

NOTICE OF MEETING
TAKE NOTICE THAT A MEETING OF
the Board of Directors of
SENNA HILLS MUNICIPAL UTILITY DISTRICT
Will be held at the offices of Willatt & Flickinger, PLLC,
12912 Hill Country Blvd., Suite F-232, Austin, Texas 78738 (SEE NOTES BELOW)
commencing at 7:10 a.m. on March 26, 2021 to consider and act upon the following:

PLEASE NOTE: THIS MEETING WILL BE HELD BY REMOTE ACCESS ONLY IN ACCORDANCE WITH THE MARCH 16, 2020 ORDER BY GOVERNOR ABBOTT TEMPORARILY SUSPENDING CERTAIN REQUIREMENTS OF THE TEXAS OPEN MEETINGS ACT TO ADVANCE THE GOAL OF LIMITING FACE-TO-FACE MEETINGS TO SLOW THE SPREAD OF COVID-19. NO PERSONS WILL BE AT THE MEETING LOCATION AND NO EQUIPMENT WILL BE AT THE MEETING LOCATION FOR ACCESS TO THE MEETING. HOWEVER, MEMBERS OF THE PUBLIC MAY ACCESS THIS MEETING BY TELEPHONE AND PARTICIPATE IN THE MEETING BY CALLING ONE OF THE FOLLOWING TOLL-FREE NUMBERS: (877) 853-5247 OR (888) 788-0099 AND ENTERING THE FOLLOWING INFORMATION: MEETING ID: 832 5245 7273 AND PASSWORD: 931333.

PLEASE SEE THE DISTRICT'S WEBSITE AT WWW.SENNAHILLSMUD.ORG FOR THE MEETING PACKET.

AGENDA

1. Call to Order.

2. Roll Call of Directors.

3. Public Comments.

This is an opportunity for members of the public to address the Board of Directors concerning any issue that is not on the agenda. The response of the Board to any comment under this heading is limited to making a statement of specific factual information in response to the inquiry, or, reciting existing policy in response to the inquiry. Any deliberation of the issues is limited to a proposal to place it on the agenda for a later meeting. Each speaker shall be limited to 3 minutes, unless more than 10 members of the public wish to speak during this meeting. In such case, speakers offering public comment shall be limited to 1 minute each.

Note: Members of the public wishing to address the Board of Directors on specific agenda items will be required to indicate the agenda items on which they wish to speak. They will be given an opportunity to speak when the item is called and prior to consideration by the Board. Such comments shall be limited to 3 minutes per speaker for each agenda item. If more than 10 members of the public wish to speak, all speakers shall be limited to 1 minute each per item per person.

4. Minutes of prior meetings.

5. Payment plans for District customers during COVID-19 virus crisis.

6. All matters related to West Travis County Public Utility Agency.

7. LCRA Cost-Sharing Program.

8. Engineer's Report on some or all of the agenda items.


9. Construction projects within the District, including advertisement for bids and approval, award, recommendation, administration of construction contracts, change orders and pay estimates.

10. MS4 Permit; maintenance of drainage easements and ponds; issues with HOA amenity center drainage facilities.

11. Bookkeeper's report, including authorization of payment of bills; builder deposits.
12. District Manager's Report on operations.
 - a. Customer Requests
 - b. Landscape Maintenance Contracts; Additional landscaping services
 - c. Inspections of HOA effluent irrigation system
 - d. Maintenance and trimming of trees and vegetation on District property; Oak tree limbs damaged in Lemon Mint Park; removal of vegetation on District property planted by homeowners without permission
 - e. Cleanup, Repair and Maintenance within the District needed as a result of recent winter storms.
13. Electronic Meters.
14. Billing Adjustments; Adjustments for Freeze-Related Usage.
15. Eagle Project planned by Boy Scouts on HOA trails on District property.
16. Taylor Lake Effluent Pond, the District's effluent disposal system; HOA's effluent irrigation system; Effluent Disposal Contract between the District and HOA.
17. Dates for future board meetings.
18. Report from Mr. Rip Miller on progress of approvals for and development of the 11.73-acre tract owned by Senna Hills, Ltd.
19. Contract by and among the District, Senna Hills Homeowners Association, Inc.; Senna Hills, Ltd. and The Senna Hills Trust.
20. Adjourn.

The Board may go into closed session at any time when permitted by Chapter 551, Government Code. Before going into closed session a quorum of the Board must be assembled in the meeting room, the meeting must be convened as an open meeting pursuant to proper notice, and the presiding officer must announce that a closed session will be held and must identify the sections of Chapter 551, Government Code, authorizing the closed session.

(SEAL)



Attorney for the District

The District is committed to compliance with the Americans with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Please call Kristi Hester, INFRAMARK, LLC, Manager for the District at (512) 246-0498, for information. Hearing impaired or speech disabled persons equipped with telecommunications devices for the deaf may call (512) 272-9116, or may utilize the statewide Relay Texas program, 1-800-735-2988.

MINUTES OF MEETING
OF
SENNA HILLS MUNICIPAL UTILITY DISTRICT

STATE OF TEXAS §
 §
COUNTY OF TRAVIS §

A meeting of the Board of Directors of Senna Hills MUD was held at 7:10 a.m. on February 26, 2021 by remote access only in accordance with the March 16, 2020 Order by Governor Abbott temporarily suspending certain requirements of the Texas Open Meetings Act to advance the goal of limiting face-to-face meetings to slow the spread of COVID-19. The meeting was open to the public and notice was given as required by the Texas Open Meetings Act and as modified by the Governor's Order.

1. CALL TO ORDER

The meeting was called to order.

2. ROLL CALL OF DIRECTORS

The Directors present were:

Chet A. Palesko - President
David I. Perl – Vice President
Lisa S. McKenzie – Secretary
Joe Szoo – Assistant Secretary
Corey Newhouse – Assistant Secretary

thus constituting a quorum. All Directors were present.

Also present at the meeting were Bill Flickinger, Matt McPhail and Jeniffer Concienne of Willatt & Flickinger, PLLC, Robert Ferguson of Murfee Engineering, Jesse Kennis and Ronja Keyes of Inframark and Allen Douthitt of Bott & Douthitt.

3. CITIZEN COMMENTS

No citizens commented under this section.

4. MINUTES OF PRIOR MEETINGS

President Chet Palesko entertained a motion for approval of the Minutes. Motion was made by David I. Perl and seconded by Lisa McKenzie to approve the Minutes of the January 29, 2021 meeting as presented in the agenda package. The motion carried unanimously.

5. PAYMENT PLANS FOR DISTRICT CUSTOMERS DURING COVID-19 VIRUS CRISIS

Manager Jesse Kennis reported that no payment plan requests were received.

6. ALL MATTERS RELATED TO WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY

President Chet Palesko asked if there was any further information on the conserve water notice from the PUA right before the storm. Manager Jesse Kennis stated that they were just trying to stay ahead of the curve.

7. ENGINEER'S REPORT ON SOME OR ALL OF THE AGENDA ITEMS

Engineer Robert Ferguson discussed his report as included in the agenda package.

Mr. Ferguson advised that they are still organizing and working on mapping of the irrigation system. He is working with Manager Jesse Kennis on this project. Mr. Ferguson had no update on the stormwater system and amenity center issues.

There was discussion of the effluent pond liner project. Mr. Ferguson met with the committee, consisting of President Chet Palesko and Vice President David I. Perl yesterday to discuss in detail. They are still working on estimates of cost and dirt work. There was discussion of replacing the liner without having to remove the boulders. They will also be looking at color options. President Chet Palesko stated that it does not appear to be an option of getting rid of the boulders. The boulders are serving as a retaining wall. The liner can be replaced with the boulders in place. This option will also help with the pricing. The preliminary figures came in at \$350,000 and \$400,000, however that is not the total cost as it does not include engineering, effluent management during liner replacement and any necessary dirt work. Mr. Perl asked about neighbor involvement with the project. The Board discussed the available colors for the liner. A tan or cream liner seems to be a better option than the black one that is installed now. Mr. Ferguson will obtain some photos of colored liners additional review. This project will be discussed in more detail next month.

In regard to the site plans and development activity with SHL, the TxDOT reviewer for the driveway permit informed Mr. Ferguson that they made comments back in October to the drainage plans that SHL submitted. To date, they have heard nothing further. The reviewer indicated that he would put Mr. Ferguson on a correspondence list and provide any updates to him.

8. CONSTRUCTION PROJECTS WITHIN THE DISTRICT, INCLUDING ADVERTISEMENT FOR BIDS AND APPROVAL, AWARD, RECOMMENDATION, ADMINISTRATION OF CONSTRUCTION CONTRACTS, CHANGE ORDERS AND PAY ESTIMATES

This item was not discussed.

9. MS4 PERMIT; MAINTENANCE OF DRAINAGE EASEMENTS AND PONDS; ISSUES WITH THE HOA AMENITY CENTER DRAINAGE FACILITIES

This item was not discussed.

10. BOOKKEEPER'S REPORT, INCLUDING AUTHORIZATION OF PAYMENT OF BILLS; BUILDER DEPOSITS

Bookkeeper Allen Douthitt discussed the financials, invoices, per diems and fund transfers with the Board. The District is over budget for the reporting period but good year to date. After discussion, President Chet Palesko entertained a motion. Motion was made by Corey Newhouse and seconded by Joe Szoo to approve the financials and payment of the invoices, per diems and authorize the fund transfers as presented. The motion carried unanimously.

11. DISTRICT MANAGER'S REPORT ON OPERATIONS

- a. Customer Requests
- b. Landscape Maintenance Contracts; Additional landscaping services
- c. Inspections of HOA effluent irrigation system
- d. Maintenance and trimming of trees and vegetation on District property; removal of vegetation on District property planted by homeowners without permission
- e. Cleanup, Repair and Maintenance within the District needed as a result of recent winter storms.

Manager Jesse Kennis discussed the Executive Summary with the Board.

Mr. Kennis discussed the effects of the winter storm on the District's wastewater plant and other areas. There was a supply line to the drum screen that broke during the freeze. The irrigation contractor, Pios repaired several broken irrigation heads from the freeze. It was also reported that a line at the reuse chlorination building at the effluent holding pond broke during the freeze. Inframark will continue to check daily reads for leaks that may have not be discovered during the freeze. However, there is no indication of leaks.

The District incurred a 25% water loss this period. Mr. Kennis stated that he would check it out but feels that reading the meters later than usual could be the issue.

As of February 13th, 183 electronic meters have been installed. There are 50 left to install at this time. Mr. Kennis discussed reports of leaks from the new meter installation at several addresses. Inframark will warranty those repairs.

Mr. Kennis discussed the draft letter to the Golson's on the inspections and meter/tap fees. This letter will be provided to legal for review before it is sent out.

12. ELECTRONIC METERS

This item was discussed as part of the Manager's Report.

13. BILLING ADJUSTMENTS; ADJUSTMENTS FOR FREEZE-RELATED USAGE

Lisa McKenzie recommends doing as much as the District can to give relief to the customers due to the winter storm and having to drip the water faucets for an extended amount of time. Mrs. McKenzie suggested the following: 1) that all water usage for February should be billed at the lowest tier; 2) the February usage should be dropped out of the winter averaging period, leaving only December and January to make up the winter averaging and 3) Inframark should waive all charges relating to emergency callouts to turn the water off for the customers during the winter storm. After discussion, President Chet Palesko entertained a motion. Motion was made by Lisa McKenzie and seconded by David I. Perl to approve billing the February water usage at the lowest tier, dropping the February water usage out of the winter averaging period and waiver of Inframark charges relating to emergency callouts to turn the water off for the customers. The motion carried unanimously.

14. TAYLOR LAKE EFFLUENT POND, THE DISTRICT'S EFFLUENT DISPOSAL SYSTEM; EFFLUENT DISPOSAL CONTRACT BETWEEN THE DISTRICT AND HOA

This item was discussed under the Engineer's Report above.

15. DATES FOR FUTURE BOARD MEETINGS

The next several Board meeting dates are as follows: March 26th, April 30th and May 28, 2021.

16. INFRAMARK CONTRACT

Attorney Bill Flickinger has not yet seen the proposed contract. Manager Kristi Hester will send the draft to Attorney Bill Flickinger for review.

17. ORDER ESTABLISHING WATER AND WASTEWATER SERVICE RATES, CHARGES AND TAP FEES, AND ADOPTING GENERAL POLICIES AND RULES WITH RESPECT TO THE DISTRICT'S WATER, WASTEWATER AND DRAINAGE SYSTEMS; GRINDER PUMPS

This item was not discussed.

18. SERVICE AGREEMENT AND APPLICATION

Lisa McKenzie discussed revisions to the Service Application. After discussion, President Chet Palesko entertained a motion. Motion was made by David I. Perl and seconded by Corey Newhouse to approve the revised Service Application as presented. The motion carried unanimously.

19. REPORT FROM MR. RIP MILLER ON PROGRESS OF APPROVALS FOR AND DEVELOPMENT OF THE 11.73 ACRE TRACT OWNED BY SENNA HILLS, LTD.

This item was not discussed.

20. CONTRACT BY AND AMONG THE DISTRICT, SENNA HILLS HOMEOWNERS ASSOCIATION, INC.; SENNA HILLS, LTD. AND THE SENNA HILLS TRUST

Attorney Bill Flickinger reported that joint letter from the HOA and District was sent to Rip Miller's attorney on February 10th. Action will need to be made by March 11, 2021. If there is no response, the consent letter at the City of Austin can be pulled.

21. ADJOURN

President Chet Palesko adjourned the meeting.

Chet A. Palesko, President

ATTEST:

Lisa S. McKenzie, Secretary

[SEAL]

Senna Hills MUD
12912 Hill Country Blvd, Suite F-232
Austin, TX 78738

Lower Colorado River Authority
Attn : Stacy Pandey
P.O Box 220
Austin, TX 78767-0220

Letter Certifying Availability of Funding to Execute the Smart Meter Project

Dear Stacy –

Per our proposal, the total expected cost of the smart meter upgrade project will be \$120,165. The district portion of this project will be \$103,083.

Approximately \$86,000 will be required in the first year and the remaining amount will be divided between years two and three.

The district has enough uncommitted funds to complete this project starting this year.

Sincerely –



Chet A Palesko
President
Senna Hills MUD

Firm Water Conservation Cost-Share Program Application

Date 3/15/21

CUSTOMER PROFILE

Organization Name: Senna Hills MUD Tax ID Number: 74-2722338

Mailing Address: 12912 Hill Country Blvd, Suite F-232

City: Austin Zip: 78738

Physical Address: 12912 Hill Country Blvd, Suite F-232

City: Austin Zip: 78738

Please provide the name and contact information of the project manager who will oversee the implementation of this project.

Contact Name: Chet Palesko

Title: Senna Hills MUD board president

Mailing Address: 10409 Peonia Ct.

City: Austin Zip: 78733

Phone: 512-659-9547 Fax: _____ Email: chetp@savansys.com

Mail should be sent to: Organization Address Primary Contact Address

PROJECT PROFILE

Project Title and Brief Description:

Smart Meter Upgrade Program

Smart meters are already installed in Senna Hills but are not being monitored. This project will add monitoring.

Amount of Cost-Share Funding Requested: \$ 17,081 Total Project Cost: \$ 120,165

Will the requested funds enable the completion of the overall project? Yes No

Is this an emerging technology project? Yes No

AUTHORIZATION (This application form must be signed by the person authorized to represent the Applicant.)

Name (print): CHET A PALESKO Signature: [Signature] Date: 3/15/21

Title: BOARD PRESIDENT Phone: 512-659-9547 Email: CHETP@SAVANSYS.COM
SENNA HILLS MUD

PROJECT NARRATIVE

The narrative must include the following, if applicable:

1. A concise overview of the proposed project, including the need for the project, project objectives, the target group, the primary strategies for implementation, the conceptual design and/or specifications, and the expected equipment life:

See SH Attachment A

2. How the cost-share funds will be used:

The district already has smart meters installed, but they are not being monitored. The primary use of these funds will be to add real time monitoring to the 421 meters already in place.

3. Population of the community in which the project is located:

421 houses.

4. The amount of estimated annual water savings associated with project implementation.

- a. Water savings estimate (in acre-feet): 14.7 Acre Feet saved per year
- b. Cost per acre-foot of water saved: \$659.85 (raw cost plus treated cost)
- c. Total up-front cost per acre-foot of water saved and the cost per acre-foot annualized over the lifetime of the project using a discount rate of 5% (not applicable to emerging technology projects):
\$5,480.99 - NPV of 10 years worth of savings at 5% discount
- d. Methodology used to calculate savings and references to any studies or research that helps support these savings estimates. If available, use five years of water use data for recycled water projects (not applicable to emerging technology projects):

Savings based on the following behavior changes with the Senna Hills district

- 1. Rapid leak detection for both residents and the district distribution infrastructure.
- 2. Usage visibility will lead to better water management. The district will be proactive in supporting the improved water management.

Estimates based on history of Senna Hills water usage, number of leaks, and delay between leak detection and leak repair

e. All assumptions used must include descriptions and/or back-up information:

See SH Attachment B

f. Estimated duration of water savings in the calculations:

10 years

5. How the project will be monitored to quantify savings for the final report and how savings will be tracked over time:

The current annual water usage for both purchased water and billed water will be used as a baseline to measure improvement.

6. Information on multiple benefits, if any, associated with the project (e.g., energy efficiency, water quality improvement, stormwater control, resiliency of water supply during drought restrictions):

Reduced water usage will delay the need for more capital improvements in water treatment and water distribution infrastructure.

7. How the project will be maintained after completion:

The real time monitoring will continue for at least 5 years and probably longer. The cost of monitoring has a significant up front cost but the minimal monthly monitoring is low. We expect the monitoring to be permanent.

8. Emerging technology project requirements:

- a. Percentage of population impacted within service area: _____

- b. Evidence of innovation (e.g., not widely adopted in region):

- c. Availability on multiple technology platforms (e.g., mobile, web):

- d. Replicability (the program can be implemented for other water suppliers):

PROJECT TIMELINE

Must include the estimated completion dates of all phases of the project. Project must be completed within 12 months, unless otherwise noted.

See SH Attachment C for both the total budget and 3 year spending plan

DETAILED PROJECT BUDGET
(Include as an attachment when submitting the application.)

Budget must include the itemized costs and funding sources (see the Sample Budget below), if applicable:

1. Breakdown of all expected project costs.
2. Amount of cost-share funding requested from LCRA.
3. Applicant's contribution.
 - a. Any in-kind contributions to the project and the associated dollar values.
 - b. Any financial contributions to the project.
4. Other funding requested or already committed from other agencies.

Sample Budget

Note: This is a sample summary of project costs. Other line items may be necessary in order to convey the required information concerning project budget.

<i>Project Costs</i>	AMOUNT
Itemized In-Kind Contribution ¹ • i.e. Associated salaries and wages, materials, etc.	\$ X
Project Materials and Construction • i.e. Estimated cost of construction, materials, conservation equipment, etc.	\$ X
Other Related Expenses	\$ X
Total Project Cost	\$ X
<i>Funding Sources</i>	
Cost-Share Fund Request	\$ X
State/Federal Funds	\$ X
Customer Funding	\$ X
Total Project Cost	\$ X

¹If some of the project work is being done "in-house" or "in-kind", a brief description is necessary.

DOCUMENTATION
(Include as attachments when the submitting the application.)

1. Letter certifying that funds are available for the completion of project.
2. Supporting documentation for all matching in-kind and cash contributions.
3. Documentation of approved funding from other sources.

Attachment A – Senna Hills Smart Meter Upgrade Cost Share Narrative

In 2020, Senna Hills MUD considered replacing all the existing residential water meters with smart meters to enable monitoring of real time water usage. Unfortunately, the budget did not support a full conversion. However, the board decided to install smart meters without monitoring.

The scope of this proposed project is to add real time monitoring to the smart meters that are already installed in the neighborhood. The project also includes two new meters to help reduce water loss within the district distribution system. The total cost of this project is estimated at \$120,165 and the expected water use reduction is 14.7 acre feet per year over the next 10 years. Following are three behavior changes that will lead to this reduction.

Rapid Leak Detection within the Resident’s System

With the existing dumb meters today, the delay between when a leak starts and when the resident is aware of the leak averages 8 weeks. Meters are read once a month. After the reads, there is a three to four week delay to get all the reads into the billing system, process the bills, and finally send to the resident. Then there is an additional delay as the homeowner does not always review the water bill when it arrives. The district has a leak adjustment process that allows residents to request the lowest tier of pricing during a leak. Most requests cover a leak period of at least 8 weeks. As part of this project, the expected time between the start of the leak to detection will drop to 2 weeks as a result of weekly monitoring and analytics.

In addition to major leaks (>50K gallons per month), the project will address minor leaks (~8k gallons per month). Many of these go undetected for months or years since they are small. As evidence, the Senna Hills MUD board did a trial of smart meters with monitoring for the board members. Out of 5 board members, 3 board members had previously undetected minor leaks that showed up as a continuous flow.

The board does not plan to rely solely on residents to detect leaks. All the residents’ data will be collected and analyzed weekly for problems. If there is an indication of a large leak (major increase in water usage) or a small leak (continuous flow), the resident will be contacted. The table below shows the calculation supporting a reduction of 8.9 acre feet through rapid leak detection.

Rapid leak detection within resident’s system		
Average Annual Acre Feet Used (2018-2020)	219.3	Acre Feet
Big Leak (50K/month) - Average leak rate per week	13	K gallons
Big Leak (50K/month) - Current duration of leak	8	weeks/leak
Big Leak (50K/month) - Estimated number of leaks per year (5% of 421 connections)	21	Leaks per year
Big Leak (50K/month) - Leak time reduction	6	weeks/leak
Small Leak (8K/month) - Undetected in 20% of houses for 2 months	1,315	K gallons saved
Annual gallons saved	2,894	K gallons
Annual acre feet saved	8.9	Acre Feet

Better Water Management

In addition to leak detection, residents who actively monitor their water usage will be able to optimize their use. It is expected that 50% of the households will proactively monitor and manage their water use. In addition to allowing residents to manage their water use, Senna Hills MUD plans to communicate water saving tips once a month. Examples include checking for leaking toilets (which will be easy with smart meters and the continuous flow warning), the value of less frequent and deeper irrigation as opposed to more frequent short irrigation, etc. The table below shows the calculation supporting a reduction of 3.3 acre feet through better water management.

Better Water Management		
Average Annual Acre Feet Used (2018-2020)	219.3	Acre Feet
50% of residents proactively manage their water use	35,734	K gallons being managed
Improvement resulting from better management	3.0%	reduction
Annual gallons saved	1,072	K gallons
Annual acre feet saved	3.3	Acre Feet

Rapid Leak Detection and Isolation within the district distribution infrastructure

Over the last 3 years, the district has lost an average of over 4 million gallons per year. During 2020, 5.7 million gallons were unaccounted for. Through better comparative tracking of the master meters against the smart meters, a water loss improvement within the distribution infrastructure of 20% is expected. Today it is often 3 to 4 months after an infrastructure leak occurs before it is identified and fixed. Given the concern about the accuracy of data, the Senna Hills MUD board will usually review at least 2 and sometimes 3 months of bad water loss data before starting a leak detection process. Real time monitoring at both the master meters and all the residential meters will substantially reduce the time between the start of the leak and fixing the leak.

Rapid leak detection and isolation with district distribution infrastructure		
Annual water loss	4,161	K gallons
Expected loss reduction	20.0%	reduction
Annual gallons saved	832	K gallons
Annual acre feet saved	2.6	Acre Feet

Billed water (K gallons)	
2018	63,450
2019	66,854
2020	71,615
3 yr. Average	67,306

Gallons/Acre Foot 325,851
 1 K Gallons/Acre Foot 325.9

Billed water (Acre Feet)	
2018	194.7
2019	205.2
2020	219.8
3 yr. Average	206.6

Annual Savings Estimates

14.7 Acre Feet

Rapid leak detection within resident's system			
Average Annual Acre Feet Used (2018-2020)	219.3	Acre Feet	
Big Leak (50K/month) - Average leak rate per week	13	K gallons	
Big Leak (50K/month) - Current duration of leak	8	weeks/leak	
Big Leak (50K/month) - Estimated number of leaks per year (5% of 421 connections)	21	Leaks per year	
Big Leak (50K/month) - Leak time reduction	6	weeks/leak	
Big Leak (50K/month) - Savings	1,579	K gallons saved - big leaks	
Small Leak (8K/month) - Undetected in 20% of houses for 2 months	1,315	K gallons saved - small leaks	
Annual gallons saved	2,894	K gallons saved - All	
Annual acre feet saved	8.9	Acre feet saved	

Better Water Management			
Average Annual Acre Feet Used (2018-2020)	219.3	Acre Feet	

50% of residents proactively manage their water use	35,734	K gallons being managed
Improvement resulting from better management	3.0%	reduction
Annual gallons saved	1,072	K gallons saved
Annual acre feet saved	3.3	Acre feet saved

Rapid leak detection and isolation with district distribution infrastructure		
Annual water loss	4,161	K gallons
Expected loss reduction	20.0%	reduction
Annual gallons saved	832	K gallons saved
Annual acre feet saved	2.6	Acre feet saved

Senna Hills 3 year water Usage

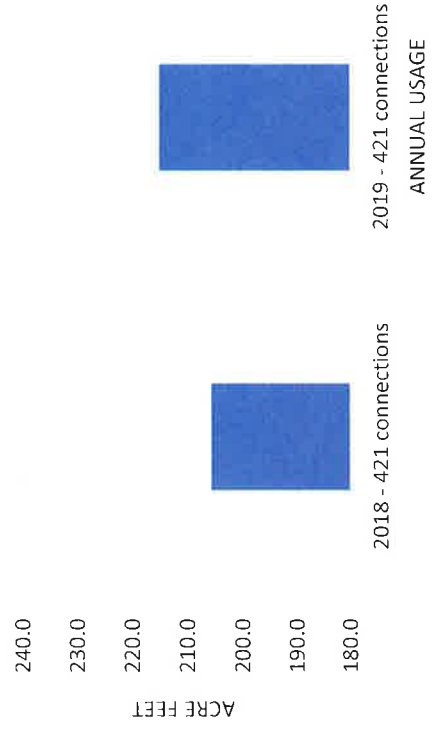
Purchased Water (K gallons)	
2018	67,002
2019	70,042
2020	77,359
3 yr. Average	71,468

Unaccounted (K gallons)	
2018	3,552
2019	3,188
2020	5,744
	4,161

Purchased Water (Acre Feet)	
2018	205.6
2019	215.0
2020	237.4
3 yr. Average	219.3

Unaccounted (Acre Feet)	
2018	10.9
2019	9.8
2020	17.6
	12.8

Purchased Water (Acre Feet)	
2018 - 421 connections	205.6
2019 - 421 connections	215.0
2020 - 421 connections	237.4



Senna Hills MUD Water Pu

Smart Meter Project

Item	Cost/unit	Qty	Total Project Cost
Smart meter - 5/8"	\$0.00	263	\$0
Smart meter - 3/4"	\$0.00	152	\$0
Smart meter - 1"	\$0.00	5	\$0
Smart meter - 2"	\$0.00	1	\$0
Doppler meter in distribution network	\$3,600.00	2	\$7,200
LTE endpoint	\$109.77	421	\$46,213
Engagement fee	\$2,300.00	1	\$2,300
Leak detection analytics	\$250.00	50	\$12,500
Subscription fee/month	\$374.69	60	\$22,481
Lid - est average cost	\$20.00	421	\$8,420
Est. installation cost - meter only	\$0.00	421	\$0
Est. incremental cost if lid and endpoint	\$50.00	421	\$21,050
Total before Limits			\$120,165
Total with max per acre foot Limits			\$120,165

Item	Cost/unit	Qty	Total Project Cost
Smart meter - 5/8"	\$0.00	263	\$0
Smart meter - 3/4"	\$0.00	152	\$0
Smart meter - 1"	\$0.00	5	\$0
Smart meter - 2"	\$0.00	1	\$0
Doppler meter in distribution network	\$3,600.00	2	\$7,200
LTE endpoint	\$109.77	421	\$46,213
Engagement fee	\$2,300.00	1	\$2,300
Leak detection analytics	\$250.00	50	\$12,500
Subscription fee/month	\$374.69	60	\$22,481
Lid - est average cost	\$20.00	421	\$8,420
Est. installation cost - meter only	\$0.00	421	\$0
Est. incremental cost if lid and endpoint	\$50.00	421	\$21,050
Total before Limits			\$120,165

Requested Cost share at 50%	District Portion (\$ plus/ In kind)
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$3,600	\$3,600
\$23,107	\$23,107
\$1,150	\$1,150
\$0	\$12,500
\$11,241	\$11,241
\$4,210	\$4,210
\$0	\$0
\$10,525	\$10,525
\$53,832	\$66,332
\$17,081	\$103,083

14.21%

2021	2022	2023
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$3,600	\$3,600
\$46,213	\$0	\$0
\$2,300	\$0	\$0
\$4,125	\$4,125	\$4,125
\$4,496	\$4,496	\$4,496
\$8,420	\$4,210	\$4,210
\$0	\$0	\$0
\$21,050	\$0	\$0
\$86,604	\$16,431	\$16,431

MURFEE ENGINEERING COMPANY, INC.

Texas Registered Firm No. F-353
1101 Capital of Texas Hwy., South
Building D, Suite 110
Austin, Texas 78746
(512) 327-9204

M E M O R A N D U M

DATE: March 19, 2021

TO: Senna Hills MUD Board of Directors

FROM: Robert Ferguson, P.E.

RE: Report from the Engineer for the Meeting of March 26, 2021
MEC Project No.: 11033.65

Wastewater Treatment Plant and Effluent Irrigation:

Mapping of Irrigation Fields: Field verifications will be rescheduled now that the weather is more conducive to conducting such activities.

Stormwater System and the Amenity Center: The situation has not changed and is in a holding pattern with the site plan and existing infrastructure and appurtenances.

Taylor Lake Pond Liner:

We provided samples of the liner materials under consideration and the committee made independent assessments of each sample. The next steps in coordinating this project during the design with and between the committee and affected residents are being discussed. We are working on determining the best approach means in managing the produced effluent during the time the pond is off line.

Site Plans and Development Activity:

We note there have been no responses on the comments to the office site plan nor has TxDoT received any updates to the driveway permit application. We are monitoring what is posted to the City's site permit website.



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
February 2021
Board Meeting: March 26th, 2021**

Reviewed By: Jesse L Kennis
Date: 3/16/2021



14050 Summit Drive, #103 Austin, TX 78728
United States

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Memorandum for: Senna Hills MUD Board of Directors

From: Jesse L. Kennis II

Date: March 26, 2021

Subject: General Manager's Executive Summary Report

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

- 1) **Wastewater Treatment Plant**
 - a) 2.5 MG for the month. 91,000 GPD average, 91% capacity.
- 2) **Re-Use Water System**
 - a) Pio's repaired broken irrigation heads from freeze damage.
- 3) **Distribution System – Billing**
 - a) 6.7 MG purchased for the month.
 - b) 21.71% water loss for February 2021.
 - c) Chlorine residuals and bacteriological samples satisfactory.
 - d) Passed TCEQ compliance inspection that was conducted February 10th.
 - e) 1 delinquent letter mailed out, 1 tag hung, no disconnects.
 - f) 170 new meters replaced as of February 13, 2021. The crew will be back towards the end of March to complete the remaining meters.
- 4) **Collection System**
 - a) Nothing significant to report.
- 5) **Drainage/Ponds/MS4**
 - b) Pond reports conducted Feb 1st, 2021. Reports are included

Current Items Requiring Board Approval:

Vendor	Amount	WO#	Budget Amount	Description
N/A				

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 3, 2021

Chet Palesko, Board President
Senna Hills Municipal Utility District
12912 Hill Country Boulevard, Suite F-232
Austin, TX, 78738

Re: Remote Comprehensive Compliance Investigation at:
Senna Hills Municipal Utility District, Travis County, Texas
TCEQ PWS ID No.: 2270316, Investigation No.:1702928

Dear Mr. Palesko

On February 10, 2021, Mr. Michael Cameron of the Texas Commission on Environmental Quality (TCEQ) Austin Region Office conducted a remote investigation of the above-referenced facility to evaluate compliance with applicable requirements for public water supply. No violations are being alleged as a result of the investigation.

The TCEQ appreciates your assistance in this matter and your compliance efforts to ensure protection of the State's environment. If you or members of your staff have any questions regarding these matters, please feel free to contact Mr. Michael Cameron in the Austin Region Office at (512) 676-8539.

Sincerely,

A handwritten signature in cursive script that reads "Chad Ahlgren".

Chad Ahlgren
Water Program Work Leader
Austin Region Office

CA/mc

cc: Vanessa Chapa, 32259 Morton Road, Brookshire, TX, 77423

PWS_2270316_CP_20210210_Investigation
Texas Commission on Environmental Quality
Investigation Report

The TCEQ is committed to accessibility. If you need assistance in accessing this document, please contact oce@tceq.texas.gov

Customer: Senna Hills Municipal Utility District
Customer Number: CN601362437

Regulated Entity Name: SENNA HILLS MUD

Regulated Entity Number: RN102671013

Investigation # 1702928	Incident Numbers
Investigator: MICHAEL CAMERON	Site Classification P 251-1K CONNECTION
Conducted: 02/10/2021 -- 02/10/2021	No Industry Code Assigned
Program(s): PUBLIC WATER SYSTEM/SUPPLY	
Investigation Type: Compliance Investigation	Location: FM 2244 & SENNA HILLS DR
Additional ID(s): 2270316	

Address: 10409 PEONIA CT,
AUSTIN, TX , 78733

Local Unit: REGION 11 - AUSTIN

Activity Type(s): COV - Flag code for activities which were modified due to restrictions related to COVID-19. Should only be used with activities used to meet federal commitments for CAA, TPDES, PWS, RCRA, or Energy Act.
PWSCCIGWCM - CCI GW PURCHASE
- COMMUNITY MANDATORY

Principal(s):

Role	Name
RESPONDENT	SENNA HILLS MUD

Contact(s):

Role	Title	Name	Phone
PARTICIPATED IN	ENVIRONMENTAL COMPLIANCE ADVISOR	MS VANESSA CHAPA	
REGULATED ENTITY MAIL CONTACT	PRESIDENT	MR CHET PALESKO	
PARTICIPATED IN	ENVIRONMENTAL COMPLIANCE COORDINATOR	MS BRISSA SMITH	Work (281) 375-5964

Other Staff Member(s):

Role	Name
Supervisor	CHAD AHLGREN
Supervisor	SHAWN STEWART

Associated Check List

Checklist Name

PWS STANDARD FIELD

Unit Name

CCI

Investigation Comments:

INTRODUCTION

On February 10, 2021, Austin Region Investigator Michael Cameron conducted a Remote Comprehensive Compliance Investigation (CCI) of Senna Hills MUD - Public Water Supply (PWS) ID: 2270316. The water system is located on Senna Hills Drive, west of the City of West Lake Hills, in Travis County. It is operated by Inframark Water Infrastructure Operations. The CCI was conducted to determine water system compliance with applicable public water system (PWS) regulatory requirements. The CCI was scheduled with Ms. Vanessa Chapa, Compliance Manager with Inframark, on January 25, 2021.

A limited investigation was conducted at the facility due to the on-going Coronavirus Disease 19(COVID-19) pandemic. The investigator was not able to conduct an on-site investigation of the facilities due to state and/or local guidelines requiring social distancing and the prevention of mass gatherings. These requirements were put in place to help prevent the spread of COVID-19. The investigation therefore consisted of a review of applicable records remotely (by email) and photographs of the facility submitted by the regulated entity.

The investigation was conducted via email and phone with Ms. Chapa. During the CCI, maintenance, operations records, monitoring reports, and other pertinent documents were reviewed. The regulated entity collected water samples in the distribution system in order to test for water pressure and disinfectant residual requirements. No violations were alleged during the investigation and the facility was issued a General Compliance letter following the CCI.

GENERAL FACILITY AND PROCESS INFORMATION

The water system for Senna Hills MUD is a community system with 404 residential connections. It purchases treated water from the West Travis County Public Utility Authority's surface water treatment plant(PWS ID: 2270235). The purchase water contract between the two entities allows Senna Hills MUD to draught up to 575,000 gallons per day or 399 gallons per minute. The area served by the district is built out. Water is received under direct pressure through two master meters located on Senna Hills Drive. There are no treatment, storage or pressure maintenance facilities.

The average daily demand during the 12-month period prior to the CCI was 211,942 gallons. The maximum daily demand during this period was 496,000 gallons on August 16, 2020. A water sample was collected at 10300 Indigo Broom Loop. The residual disinfectant concentration was 3.4 milligrams per liter of total chlorine. The water pressure at this location was 100 pounds per square inch. The location was chosen because it is used as a representative site on the system sample siting plan.

BACKGROUND

The previous CCI was conducted on January 25, 2018. One additional issue was noted for the disinfectant residual measuring above 4.0 milligrams per liter in a sample taken during the investigation. No violations were alleged.

In the applicable 5-year compliance history, no violations have been alleged. Additionally, no complaint investigations have been conducted at the system.

ADDITIONAL INFORMATION

On January 25, 2021, the investigator contacted Ms. Chapa to set up the remote CCI and to provide a list of records and photos to be reviewed. Ms. Chapa submitted the required records and photos on February 5 and February 8, 2021.

The investigator reviewed Monthly Operating Reports (MORs), Disinfectant Quarterly Operating Reports (DLQORs), Monitoring Plans, the Operation and Maintenance manual, water purchase contracts and other documents that demonstrate the system was in compliance with applicable record keeping requirements. Records were organized and up to date. Required sampling and calibrations were conducted on time.

No Violations Associated to this Investigation

Signed M. Cameron
Environmental Investigator

Date 03/01/2021

Signed Chad Ahlgren
Supervisor

Date 03/02/2021

Attachments: (in order of final report submittal)

Enforcement Action Request (EAR)

Maps, Plans, Sketches

Letter to Facility (specify type) : Compliance

Photographs

Investigation Report

Correspondence from the facility

Sample Analysis Results

Other (specify) :

Manifests

Notice of Registration

List of Attached files
Attachments.pdf

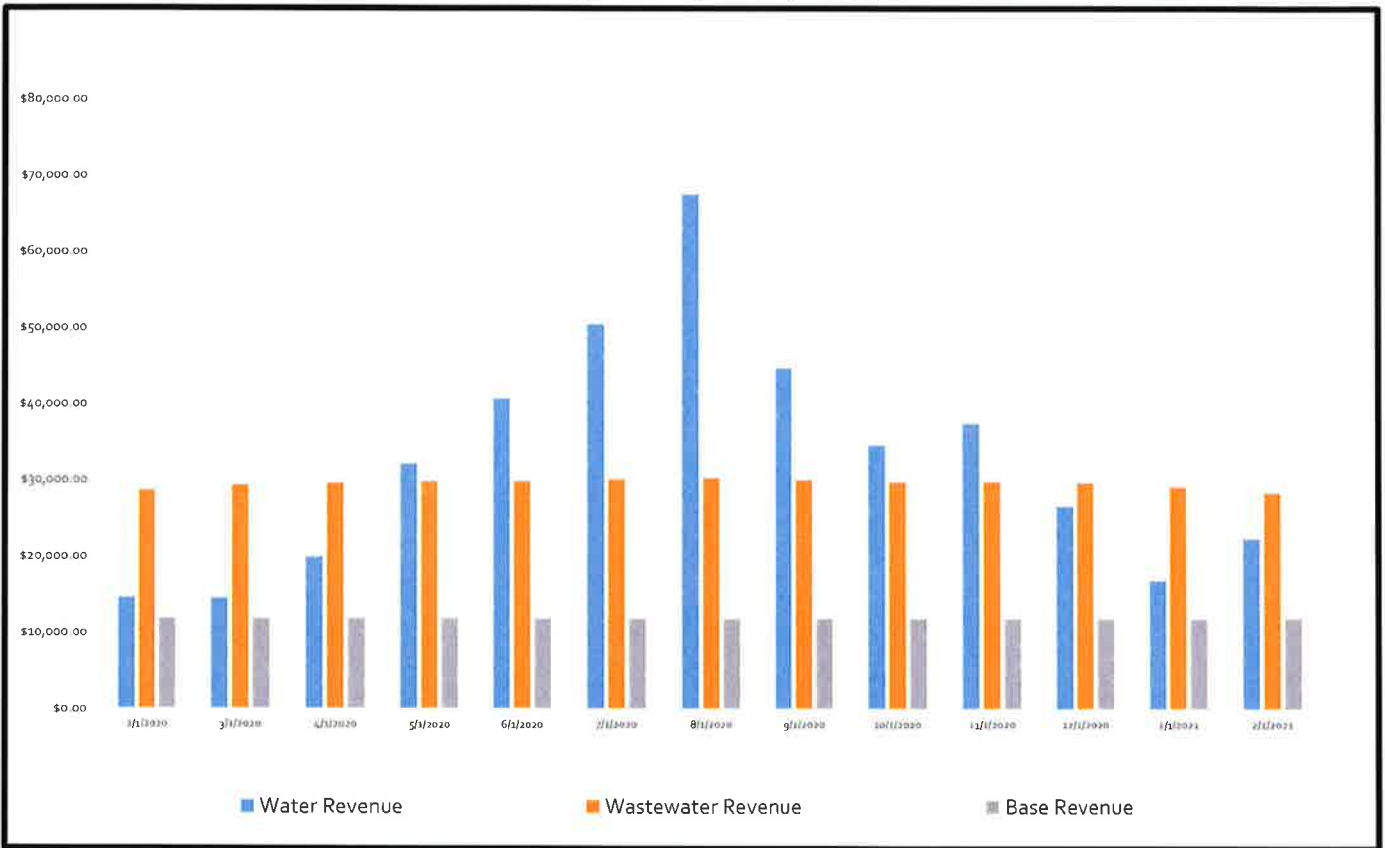


Billing Summary

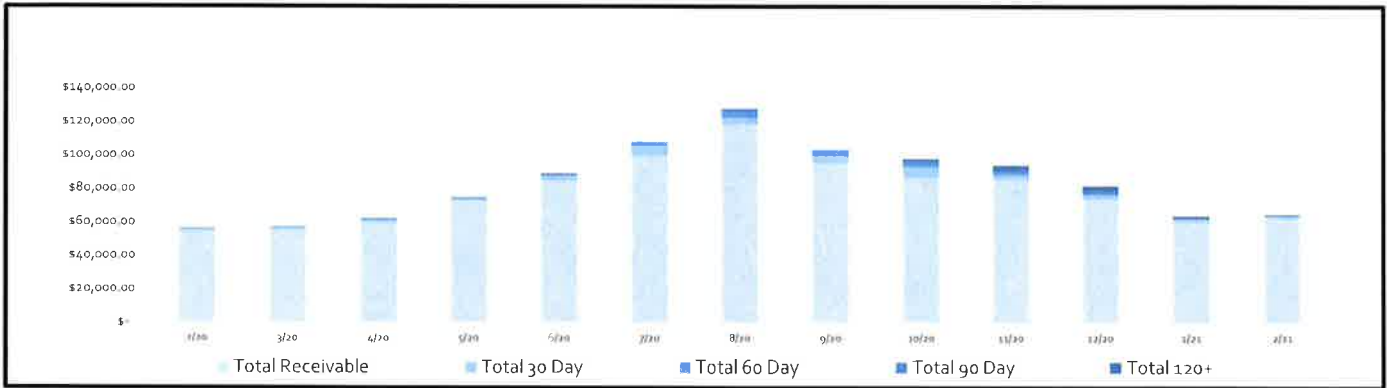


Description	Connections	
	Feb-20	Feb-21
Residential	405	405
Hydrant	-	-
Tracking	6	5
No Bill	1	1
Total Number of Accounts Billed	412	411
	Consumption	
Residential	2,841,000	4,471,000
Hydrant	-	-
Tracking Amenity Center	9,000	52,000
Total Gallons Consumed	2,850,000	4,523,000
	Average Consumption	
Residential	7,015	11,040
Hydrant	-	-
Tracking	1,500	10,400
Avg Water Use for Accounts Billed	6,917	11,005
Total Billed	\$ 57,595	\$ 64,955
Total Aged Receivables	\$ (3,110)	\$ (2,371)
Total Receivables	\$ 54,485	\$ 62,584

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+
2/20	\$ 54,484.68	\$ 1,101.79	\$ 394.88	\$ 31.21	\$ 66.41
3/20	\$ 54,969.25	\$ 1,361.85	\$ 455.55	\$ 125.46	\$ 87.04
4/20	\$ 59,559.19	\$ 1,510.86	\$ 479.77	\$ 161.02	\$ 206.41
5/20	\$ 72,614.06	\$ 1,922.58	\$ 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	\$ 95,242.04	\$ 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	\$ 3,026.57	\$ 6.77	\$ -	\$ 1,507.36
2/21	\$ 62,583.57	\$ 1,229.60	\$ 556.79	\$ 6.77	\$ 206.41

Board Consideration to Write Off	\$0.00
Board Consideration Collections	\$0.00
Delinquent Letter Mailed	1
Delinquent Tags Hung	1
Disconnects for Non Payment	N/A



Water Production and Quality

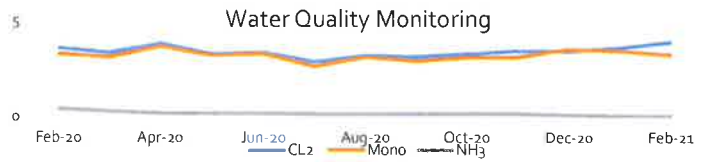

Senna Hills Municipal Utility District
 14050 Summit Drive Suite 113A
 Austin, Texas 78728
 512-844-1041

Water Quality Monitoring

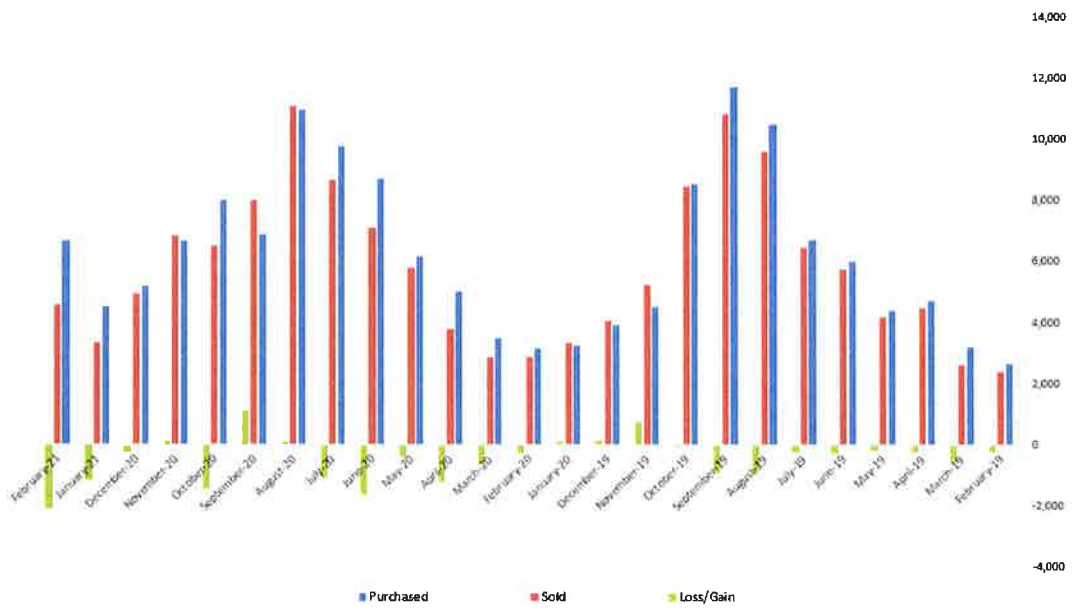
Current Annual CL2 Avg

Requirements Min .50

Date	CL2	Mono	NH3
Feb-20	3.6	3.3	0.43
Mar-20	3.36	3.13	0.30
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

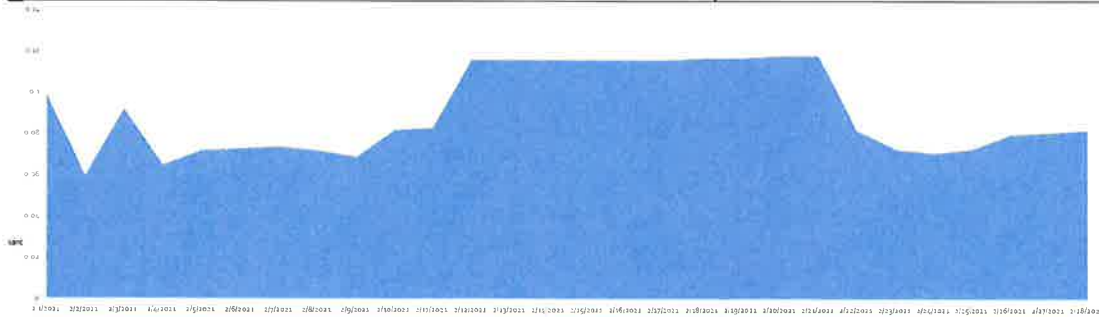


Water Accountability Report



Month	Read Date	Purchased (1000)	Sold (1000)	Flushing	Gal.s Loss (-)	Accounted For %	Running	
							Loss %	Accounted For %
February 19	2/13/19	2,636	2,387	4	(245)	90.7%	-5.99%	94.01%
March 19	3/14/19	3,197	2,595	4	(598)	81.3%	-6.62%	93.38%
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%

Wastewater Flows for the Month of February



Wastewater Treatment Permit Summary

For the Month of February

	PERMIT	ACTUAL	COMPLIANT?	PERCENT
AVG. PERMITTED FLOW	0.1 MGD	0.091	Yes	91%
AVG. PERMITTED BOD	5 mg/L	2	Yes	
AVG. PERMITTED TSS	5 mg/L	1	Yes	
AVG. PERMITTED AMMONIA NH ₃	2.0 mg/L	0.20	Yes	
MIN. Cl ₂ RESIDUAL POND	1.0 mg/L	1.5	Yes	
PH (Min)	6.0 Std Units	7.0	Yes	
PH (Max)	9.0 Std Units	7.3	Yes	

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
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		4,951,000	84,000	204	84%	539,800	4,685,000	5,224,800
Dec-20	411	2,519,000	81,000	197	81%	272,000	2,837,100	2,365,000
Nov-20	411	2,270,000	76,000	185	76%	508,600	1,880,000	2,388,800
Ocl-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	26,128,000
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
Ocl-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	78,000	184	78%	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	1,991,000
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%	78,000	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: 02.01.2021
WO#: 2458433
TECH.: TAMMY YBARRA

Pond Location	STRAWFLOWER
Pond water level	DRY
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?	3"
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

COMMENTS INLET NEEDS ATTENTION - WO 2299668





**STORMWATER POND INSPECTION
SAND FILTER SYSTEM**

DISTRICT: SENNA
DATE: 02.01.2021
WO#: 2458433
TECH.: TAMMY YBARRA

Pond Location	MILAGRO
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?	3"
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, gablan 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

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

COMMENTS





**STORMWATER POND INSPECTION
FILTER SYSTEM**

DISTRICT: SENNA
DATE: 02/01/2021
WO#: 2458430
TECH.: TAMMY YBARRA

Pond Location	SEC 2
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?	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





**STORMWATER POND INSPECTION
SAND FILTER SYSTEM**

DISTRICT: SENNA
DATE: 02.01.2021
WO#: 2458433
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	

