

## Johnson, Sabrina O

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**From:** Fischer, Shane <SFischer@SCSEngineers.com>  
**Sent:** Monday, October 14, 2019 10:11 AM  
**To:** SWD\_Waste; Tafuni, Steven  
**Cc:** Anthony Detweiler; Bryan White; Cooper, Dan; Lebron, Carlo  
**Subject:** Manatee County Lena Road Landfill Monthly Report September 2019  
**Attachments:** September 2019 Report.pdf

Mr. Tafuni,

Attached is the Manatee County Lena Road Landfill Monthly Report (for September 2019) which includes the following:

- Monthly Water Balance Report (Exhibit A)
- Monthly Leachate Tracking Summary - 2019 (Exhibit B)
- Monthly Leachate Meter Readings
- Monthly Rainfall
- Monthly Groundwater Gradient Report

If you should have any questions concerning this report, please contact me at (813) 804-6714.

Thanks

Shane R. Fischer, P.E.  
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October 14, 2019  
File No. 09217088.15

Mr. Steven Tafuni  
Florida Department of Environmental Protection  
Southwest District Office - Solid Waste Section  
130501 N. Telecom Parkway  
Temple Terrace, Florida 33637-0926

Subject: Manatee County Lena Road Landfill  
Monthly Report – September 2019

Dear Mr. Tafuni:

This letter includes the following monthly reports: Monthly Water Balance Report (Exhibit A), Monthly Leachate Tracking Summary - 2019 (Exhibit B), Monthly Leachate Meter Readings, Monthly Rainfall, and Monthly Groundwater Gradient Report.

Sincerely,



Shane R. Fischer, P.E.  
Office Manager/Project Director  
SCS Engineers



Katherine Sun  
Associate Professional  
SCS Engineers

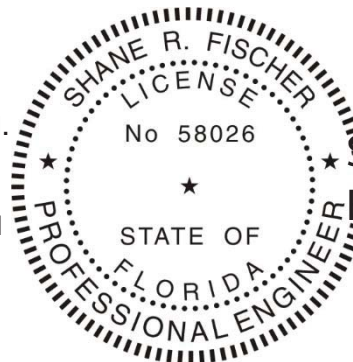
SRF/CED

cc: Bryan White, Manatee County Landfill Superintendent  
Anthony Detweiler, Manatee County Landfill Operations Supervisor

Enclosures

This item has been digitally signed and sealed by  
Shane R. Fischer, PE on the date adjacent to the seal.

Printed copies of this document are not considered  
signed and sealed and the signature must be verified  
on any electronic copies.



Shane  
Fischer

Digitally signed by  
Shane Fischer  
Date: 2019.10.14  
10:06:41 -04'00'

EXHIBIT A

**MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
LENA ROAD LANDFILL  
MONTHLY WATER BALANCE REPORT  
August 2019**

A	B	C	D	E	F	G	H	I
DATE	LEACHATE STAGE I Lift Station 1 (gallons)	LEACHATE STAGE I Lift Station 2 (gallons)	LEACHATE STAGE I TOTAL (gallons)	LEACHATE STAGE II TOTAL (gallons)	LEACHATE STAGE III TOTAL (gallons)	TOTAL LEACHATE PUMPED (gallons)	RAINFALL (inches)	RAINFALL (gallons)
1-Sep-19	0	0	0	0	0	0	0.15	1,164,992
2-Sep-19	0	0	0	0	0	0	0.20	1,553,323
3-Sep-19	178,737	24,946	203,683	752	287,724	492,159	0.00	0
4-Sep-19	40,988	5,388	46,376	176	62,800	109,352	0.00	0
5-Sep-19	43,538	5,781	49,319	176	69,024	118,519	0.00	0
6-Sep-19	36,398	4,955	41,353	144	58,984	100,481	0.47	3,650,310
7-Sep-19	0	0	0	0	0	0	0.00	0
8-Sep-19	0	0	0	0	0	0	0.00	0
9-Sep-19	120,370	16,213	136,583	480	185,864	322,927	1.01	7,844,282
10-Sep-19	32,942	4,664	37,606	144	54,220	91,970	0.00	0
11-Sep-19	39,714	5,511	45,225	336	64,980	110,541	0.00	0
12-Sep-19	36,236	5,218	41,454	228	54,136	95,818	0.00	0
13-Sep-19	40,500	5,610	46,110	172	59,064	105,346	0.41	3,184,313
14-Sep-19	0	0	0	0	0	0	0.00	0
15-Sep-19	0	0	0	0	0	0	0.00	0
16-Sep-19	121,282	16,852	138,134	592	171,912	310,638	0.00	0
17-Sep-19	33,840	4,935	38,775	160	48,828	87,763	0.00	0
18-Sep-19	39,094	5,465	44,559	176	53,424	98,159	0.20	1,553,323
19-Sep-19	45,508	6,276	51,784	208	65,324	117,316	0.00	0
20-Sep-19	25,682	3,686	29,368	112	36,600	66,080	0.00	0
21-Sep-19	0	0	0	0	0	0	0.00	0
22-Sep-19	0	0	0	0	0	0	0.00	0
23-Sep-19	106,360	15,333	121,693	992	154,348	277,033	0.00	0
24-Sep-19	33,152	4,926	38,078	224	43,336	81,638	0.00	0
25-Sep-19	37,510	5,462	42,972	161	47,884	91,017	0.00	0
26-Sep-19	36,754	5,314	42,068	159	47,808	90,035	0.00	0
27-Sep-19	34,654	5,055	39,709	208	46,548	86,465	0.00	0
28-Sep-19	0	0	0	0	0	0	0.00	0
29-Sep-19	0	0	0	0	0	0	0.00	0
30-Sep-19	96,904	14,645	111,549	1,024	138,048	250,621	0.00	0
<b>TOTAL</b>	<b>1,180,163</b>	<b>166,235</b>	<b>1,346,398</b>	<b>6,624</b>	<b>1,750,856</b>	<b>3,103,878</b>	<b>2.44</b>	<b>18,950,543</b>
Leachate Pumped as Percentage of Rainfall				19.9%	0.1%	40.0%		

**Column Notes:**

A - Date of reading.

B - Leachate pumped (gallons) from Stage I by lift station 1.

C - Leachate pumped (gallons) from Stage I by lift station 2.

D - Total Stage I leachate pumpage (B+C).

E - Leachate pumped (gallons) from Stage II.

F - Leachate pumped (gallons) from Stage III.

G - Total leachate pumped to WWTP storage tank (D+E+F).

H - Rainfall (inches) recorded on this date.

I - Rainfall (gallons) calculated based on open area (H x Area x 27,156 gal/acre-in).

**Comments**

"0" = no data recorded

	Stage I (acres)	Stage II (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	102.0	113.0	66.0	281.0
Interm. Cover	0.0	5.0	--	5.0
Closed	30.0	0.0	--	30.0
<b>TOTAL</b>	<b>132.0</b>	<b>118.0</b>	<b>66.0</b>	<b>316.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>118.0</b>	<b>66.0</b>	<b>286.0</b>

EXHIBIT B

MANATEE COUNTY SOLID WASTE MANAGEMENT FACILITY  
 LENA ROAD LANDFILL  
 MONTHLY LEACHATE TRACKING SUMMARY -- 2019

	B	C	D	E	F	G	H	I	J
MONTH	STAGE I	STAGE II	STAGE III	TOTAL	RAINFALL (inches)	RAINFALL (gallons)	STAGE I	STAGE II	STAGE III
	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)	LEACHATE (gallons)			LEACHATE/ RAINFALL (%)	LEACHATE/ RAINFALL (%)	LEACHATE/ RAINFALL (%)
JANUARY	985,946	3,653,440	924,189	5,563,575	3.48	27,027,824	10.2%	32.8%	14.8%
FEBRUARY	881,333	3,006,288	1,745,237	5,632,858	2.23	17,319,554	14.3%	42.1%	43.7%
MARCH	779,697	3,388,032	1,910,490	6,078,219	2.06	15,999,229	13.7%	51.3%	51.7%
APRIL	819,304	3,945,872	1,355,972	6,121,148	2.04	15,843,897	14.5%	60.4%	37.1%
MAY	699,681	7,390,560	2,560,600	10,650,841	2.41	18,717,545	10.5%	95.7%	59.3%
JUNE	745,979	2,745,936	1,169,260	4,661,175	7.83	60,812,603	3.4%	10.9%	8.3%
JULY	765,489	5,313,184	2,503,452	8,307,305	16.05	124,654,187	1.7%	10.3%	8.7%
AUGUST	1,530,136	2,173,456	3,016,204	6,719,796	17.95	139,410,757	3.1%	3.8%	9.4%
SEPTEMBER	1,346,398	6,624	1,750,856	3,103,878	2.44	18,950,543	19.9%	0.1%	40.0%
OCTOBER									
NOVEMBER									
DECEMBER									
<b>TOTAL</b>	<b>8,553,963</b>	<b>31,623,392</b>	<b>16,936,260</b>	<b>56,838,795</b>	<b>56.49</b>	<b>438,736,138</b>	<b>5.5%</b>	<b>20.2%</b>	<b>10.8%</b>

Notes:

- (B) Total leachate pumped from Stage I.
- (C) Total leachate pumped from Stage II
- (D) Total leachate pumped from Stage III
- (E) Total leachate (Column B+C+D) pumped to WWTP storage tank.
- (F) Total rainfall in inches.
- (G) Total rainfall in gallons (Stage I, II, and III Open Area of 286-acres x Rainfall)
- (H) Stage I leachate as a percentage of rainfall.
- (I) Stage II leachate pumped as a percentage of rainfall.
- (J) Stage III leachate pumped as a percentage of rainfall.

Landfill Stage Land Area

	Stage I (acres)	Stage II (acres)	Stage III (acres)	TOTAL (acres)
Initial Cover	102.0	113.0	66.0	281.0
Intermed. Cover	0.0	5.0	--	5.0
Closed	30.0	0.0	--	30.0
<b>TOTAL</b>	<b>132.0</b>	<b>118.0</b>	<b>66.0</b>	<b>316.0</b>
<b>Open Area</b>	<b>102.0</b>	<b>118.0</b>	<b>66.0</b>	<b>286.0</b>

## LEACHATE METER READINGS

DATE	LEACHATE METERS				STORMWATER S.G.		COMMENTS	NAME (Initials)
	#1	#2	#3	#4	#1	#2		
	9/1/19							
9/2/19								
9/3/19	27573018	5681883	44083196	220049360	34.41	32.32	OK	JFB
9/4/19	27614006	5687271	44145996	220049536	34.36	32.31	OK	JFB
9/5/19	27657544	5693052	44215020	220049712	34.3	32.29	OK	JFB
9/6/19	27693942	5698007	44274004	220049888	34.27	32.27	OK	JFB
9/7/19								
9/8/19								
9/9/19	27814312	5714220	44459862	220050336	34.26	32.32	OK	JFB
9/10/19	27847254	5718884	44514088	220050480	34.42	32.34	OK	JFB
9/11/19	27886968	5724395	44579068	220050616	34.41	32.33	OK	JFB
9/12/19	27923204	5729613	44633204	220050752	34.35	32.31	OK	JFB
9/13/19	27963704	5735233	44692268	220050888	34.3	32.3	OK	JFB
9/14/19								
9/15/19								
9/16/19	28084986	5752075	44864186	220051808	34.27	32.32	OK	JFB
9/17/19	28118826	5757010	44913068	220051968	34.24	32.32	OK	JFB
9/18/19	28157920	5762475	44966432	220052144	34.22	32.32	OK	JFB
9/19/19	28203428	5768751	45031756	220052352	34.2	32.27	OK	JFB
9/20/19	28229110	5772437	45068356	220052464	34.14	32.22	OK	JFB
9/21/19								
9/22/19								
9/23/19	28335470	5787770	45222704	220053456	34.12	32.04	OK	JFB
9/24/19	28368622	5792696	45266496	220053600	34.11	32.02	OK	JFB
9/25/19	28406132	5798158	45313424	220053840	34.09	31.92	OK	JFB
9/26/19	28442886	5803472	45361732	220054000	34.00	31.89	OK	JFB
9/27/19	28477540	5808527	45408280	220054208	34.00	31.85	OK	JFB
9/28/19								
9/29/19								
9/30/19	28574444	5823172	45546328	220055280	34.02	31.78	OK	JFB

Landfill

LANDFILL SHEET			LAKE LEVEL DATA IN FEET NGVD	
2019 Sep	RAIN FALL	LEACHATE MGD	SOUTH (86 ACRE)	EAST (63 ACRE)
1	0.15	0.027	42.50	40.50
2	0.20	0.026	42.50	40.50
3	0.00	0.026	42.50	40.50
4	0.00	0.025	42.50	40.50
5	0.00	0.024	42.50	40.50
6	0.47	0.024	42.50	40.50
7	0.00	0.023	42.50	40.50
8	0.00	0.023	42.50	40.50
9	1.01	0.022	42.50	40.50
10	0.00	0.022	42.50	40.50
11	0.00	0.023	42.50	40.50
12	0.00	0.023	42.50	40.50
13	0.41	0.022	42.50	40.50
14	0.00	0.022	42.50	40.50
15	0.00	0.022	42.50	40.50
16	0.00	0.021	42.50	40.50
17	0.00	0.020	42.50	40.50
18	0.20	0.020	42.50	40.50
19	0.00	0.019	42.50	40.50
20	0.00	0.018	42.50	40.50
21	0.00	0.018	42.50	40.50
22	0.00	0.018	42.50	40.50
23	0.00	0.019	42.50	40.50
24	0.00	0.019	42.50	40.50
25	0.00	0.018	42.50	40.50
26	0.00	0.018	42.50	40.50
27	0.00	0.017	42.50	40.50
28	0.00	0.017	42.50	40.50
29	0.00	0.016	42.50	40.50
30	0.00	0.017	42.50	40.50
31				
TOTAL	2.44	0.629		
AVG		0.021		
MIN				
MAX	1.01	0.027		

Fax # 9-708-5668

FIGURE L-7

Manatee County Lena Road Landfill

## Monthly Groundwater Gradient Report

Month and Year: September 2019

Piezometers Inside Slurry Wall				Groundwater Monitoring Wells Outside Slurry Wall		
Piezometer	Riser Elevation	Leachate Elevation	Gradient Flow	Monitoring Well	Riser Elevation	Groundwater Elevation
P-1	42.68	NA	NA	GW-1	38.68	NA
P-2	42.32	NA	NA	GW-2	40.92	NA
P-3	40.36	25.66	<i>inward</i>	GW-3	39.40	33.29
P-4	40.78	22.11	<i>inward</i>	GW-4	40.53	32.32
P-5	40.73	20.97	<i>inward</i>	GW-5	39.90	31.96
P-6	40.74	19.90	<i>inward</i>	GW-6	38.95	31.29
P-7	40.60	19.31	<i>inward</i>	GW-7	39.49	31.21
P-8	40.21	19.27	<i>inward</i>	GW-8	39.75	29.89
P-9	39.97	19.70	<i>inward</i>	GW-9	39.65	28.71
P-10	39.86	19.27	<i>inward</i>	GW-10	38.34	29.12
P-11	40.52	22.62	<i>inward</i>	GW-11	38.26	31.72
P-12	43.28	29.74	<i>inward</i>	GW-12	42.09	32.76
P-13	44.78	31.08	<i>inward</i>	GW-13	44.79	33.98
P-14	45.09	29.89	<i>inward</i>	GW-14	39.63	34.41
P-15	45.57	31.02	<i>inward</i>	GW-15	42.33	35.05
P-16	44.67	31.02	<i>inward</i>	GW-16	44.41	35.43
P-17	44.28	30.26	<i>inward</i>	GW-17	42.19	34.05
P-18	43.16	25.49	<i>inward</i>	GW-18	41.76	31.86
P-19	42.91	25.77	<i>inward</i>	GW-19	41.20	31.44
P-20	42.54	26.15	<i>inward</i>	GW-20	41.00	30.39
P-21	42.23	25.78	<i>inward</i>	GW-21	40.94	28.79
P-22	42.06	25.76	<i>inward</i>	GW-22	41.53	27.99
P-23	42.08	25.77	<i>inward</i>	GW-23	40.91	30.33
P-24	42.03	25.82	<i>inward</i>	GW-24	41.37	33.05
P-25	42.16	25.77	<i>inward</i>	GW-25	41.11	30.88
P-26	42.50	25.75	<i>inward</i>	GW-26	41.44	32.51
P-27R	42.73	25.77	<i>inward</i>	GW-27R	40.90	32.62

NA = Not Applicable - wells and piezometers abandoned in March 2016

Wells (GW-18 through GW-27R) and piezometers (P-18 through P-27R) installed in April 2016

Date Data Collected: 09/26/2019