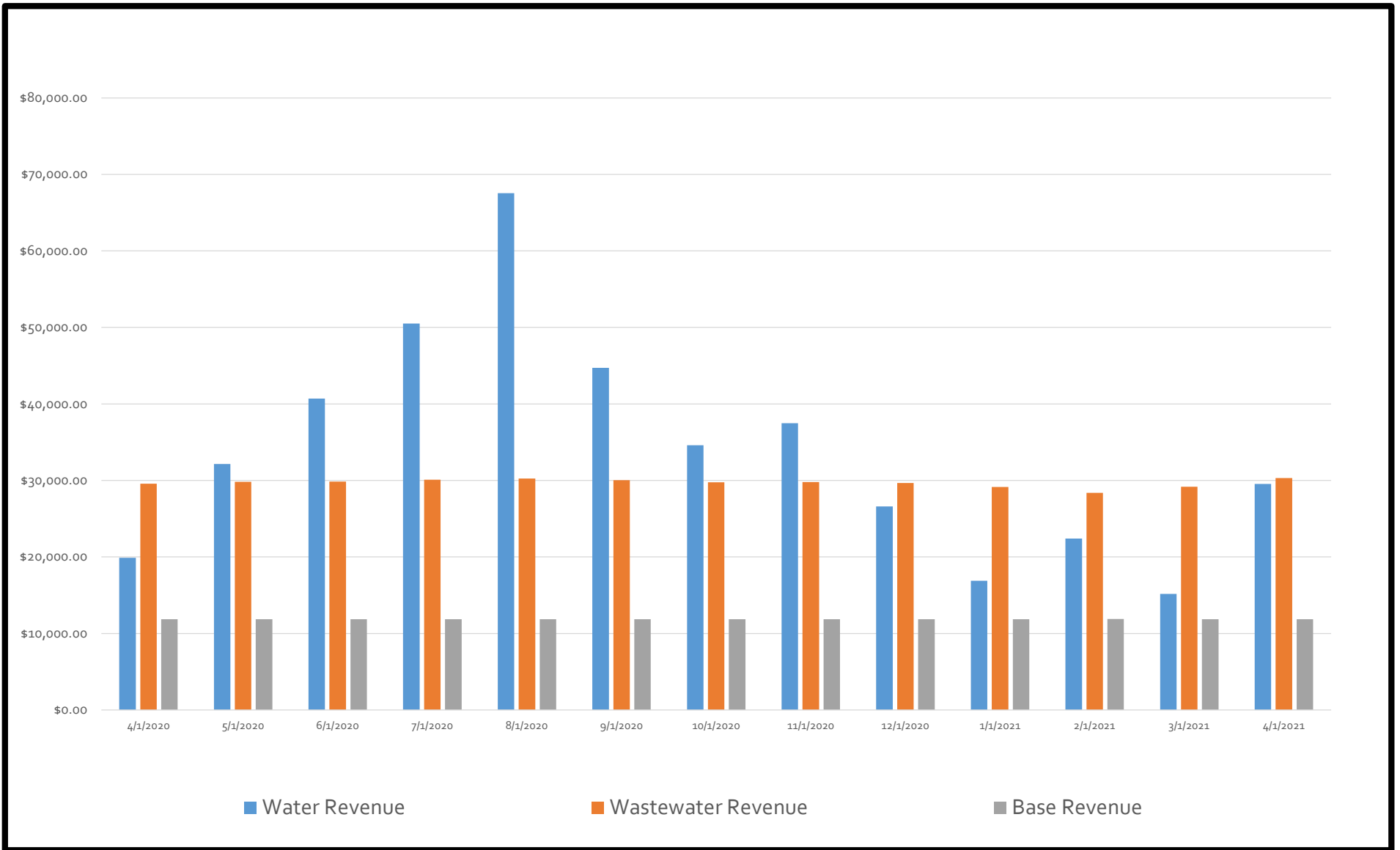


Billing Summary

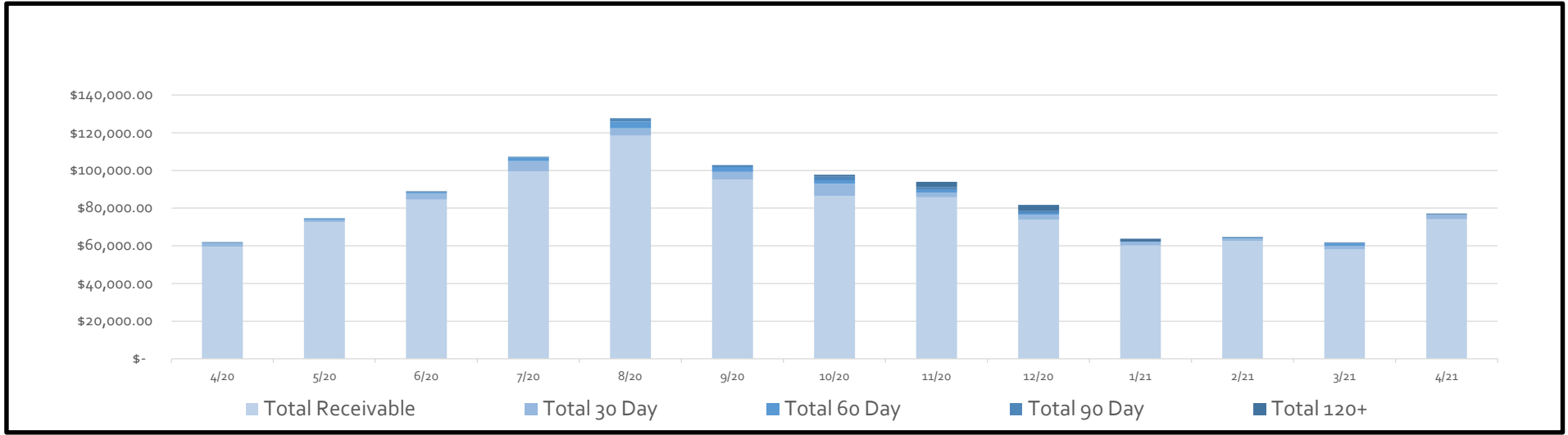


Description	Connections	
	Apr-20	Apr-21
Residential	405	411
Hydrant	-	-
Tracking	5	5
No Bill	1	1
Total Number of Accounts Billed	411	417
	Consumption	
Residential	3,770,000	5,345,000
Hydrant	-	-
Tracking Amenity Center	10,000	21,000
Total Gallons Consumed	3,780,000	5,366,000
	Average Consumption	
Residential	9,309	13,005
Hydrant	-	-
Tracking	2,000	4,200
Avg Water Use for Accounts Billed	9,197	12,868
Total Billed	\$ 63,693	\$ 73,934
Total Aged Receivables	\$ (4,134)	\$ 125
Total Receivables	\$ 59,559	\$ 74,059

12 Billing Month History Revenue by Category



12 Month Accounts Receivable and Collections Report



Date	Total Receivable	Total 30 Day	Total 60 Day	Total 90 Day	Total 120+
4/20	\$ 59,559.19	\$ 1,510.86	\$ 479.77	\$ 161.02	\$ 206.41
5/20	\$ 72,614.06	\$ 1,022.58	\$ 666.13	\$ 149.52	\$ 66.41
6/20	\$ 84,434.56	\$ 3,263.99	\$ 739.08	\$ 284.50	\$ 215.93
7/20	\$ 99,382.73	\$ 5,564.86	\$ 1,967.41	\$ 225.05	\$ 206.41
8/20	\$ 118,432.85	\$ 3,897.91	\$ 3,574.75	\$ 1,672.95	\$ 90.03
9/20	\$ 95,241.04	\$ 4,047.31	\$ 2,481.75	\$ 949.81	\$ 81.74
10/20	\$ 86,426.07	\$ 6,598.91	\$ 1,714.63	\$ 2,077.01	\$ 868.39
11/20	\$ 85,816.45	\$ 2,329.59	\$ 1,473.47	\$ 1,359.46	\$ 2,945.40
12/20	\$ 73,915.09	\$ 2,494.91	\$ 929.37	\$ 1,314.59	\$ 3,038.53
1/21	\$ 60,176.37	\$ 2,026.57	\$ 6.77	\$ -	\$ 1,507.36
2/21	\$ 62,583.57	\$ 1,229.60	\$ 556.79	\$ 6.77	\$ 206.41
3/21	\$ 58,092.96	\$ 1,887.29	\$ 1,234.74	\$ 458.39	\$ 213.18
4/21	\$ 74,059.15	\$ 2,191.74	\$ 173.29	\$ 217.21	\$ 431.49

Board Consideration to Write Off	\$0.00
Board Consideration Collections	\$0.00
Delinquent Letter Mailed	11
Delinquent Tags Hung	4
Disconnects for Non Payment	2



Water Production and Quality

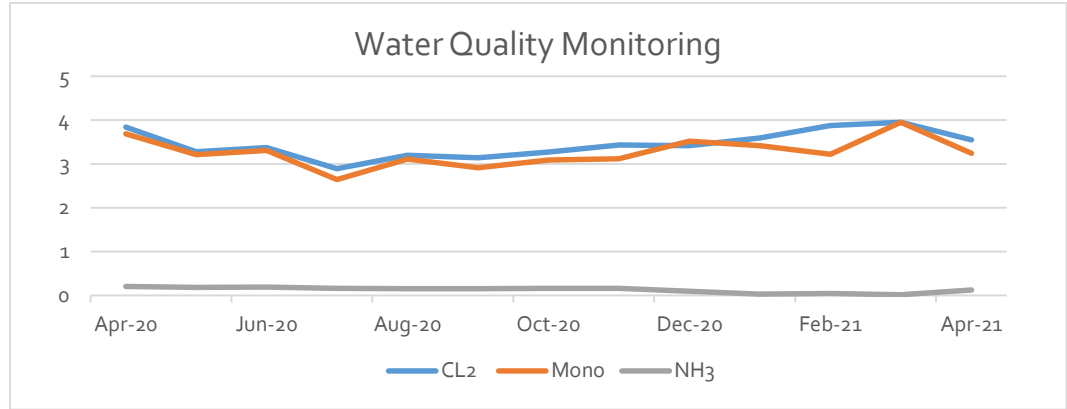


Water Quality Monitoring

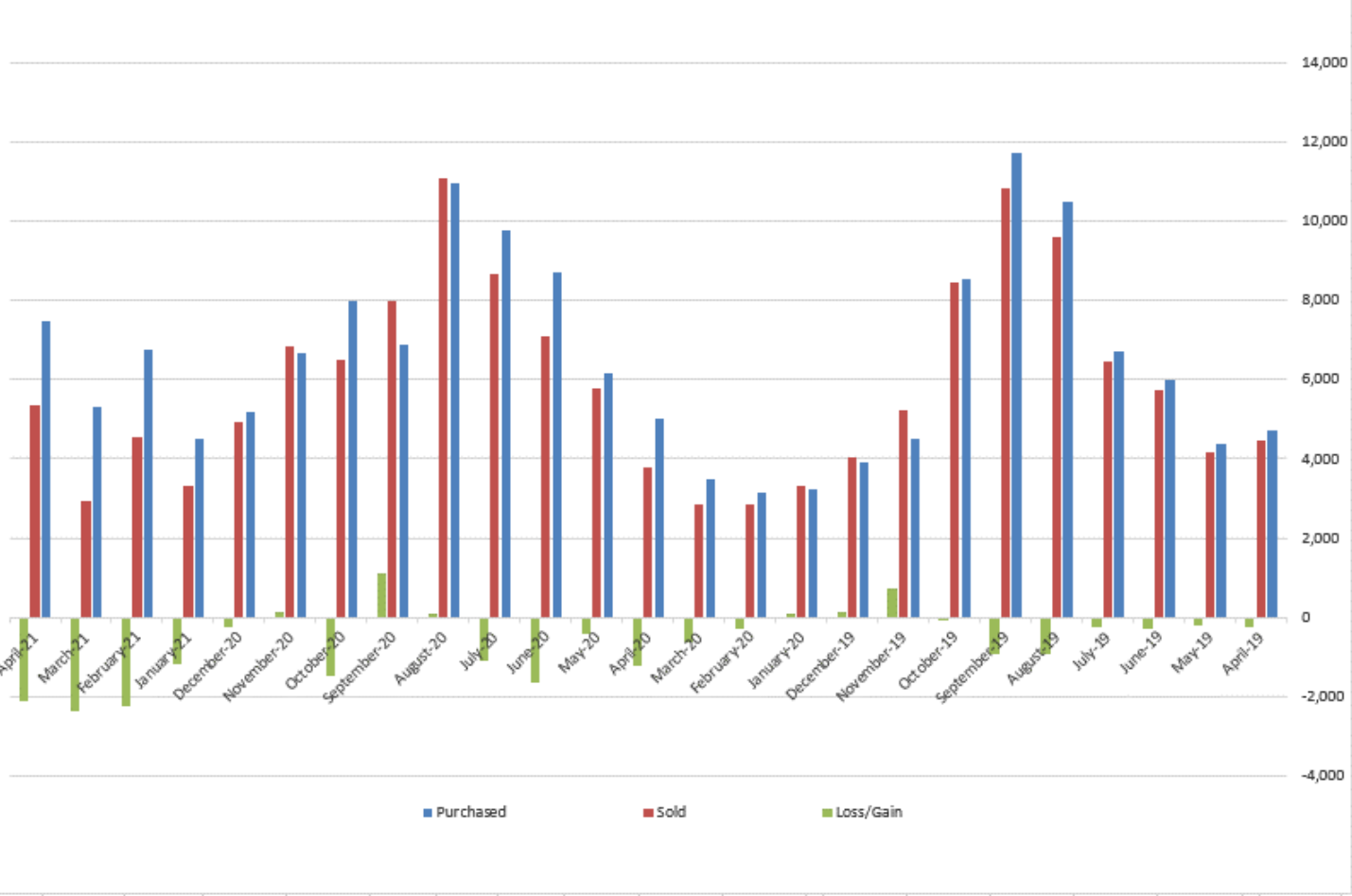
Current Annual CL2 Avg 3.44

Requirements Min .50

Date	CL2	Mono	NH3
Apr-20	3.84	3.69	0.20
May-20	3.28	3.21	0.18
Jun-20	3.37	3.31	0.19
Jul-20	2.89	2.64	0.16
Aug-20	3.2	3.11	0.15
Sep-20	3.14	2.91	0.15
Oct-20	3.27	3.09	0.16
Nov-20	3.43	3.12	0.16
Dec-20	3.42	3.52	0.09
Jan-21	3.59	3.42	0.03
Feb-21	3.88	3.22	0.04
Mar-21	3.95	3.95	0.01
Apr-21	3.55	3.24	0.12

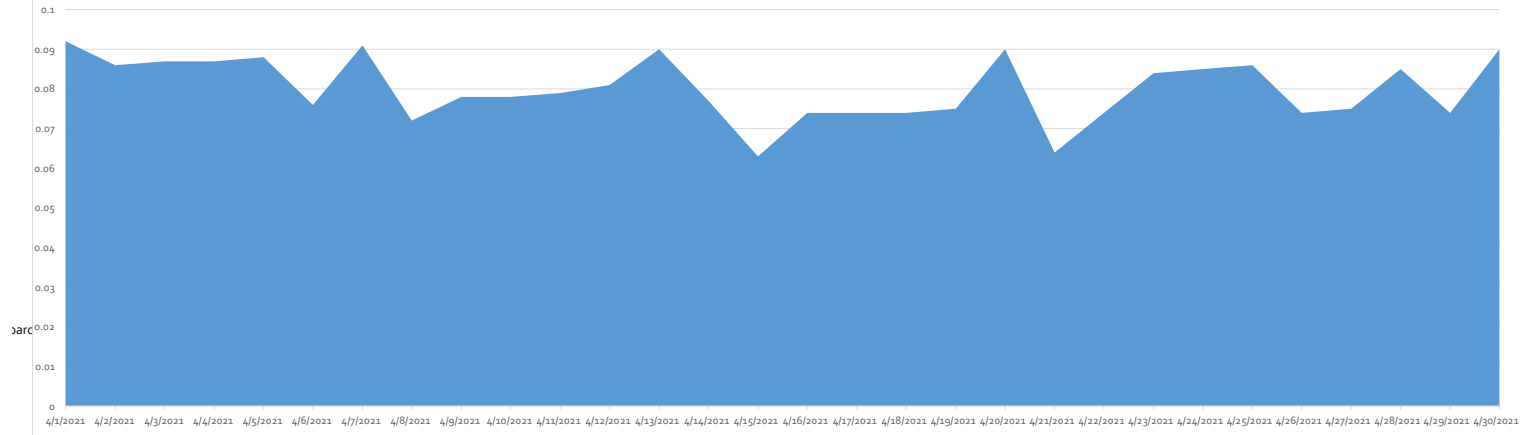


Water Accountability Report



Month	Read Date	Purchased (1000)	Sold (1000)	Flushing	Gal.s Loss (-)	Accounted For %	Running	
							Loss %	Accounted For %
April 19	4/15/19	4,741	4,485	3	(583)	94.7%	-5.71%	94.29%
May 19	5/16/19	4,367	4,148	4	(215)	95.1%	-5.37%	94.63%
June 19	6/17/19	6,006	5,724	4	(278)	95.4%	-5.91%	94.09%
July 19	7/16/19	6,699	6,468	6	(225)	96.6%	-5.82%	94.18%
August 19	8/15/19	10,503	9,588	6	(909)	91.3%	-6.33%	93.67%
September 19	9/16/19	11,723	10,812	4	(907)	92.3%	-7.23%	92.77%
October 19	10/15/19	8,547	8,458	5	(84)	99.0%	-6.49%	93.51%
November 19	11/14/19	4,508	5,232	13	737	116.3%	-5.03%	94.97%
December 19	12/16/19	3,895	4,046	5	155	104.0%	-4.43%	95.57%
January 20	1/16/20	3,243	3,318	6	81	102.5%	-3.91%	96.09%
February 20	2/17/20	3,153	2,854	2	(297)	90.6%	-3.96%	96.04%
March 20	3/17/20	3,498	2,857	3	(637)	81.8%	-4.00%	96.00%
April 20	4/16/20	5,001	3,791	5	(1,206)	75.9%	-5.32%	94.68%
May 20	5/15/20	6,085	5,765	6	(411)	93.4%	-5.46%	94.54%
June 20	6/15/20	8,711	7,082	5	(1,624)	81.4%	-7.04%	92.96%
July 20	7/15/20	9,786	8,676	6	(1,103)	88.7%	-7.88%	92.12%
August 20	8/17/20	10,954	11,062	6	113	101.0%	-8.88%	93.46%
September 20	9/17/20	6,878	7,968	6	1,095	115.9%	0.38%	95.72%
October 20	10/16/20	7,997	6,491	5	(1,510)	81.2%	-1.13%	93.77%
November 20	11/16/20	6,669	6,820	4	155	102.3%	-1.13%	93.19%
December 20	12/17/20	5,175	4,931	3	(241)	95.4%	-7.96%	92.79%
January 21	1/15/21	4,460	3,316	11	(1,133)	74.6%	-7.48%	91.36%
February 21	2/21/21	6,662	4,534	4	(2,124)	68.1%	-21.71%	89.44%
March 21	3/18/21	5,315	2,955	-	(2,360)	55.6%	-34.75%	87.52%
April 21	4/16/21	7,486	5,369	5	(2,112)	71.8%	-34.25%	86.82%

Wastewater Flows for the Month of April



Wastewater Treatment Permit Summary

For the Month of April

	PERMIT	ACTUAL	COMPLIANT?		PERCENT
AVG. PERMITTED FLOW	0.1 MGD	0.080	Yes	MGD	80%
AVG. PERMITTED BOD	5 mg/L	1	Yes	mg/L	
AVG. PERMITTED TSS	5 mg/L	1	Yes	mg/L	
AVG. PERMITTED AMMONIA NH ₃	2.0 mg/L	0.05	Yes	mg/L	
MIN. Cl ₂ RESIDUAL POND	1.0 mg/L	3.25	Yes	mg/L	
PH (Min)	6.0 Std Units	6.9	Yes	Std Units	
PH (Max)	9.0 Std Units	7.0	Yes	Std Units	

Senna Hills MUD Wastewater Flow Historical

TOTALS	Connections	Total Effluent Flows	Average	Avg Flow Per Connection	WWTP Capacity %	ROW Flows	Pond Flows	Total Irrigation Flows
Apr-21	411	2,403,000	80,000	195	80%	253,600	1,932,000	2,088,900
Mar-21	411	2,423,000	78,000	190	78%	496,000	2,019,000	2,515,000
Feb-21	411	2,549,000	91,000	221	91%	293,000	2,405,000	2,697,800
Jan-21	411	2,402,000	77,000	187	77%	246,800	2,280,000	2,527,000
TOTALS		9,777,000	81,500	198	82%	1,289,400	8,636,000	9,828,700
Dec-20	411	2,519,000	81,000	197	81%	272,000	2,637,100	2,365,000
Nov-20	411	2,270,000	76,000	185	76%	508,600	1,880,000	2,388,800
Oct-20	411	2,527,000	82,000	200	82%	887,400	1,733,000	2,620,500
Sep-20	411	2,483,000	83,000	202	83%	874,900	1,697,000	2,571,400
Aug-20	411	2,419,000	78,000	190	78%	748,500	1,706,000	2,454,700
Jul-20	411	2,422,000	78,000	190	78%	593,700	1,641,000	2,234,500
Jun-20	411	2,426,000	81,000	197	81%	417,500	2,420,000	2,837,300
May-20	411	2,582,000	83,000	202	83%	267,900	2,030,000	2,298,000
Apr-20	412	2,472,000	82,000	199	82%	171,400	2,141,000	2,312,100
Mar-20	412	2,636,000	85,000	206	85%	165,800	1,918,000	2,083,800
Feb-20	412	2,011,000	69,000	167	69%	73,000	1,823,000	1,895,900
Jan-20	412	2,180,000	70,000	170	70%	118,000	1,948,000	2,066,000
TOTALS		28,947,000	79,000	192	79%	5,098,700	23,574,100	28,128,000
Dec-19	412	2,138,000	69,000	167	69%	166,000	1,851,000	2,016,800
Nov-19	412	2,132,000	71,000	172	71%	518,000	1,577,000	2,095,000
Oct-19	412	2,129,000	69,000	167	69%	710,500	1,414,000	2,124,600
Sep-19	412	2,157,000	72,000	175	72%	642,000	1,650,000	2,292,000
Aug-19	412	2,207,000	71,000	172	71%	680,000	1,463,000	2,143,000
Jul-19	412	1,895,000	61,000	148	61%	594,000	1,166,000	1,760,000
Jun-19	412	1,944,000	65,000	158	65%	276,000	1,345,000	1,621,000
May-19	412	2,108,000	76,000	184	76%	33,200	2,157,000	2,190,200
Apr-19	412	2,005,000	67,000	163	67%	32,200	728,000	760,200
Mar-19	412	1,905,000	61,000	148	61%	55,000	1,846,000	1,901,000
Feb-19	412	1,791,000	64,000	155	64%	9,000	1,781,000	1,790,000
Jan-19	412	2,303,000	74,000	180	74%	76,000	2,227,000	2,303,000
TOTALS		24,714,000	68,333	166	68%	3,791,900	19,205,000	22,996,800



**STORMWATER POND INSPECTION
SAND FILTER SYSTEM**

DISTRICT: SENNA
DATE: 04.01.2021
WO#: 2508738
TECH.: TAMMY YBARRA

Pond Location	STRAWFLOWER
Pond water level	WET
Does the pond drain within 48 hours?	YES
Sediment depth in the forbay?	HAS DEEP SPOTS AT FORBAY
Sediment depth in the sand filter area?	WET
Trash found at site?	NO
Is vegetation below 18" in height?	YES
Trees or brush found in basin area?	NO
Condition of the media?	GOOD
Condition of vegetation around the out fall pipe	GOOD
Was sediment found in the under drain piping? Remove open clean out tops and check	NO
Any damage to structural elements (pipes, concrete drainage, retaining walls, gabian walls, etc.)?	NO
Discharge valve open operational	N/A
Emergency bypass valve closed and operational	N/A
Are all inlets in area clear of debris and sediment?	NO - SEDIMENT & VEGETATION

FALLEN TREE LEANING INTO SAND FILTER (OBTAIN QUOTE) - WO 2491778

COMMENTS **INLET NEEDS ATTENTION - WO 2299668**





**STORMWATER POND INSPECTION
SAND FILTER SYSTEM**

DISTRICT: SENNA
DATE: 04.01.2021
WO#: 2508738
TECH.: TAMMY YBARRA

Pond Location	MILAGRO
Pond water level	DRY
Does the pond drain within 48 hours?	2" - 3"
Sediment depth in the forbay?	2" - 3"
Sediment depth in the sand filter area?	NO
Trash found at site?	NO
Is vegetation below 18" in height?	NO
Trees or brush found in basin area?	NO
Condition of the media?	LOTS OF DRY LEAVES
Condition of vegetation around the out fall pipe	GOOD
Was sediment found in the under drain piping? Remove open clean out tops and check	NO
Any damage to structural elements (pipes, concrete drainage, retaining walls, gabian walls, etc.)?	NO
Discharge valve open operational	N/A
Emergency bypass valve closed and operational	N/A
Are all inlets in area clear of debris and sediment?	YES

COMMENTS BRICKS AT ENTRANCE NEED TO BE RELAYED, BRIDGE NEEDS ATTENTION, FENCE IS DAMAGED



STORMWATER POND INSPECTION FILTER SYSTEM

DISTRICT: SENNA
DATE: 04/01/2021
WO#: 2508738
TECH.: TAMMY YBARRA

Pond Location	SEC 2
Pond water level	WET
Does the pond drain within 48 hours?	YES
Sediment depth in the forbay?	N/A
Sediment depth in the sand filter area?	N/A
Trash found at site?	NO
Is vegetation below 18" in height?	YES
Trees or brush found in basin area?	NO
Condition of the media?	GOOD
Condition of vegetation around the out fall pipe	NEEDS ATTENTION
Was sediment found in the under drain piping? Remove open clean out tops and check	N/A
Any damage to structural elements (pipes, concrete drainage, retaining walls, gabian walls, etc.)?	NO
Discharge valve open operational	N/A
Emergency bypass valve closed and operational	N/A
Are all inlets in area clear of debris and sediment?	YES
COMMENTS	CLEAN VEGETATION AROUND DOUT FALL PIPE - WO 2491804





STORMWATER POND INSPECTION SAND FILTER SYSTEM

DISTRICT: SENNA
DATE: 04.01.2021
WO#: 2508738
TECH.: TAMMY YBARRA

Pond Location	SEC 4
Pond water level	DRY
Does the pond drain within 48 hours?	YES
Sediment depth in the forbay?	N/A
Sediment depth in the sand filter area?	N/A
Trash found at site?	NO
Is vegetation below 18" in height?	NO
Trees or brush found in basin area?	NO
Condition of the media?	GOOD
Condition of vegetation around the out fall pipe	GOOD
Was sediment found in the under drain piping? Remove open clean out tops and check	NO
Any damage to structural elements (pipes, concrete drainage, retaining walls, gabion walls, etc.)?	EROSION ISSUE NEXT TO EMBANKMENT AT GABION - WO 2443736
Discharge valve open operational	N/A
Emergency bypass valve closed and operational	N/A
Are all inlets in area clear of debris and sediment?	YES
	EROSION ISSUE NEXT TO EMBANKMENT AT GABION - WO 2443736
COMMENTS	

