

Smith, George

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Thursday, April 15, 2021 5:00 PM
To: Morgan, Steve; SWD_Waste
Cc: Madden, Melissa; Cope, Ronald; Byer, Kimberly; Ruiz, Larry; O'Neill, Joseph; Spradlin, Kollan; Curtis, Bob
Subject: WACS ID 41193 - Qtr. 1 2021 Water Balance & Waste Tire Report for Southeast County
Attachments: 1Q2021 Water Balance Report.pdf; 1Q2021 Waste Tire Report.pdf

Mr. Morgan,

The Quarterly Water Balance and Waste Tire Report for the Southeast County Landfill are attached (WACS ID 41193).

Please advise should you have any questions concerning the information provided.

Ron Wiesman II

Manager

Solid Waste Management Division
Public Utilities Department

P: (813) 671-7707 VOIP 42801

M: (813) 455-2194

E: wiesmanr@HCFLGov.net

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Hillsborough County

15960 County Road 672 Lithia, FL 33547

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Hillsborough County Florida

SOLID WASTE MANAGEMENT

PO Box 1110 Tampa, FL 33601-1110
813-272-5680

April 15, 2021

Mr. Steve Morgan
Solid Waste Section
Florida Department of Environmental Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Waste Tire Facility Quarterly Report - Permit No. 126787-
007-WT/02

Dear Mr. Morgan:

In accordance with Rule 62-711, F.A.C. and Permit No 126787-007-WT/02, the Solid Waste Management Division (SWMD) is submitting the Quarterly Report for the Waste Tire Facility for the period January 1, 2021 through March 31, 2021. The SWMD staff compiled the information from the site's daily reports for this Quarterly Report.

Should you have any questions or require additional information concerning this submittal, please contact me at (813) 671-7707.

Sincerely,

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Division

LER/rw

Attachments

xc: Ron Cope, EPC

Kimberly Byer, SWMD

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**WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
FIRST QUARTER 2021**

		FIRST QUARTER	Beginning Tonnage (Jan. 1, 2021)	
				725.42
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Jan. 2021	251.92	157.93	0.00	21.15
Beginning Tons	725.42			
	977.34	-157.93	0.00	0.00
			Ending Tonnage	819.41
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Feb. 2021	318.06	322.43	39.26	21.09
Beginning Tons	819.41			
	1,137.47	-322.43	-39.26	0.00
			Ending Tonnage	775.78
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Mar. 2021	240.00	123.64	59.03	0.00
Beginning Tons	775.78			
	1,015.78	-123.64	0.00	0.00
			Ending Tonnage	892.14
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS	Tons Adjusted
Jan. 2021	251.92	157.93	0.00	21.15
Feb. 2021	318.06	322.43	39.26	21.09
Mar. 2021	240.00	123.64	59.03	0.00
Sub-Total	809.98	604.00	98.29	42.24
Beginning Tons	725.42			
TOTAL	1,535.40	-604.00	-98.29	-42.24
			Ending Tonnage	790.87



Department of Environmental Protection

DEP Form # 62-701.900(21)
Waste Tire Processing Facility
Form Title <u>Quarterly Report</u>
Effective Date <u>3/22/00</u>
DEP Application No. _____ (Filled in by DEP)

Waste Tire Processing Facility Quarterly Report

Pursuant to Rule 62-711.530, Florida Administrative Code, the owner or operator of a waste tire processing facility shall submit the following information to the Department quarterly.

Quarter covered by this report 1/1/21 thru 3/31/21 (First quarter begins on January 1 of any given year)

- Facility name: Hillsborough County Southeast Landfill Waste Tire Facility
- Facility mailing address: 332 N. Falkenburg Road
City: Tampa County: Hillsborough Zip: 33619
- Facility permit number: 126787-007-WT/02
- Facility telephone number (813) 671-7707
- Authorized person preparing report: Larry E. Ruiz
- Affiliation with facility: Owner Representative - Manager Landfill Operations
- Telephone number (if different from above): ()
- Activity: Report in tons

	Beginning Inventory	Received	Processed	Consumed	Removed	Adjustments	Ending Inventory
Used Tires	725.42	809.98			702.29	42.24	790.87
Other whole Tires							
Processed tires							
Processing Waste							
Other							
Total	725.42	809.98			702.29	42.24	790.87

- Explain all inventory adjustments. 42.24
42.24 tons of unprocessed truck tires.
- List any period in which one or more category of inventory exceeded the permitted maximum for that category. How was that condition relieved?

For any excess inventory at the end of the quarter, state how and when this condition will be relieved. Attach Additional sheets, if necessary.

9. Certification:

To the best of my knowledge and belief, I certify the information provided in this report is true, accurate, and complete.

Larry E. Ruiz

Print Name of Authorized Agent

Larry E. Ruiz

Signature of Authorized Agent

4/15/2021

Date

Mail complete form to
the appropriate district office

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600



Hillsborough County Florida

SOLID WASTE MANAGEMENT
PO Box 1110 Tampa, FL 33601-1110
813-272-5680

April 15, 2021

Mr. Steve Morgan
Solid Waste Section
Florida Department of Environmental Protection, Southwest
District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

RE: Southeast County Landfill – Leachate Data Quarterly Report

Dear Mr. Morgan:

In accordance with Specific Condition No. C.12.d of Permit No. 35435-022-SO/01, the Solid Waste Management Division (SWMD) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending March 31, 2021. The data is being submitted as separate monthly reports for January, February and March 2021.

Please advise should you have any questions concerning the attached submittal.

Sincerely,

Larry E. Ruiz, SC
Manager Landfill Operations
Solid Waste Management Division

LER/rw
Attachment
xc: Kollan Spradlin, SCS
Ron Cope, EPC

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PUBLIC UTILITIES

PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: February 15, 2021

TO: Larry E. Ruiz, Manager Landfill Operations, Solid
Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste
Management Division

SUBJECT: Leachate Water Balance Report Forms for January 2021
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2021 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.38 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 3.3 feet.

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Lucia E. Garsys

Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of effluent in Pond B was 3.1 feet.

Estimated Depth at Pump Station B Sump (PS-B) (Column V)

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The numbers recorded on the second through fourth was caused by a both pumps failing at the Main Leachate Pump Station (MLPS). The pumps were replaced and the system returned to normal. The average recorded depth of leachate in the PS-B sump was 21.2 inches.

Depth in Clean Out 2-1 (CO 2-1) (Column VI)

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The numbers recorded on the second through fourth was caused by a both pumps failed at the Main Leachate Pump Station (MLPS). The pumps were replaced and the system returned to normal. The average recorded depth of leachate in the CO 2-1 was 24.7 inches.

Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column. The average recorded depth of leachate in the MP 2-2 was 24.8 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VIII)

Column VI presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 91,984 gallons. A total of 2,851,511 gallons of leachate was pumped this month.

Leachate Pumped from Sections 7-8 LDS (Column IV)

Column VII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 3,890 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column X)

Column VIII presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 252,214 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column IX presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 3,103,725 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column X presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 151,803 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XI presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month zero gallons of leachate was removed from the leak detection system.

Leachate in 575,000-Gallon Tank (Column XIV)

Column XII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 269,100 gallons of leachate was stored in the tank.

Effluent in 575,000-Gallon Tank (Column XV)

Column XIII typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 266,200 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XIV presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 867,500 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XV presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,492,589 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

Column XVI presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of 7,043 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

Column XVII presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 129,300 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XVIII presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month a daily average of 174,400 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XIX presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month 222,337 gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXII)

Column XX presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 933,772 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXI presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIV)

Column XXII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXIII presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 763,900 gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMD staff.

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 3,255,768 gallons. Total outflow quantity from the LTRF was 3,367,132 gallons. The change in storage for the month decreased by 111,365 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JANUARY 2021
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV	
	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in)	Depth in CO 2-1 (in)	Depth in MP 2-2 (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Sprayed Pond B (gal.)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)		
Day	1	0.00	3.3	3.6	36.9	34.6	21.2	76,502	0	6,668	83,170	6,723	0	290,000	259,000	43,559	0	140,000	234,000	0	0	0	0	0	
2	0.00	3.4	3.6	52.8	50.8	25.2	61,330	0	6,668	67,998	6,723	0	319,000	250,000	43,559	7,036	0	129,000	234,000	0	0	0	0	0	
3	0.07	3.5	4.1	54.7	58.2	24.7	31,168	0	14,489	45,648	4,405	0	319,000	250,000	43,559	0	0	140,000	267,000	0	43,599	0	0	34,900	
4	0.00	3.4	4.1	33.4	61.3	24.7	104,264	9	22,292	126,556	6,303	0	333,000	252,000	43,559	117,289	0	129,000	267,000	0	0	0	0	0	
5	0.00	3.5	4.3	21.6	15.8	24.9	141,256	0	9,504	150,760	0	0	360,000	223,000	42,712	129,865	0	140,000	267,000	0	6,841	0	0	5,500	
6	0.00	3.1	4.6	18.6	19.4	24.7	118,100	0	7,504	125,604	10,546	0	391,000	180,000	31,118	129,546	0	113,000	267,000	44,172	0	0	0	2,200	
7	0.63	3.4	4.4	15.8	20.2	24.9	108,807	0	9,507	118,314	5,938	0	278,000	250,000	26,650	158,638	0	129,000	267,000	80,859	43,599	0	0	38,900	
8	0.00	3.4	4.3	19.4	18.7	25.1	108,081	0	3,654	111,735	4,660	0	178,000	324,000	25,882	138,790	0	129,000	267,000	94,383	29,458	0	0	28,300	
9	0.00	2.8	4.2	17.6	19.2	24.4	97,542	0	11,461	109,003	5,904	0	242,000	259,000	5,709	7,098	0	98,000	267,000	0	77,354	0	0	61,900	
10	0.00	2.9	3.9	19.2	22.4	24.3	92,966	0	8,236	101,202	6,196	0	326,000	259,000	5,709	0	0	103,000	267,000	2,923	80,348	0	0	64,400	
11	0.00	2.7	3.2	20.8	18.9	24.7	92,976	0	4,266	97,242	4,858	0	389,000	259,000	5,709	134,617	0	93,000	192,000	0	0	0	0	0	
12	0.00	2.8	3.2	18.3	26.4	25.0	98,578	0	3,325	101,903	4,635	0	324,000	288,000	18,580	110,822	0	98,000	192,000	0	25,265	0	0	20,200	
13	0.01	3.6	2.9	20.9	24.4	24.8	97,685	0	1,163	98,848	4,524	0	216,000	365,000	26,240	114,889	0	145,000	162,000	0	35,466	0	0	28,400	
14	0.00	3.6	2.8	16.0	18.7	25.3	98,958	178	15,301	114,259	4,864	0	163,000	386,000	26,050	115,160	0	145,000	152,000	0	14,368	0	0	11,500	
15	0.01	3.8	2.8	21.0	22.7	25.3	102,898	1,819	9,504	112,402	6,193	0	192,000	355,000	25,850	134,881	0	157,000	152,000	0	0	0	0	0	
16	0.00	3.5	3.2	19.4	20.5	25.2	102,884	1,053	9,594	112,478	4,928	0	230,000	307,000	26,800	19,176	0	140,000	192,000	0	47,939	0	0	38,400	
17	0.00	3.4	3.1	16.5	21.4	24.8	97,268	0	8,238	105,506	3,559	0	297,000	307,000	26,800	0	0	129,000	182,000	0	49,273	0	0	39,500	
18	0.00	3.1	3.0	16.9	22.3	24.7	86,799	23	8,101	94,900	4,748	0	297,000	348,000	26,800	127,832	0	113,000	172,000	0	34,606	0	0	27,700	
19	0.00	3.5	2.7	22.4	21.1	24.0	86,823	3	7,659	94,482	5,716	0	309,000	278,000	26,596	152,451	0	140,000	143,000	0	21,992	0	0	17,600	
20	0.00	3.6	2.7	17.3	18.4	24.5	89,656	0	6,308	95,962	4,150	0	269,000	254,000	25,732	107,372	7,043	145,000	143,000	0	28,724	0	0	28,600	
21	0.01	3.5	2.7	18.1	18.3	25.1	93,862	0	7,710	101,572	4,371	0	264,000	294,000	26,236	89,720	0	140,000	143,000	0	27,815	0	0	22,300	
22	0.00	3.4	2.8	20.6	18.9	25.1	96,607	0	8,671	105,278	3,724	0	271,000	194,000	26,302	118,681	0	129,000	152,000	0	42,478	0	0	34,000	
23	0.00	3.2	2.6	18.0	19.3	25.1	97,517	0	7,169	104,686	4,707	0	288,000	163,000	26,419	7,072	0	118,000	133,000	0	64,071	0	0	51,300	
24	0.00	3.4	2.3	11.4	22.6	25.2	97,915	0	7,082	104,997	3,976	0	290,000	242,000	26,419	0	0	129,000	106,000	0	45,523	0	0	36,400	
25	0.00	2.1	2.2	13.5	22.4	25.2	88,557	0	7,004	95,561	4,430	0	250,000	329,000	26,419	132,737	0	65,000	97,000	0	0	0	0	0	
26	0.00	3.6	2.2	14.1	22.4	24.9	86,278	0	6,983	93,261	4,442	0	240,000	317,000	33,944	109,047	0	145,000	97,000	0	26,848	0	0	21,500	
27	0.25	3.9	2.2	14.2	21.0	24.4	81,882	728	5,030	86,912	4,018	0	233,000	283,000	35,280	125,830	0	162,000	97,000	0	52,071	0	0	41,700	
28	0.00	3.6	2.2	11.9	19.6	24.1	85,884	77	8,856	94,740	3,954	0	194,000	259,000	33,650	88,664	0	145,000	97,000	0	26,652	0	0	21,300	
29	0.00	3.5	2.2	17.9	18.2	24.0	69,507	0	6,548	76,055	5,231	0	175,000	223,000	34,006	108,149	0	140,000	97,000	0	16,306	0	0	13,000	
30	0.00	3.8	2.2	19.3	21.6	24.4	72,574	0	7,705	80,279	3,506	0	180,000	192,000	25,826	7,227	0	157,000	97,000	0	50,311	0	0	40,200	
31	0.40	3.3	2.2	20.3	24.6	24.7	86,298	0	6,025	92,323	3,852	0	235,000	192,000	25,826	0	0	123,000	97,000	0	42,765	0	0	34,200	
Total	1.38				764	769	2,851,511	3,890	252,214	3,103,725	151,003	0			867,500	2,492,589	7,043			222,337	933,772	0	0	763,900	
Daily Average		3.3	3.1	21.2	24.7	24.8	91,984	125	8,136	100,120	4,897	0	269,100	266,200				129,300	177,400		30,100	0	0	24,640	
Mo. Average					20	20												200					0	0	24,640

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Columns XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XI, XVI, XVII, XVIII and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XVIII, XXII - XXIV, plus 5% of the daily values from column XXII.

**TABLE 2. FIELD DATA ENTRY FORM
JANUARY 2021
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled Contractor (gal.)	Leachate Hauled County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	Effluent Hauled County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.00	815,433	36.9	3,282,319	3,137,224	5,890,687	2,347,333	2,815	3.6	0	3.5	0	10.08	9.00	43,559	0	0	0	0	0	0
2	0.00	875,785	52.8	3,289,041	3,137,224	5,890,687	2,354,021	2,815	3.6	0	3.4	0	11.08	8.67	43,559	7,036	0	0	0	0	0
3	0.07	905,800	54.7	3,293,446	3,137,224	5,890,687	2,354,821	2,815	4.1	0	3.5	43,599	11.08	8.67	43,559	0	0	0	0	0	0
4	0.00	975,398	33.4	3,299,749	3,137,224	5,890,687	2,377,113	2,824	4.1	0	3.4	0	11.58	8.75	43,559	97,735	19,554	0	0	0	0
5	0.00	1,087,198	21.6	3,299,749	3,137,224	5,890,687	1,586,949	2,824	4.3	0	3.5	6,841	12.50	7.75	42,712	129,865	0	0	0	0	0
6	0.00	1,178,465	18.6	3,310,281	3,137,238	5,890,608	1,594,453	2,824	4.6	44,172	3.1	0	13.58	6.25	31,118	110,715	18,831	0	0	0	0
7	0.63	1,261,957	15.8	3,316,219	3,137,238	5,890,597	1,603,960	2,824	4.4	80,859	3.4	43,599	9.67	8.67	26,650	139,850	18,788	0	0	0	0
8	0.00	1,345,728	19.4	3,320,879	3,137,238	0	1,607,614	2,824	4.3	94,383	3.4	29,458	6.17	11.25	25,882	121,729	17,061	0	0	0	0
9	0.00	1,423,945	17.6	3,326,783	3,137,238	0	1,619,075	2,824	4.2	0	2.8	77,354	8.42	9.00	5,709	7,098	0	0	0	0	0
10	0.00	1,495,782	19.2	3,332,979	3,137,238	0	1,627,311	2,824	3.9	2,923	2.9	80,348	11.33	9.00	5,709	0	0	0	0	0	0
11	0.00	1,566,348	20.8	3,337,837	3,137,238	0	1,631,577	2,824	3.2	0	2.7	0	13.50	9.00	5,709	115,028	19,589	0	0	0	0
12	0.00	1,643,318	18.3	3,342,472	3,137,238	0	1,634,902	2,824	3.2	0	2.8	25,265	11.25	10.00	18,580	91,260	19,562	0	0	0	0
13	0.01	1,717,578	20.9	3,346,996	3,137,238	0	1,636,065	2,824	2.9	0	3.6	35,466	7.50	12.67	26,240	96,262	18,627	0	0	0	0
14	0.00	1,791,950	16.0	3,351,860	3,137,238	0	1,651,366	3,002	2.8	0	3.6	14,368	5.67	13.42	26,050	102,749	12,411	0	0	0	0
15	0.01	1,870,865	21.0	3,358,053	3,137,238	0	2,396,121	4,821	2.8	0	3.8	0	6.67	12.33	25,850	121,869	13,012	0	0	0	0
16	0.00	1,952,906	19.4	3,362,981	3,137,238	0	2,405,715	5,874	3.2	0	3.5	47,939	8.00	10.67	26,800	19,176	0	0	0	0	0
17	0.00	2,028,000	16.5	3,366,560	3,137,238	0	2,413,953	5,874	3.1	0	3.4	49,373	10.33	10.67	26,800	0	0	0	0	0	0
18	0.00	2,097,277	16.0	3,371,308	3,137,238	0	2,422,054	5,897	3.0	0	3.1	34,606	10.33	12.08	26,800	108,253	19,579	0	0	0	0
19	0.00	2,165,678	22.4	3,377,024	3,137,238	0	2,429,713	5,900	2.7	0	3.5	21,992	10.75	9.67	26,596	132,891	19,560	0	0	0	0
20	0.00	2,233,157	17.3	3,381,174	3,137,238	0	2,436,019	5,900	2.7	0	3.6	28,724	9.33	8.83	25,732	88,653	18,719	7,043	0	0	0
21	0.01	2,303,500	18.1	3,385,545	3,137,238	0	2,443,729	5,900	2.7	0	3.5	27,815	9.17	7.08	26,236	70,983	18,737	0	0	0	0
22	0.00	2,377,242	20.6	3,389,269	3,137,238	0	2,452,400	5,900	2.8	0	3.4	42,478	9.42	6.75	26,302	99,975	18,706	0	0	0	0
23	0.00	2,453,040	18.0	3,393,976	3,137,238	0	2,459,569	5,900	2.6	0	3.2	64,071	10.00	5.67	26,419	7,072	0	0	0	0	0
24	0.00	2,530,479	11.4	3,397,952	3,137,238	0	2,466,651	5,900	2.3	0	3.4	45,523	10.08	8.42	26,419	0	0	0	0	0	0
25	0.00	2,596,673	13.5	3,402,382	3,137,238	0	2,473,655	5,900	2.2	0	2.1	0	8.67	11.42	26,419	113,226	19,511	0	0	0	0
26	0.00	2,680,846	14.1	3,406,824	3,137,238	0	2,480,638	5,900	2.2	0	3.6	26,848	8.33	11.00	33,944	89,561	19,486	0	0	0	0
27	0.25	2,761,032	14.2	3,410,842	3,137,238	0	2,485,668	6,628	2.2	0	3.9	52,071	8.08	9.83	35,280	107,150	18,680	0	0	0	0
28	0.00	2,841,085	11.9	3,414,796	3,137,238	0	2,494,524	6,705	2.2	0	3.6	26,652	6.75	9.00	33,650	70,004	18,660	0	0	0	0
29	0.00	2,908,761	17.9	3,420,027	3,137,238	0	2,501,072	6,705	2.2	0	3.5	16,306	6.08	7.75	34,006	88,606	19,543	0	0	0	0
30	0.00	2,979,405	19.3	3,423,533	3,137,238	0	2,508,777	6,705	2.2	0	3.8	50,311	6.25	6.67	25,826	7,227	0	0	0	0	0
31	0.40	3,050,565	20.3	3,427,385	3,137,238	0	2,514,802	6,705	2.2	0	3.3	42,765	8.17	6.67	25,826	0	0	0	0	0	0
Totals	1.38									222,337		933,772			867,500	2,143,973	348,616	7,043	0	0	0

balance\2021\1-21bal.xls

- Notes:
- NR = No Records, NA = Not Available.
 - Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
 - Columns G and J include quantities from leak detection system.
 - Column B, trace is less than 0.01 inches.
 - Columns C, D, E, F, G, H, I, J, K, L, N, and R-V are quantities from flow meters.
 - Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

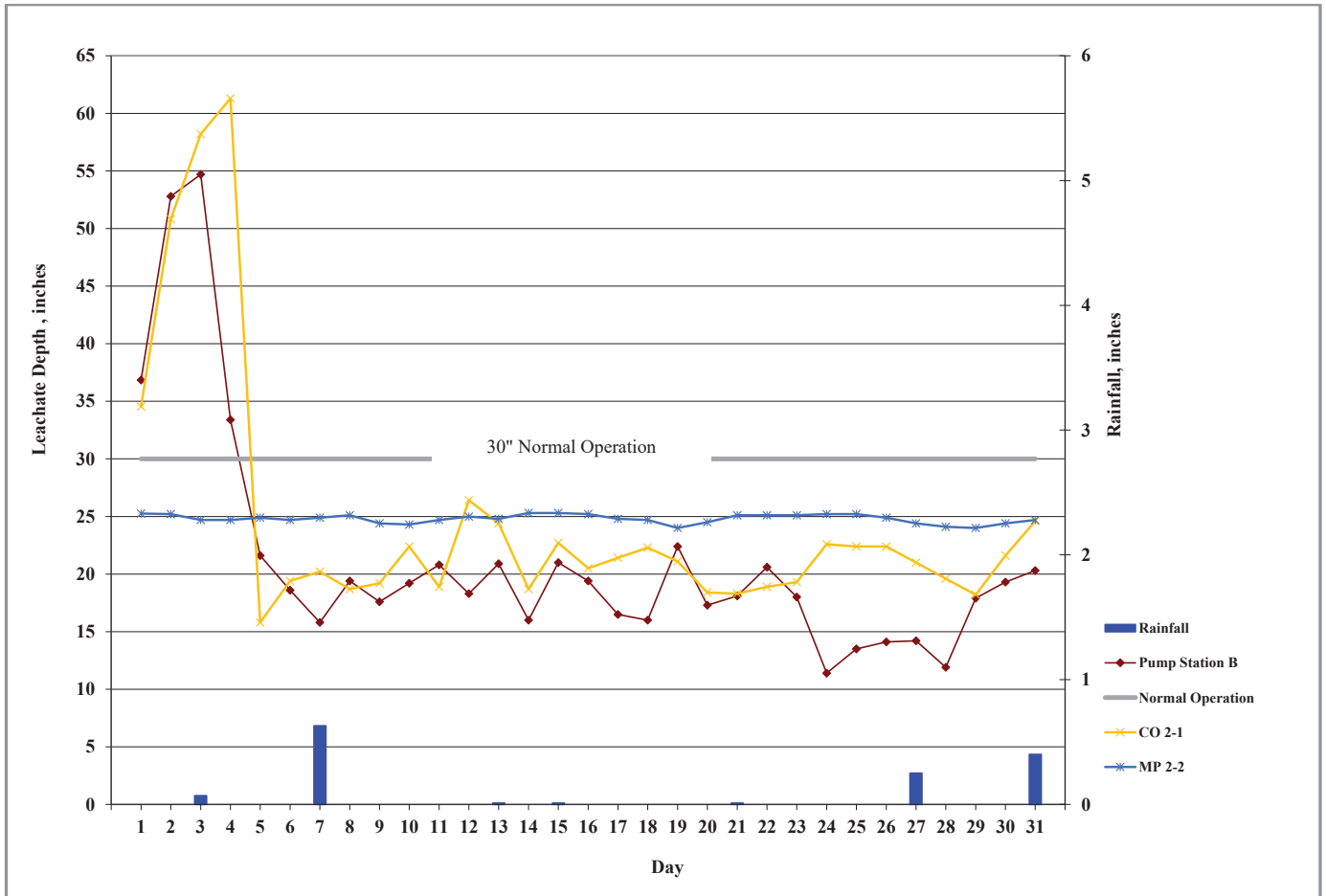


Figure 1. Leachate Levels and Rainfall for January 2021.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2021**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	933,772	3,255,768	3,367,132	-111,365
February														
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	933,772	3,255,768	3,367,132	-111,365

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.



PUBLIC UTILITIES

PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: March 12, 2021

TO: Larry E. Ruiz, Manager Landfill Operations, Solid
Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste
Management Division

SUBJECT: Leachate Water Balance Report Forms for February 2021
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2021 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 4.53 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 3.3 feet.

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Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of effluent in Pond B was 2.6 feet.

Estimated Depth at Pump Station B Sump (PS-B) (Column V)

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 20.5 inches.

Depth in Clean Out 2-1 (CO 2-1) (Column VI)

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The average recorded depth of leachate in the CO 2-1 was 20.9 inches.

Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column. The average recorded depth of leachate in the MP 2-2 was 24.7 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VIII)

Column VI presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 83,392 gallons. A total of 2,334,983 gallons of leachate was pumped this month.

Leachate Pumped from Sections 7-8 LDS (Column IV)

Column VII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 1,059 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column X)

Column VIII presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 184,450 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column IX presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 2,519,433 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column X presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 120,412 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XI presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 7,688 gallons of leachate was removed from the leak detection system.

Leachate in 575,000-Gallon Tank (Column XIV)

Column XII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 252,900 gallons of leachate was stored in the tank.

Effluent in 575,000-Gallon Tank (Column XV)

Column XIII typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 230,900 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XIV presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 515,325 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XV presents the daily amount of leachate, in gallons, hauled off site. This month a total of 1,989,793 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

Column XVI presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of 3,048 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

Column XVII presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 109,700 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XVIII presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month a daily average of 128,900 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XIX presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month 220,891 gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXII)

Column XX presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 402,814 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXI presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIV)

Column XXII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXIII presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 335,900 gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMD staff.

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,648,166 gallons. Total outflow quantity from the LTRF was 2,508,166 gallons. The change in storage for the month increased by 139,899 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
FEBRUARY 2021
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in)	Depth in CO 2-1 (in)	Depth in MP 2-2 (in.)	Leachate Pumped to MLPS from Phases 1-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	3.3	2.2	21.5	21.1	25.1	86,806	0	7,000	93,806	4,939	0	281,000	202,000	25,826	139,706	0	118,000	97,000	0	0	0	0	0
2	0.00	3.6	2.2	17.5	26.8	24.6	84,440	0	15,040	99,480	3,387	0	259,000	168,000	22,168	114,525	0	118,000	97,000	0	19,551	0	0	15,600
3	0.00	3.7	2.2	18.5	15.1	24.6	81,749	248	4,240	85,989	4,788	0	235,000	127,000	24,046	76,807	0	118,000	97,000	0	19,901	0	0	15,900
4	0.00	3.8	2.2	19.6	21.6	24.6	69,730	85	4,173	73,903	2,203	0	214,000	122,000	24,056	82,047	0	118,000	97,000	0	26,444	0	0	21,200
5	0.00	3.7	2.2	18.2	17.5	24.9	89,531	35	6,929	96,460	0	0	182,000	122,000	24,102	97,196	0	118,000	97,000	0	11,806	0	0	9,400
6	0.23	3.4	2.2	21.6	18.3	24.8	75,288	46	6,708	81,976	8,650	0	221,000	122,000	3,219	0	0	118,000	97,000	0	41,964	0	0	23,600
7	1.00	3.1	2.3	18.6	22.4	24.8	88,321	48	2,449	90,770	4,945	0	223,000	216,000	3,219	0	0	113,000	106,000	0	0	0	0	0
8	0.00	3.1	2.3	20.4	21.6	24.3	78,703	0	4,007	82,710	4,702	0	202,000	295,000	3,219	102,778	0	113,000	106,000	0	0	0	0	0
9	0.00	3.4	2.2	16.8	24.2	24.5	76,804	30	8,283	85,087	3,179	0	182,000	286,000	19,136	128,849	0	118,000	97,000	0	23,317	0	0	18,700
10	0.00	3.3	2.2	18.6	23.8	24.5	82,929	48	9,867	92,796	5,021	0	161,000	259,000	21,330	84,173	0	118,000	97,000	0	24,233	0	0	19,400
11	0.00	3.3	2.2	19.8	17.6	24.6	86,632	46	6,233	92,865	0	0	182,000	230,000	21,046	115,994	0	118,000	97,000	0	14,713	0	0	11,800
12	0.00	3.3	2.2	20.4	19.1	24.8	83,621	0	2,789	86,410	0	0	166,000	221,000	20,660	91,810	0	118,000	97,000	0	20,357	0	0	16,300
13	1.05	3.3	2.2	18.6	18.6	24.9	92,005	51	6,510	98,515	8,780	20	221,000	189,000	22,418	7,030	0	118,000	97,000	0	2,690	0	0	2,200
14	0.97	3.8	2.4	20.2	20.8	24.9	87,050	47	9,338	96,388	5,161	1,598	293,000	189,000	22,418	0	0	118,000	115,000	0	0	0	0	0
15	0.00	4.0	2.5	18.0	24.3	24.6	82,553	0	8,590	91,143	3,381	1	338,000	197,000	22,418	79,576	0	118,000	124,000	0	0	0	0	0
16	0.98	3.7	2.8	18.0	19.0	24.5	81,742	48	704	82,446	5,240	1,036	266,000	269,000	13,990	79,158	0	118,000	152,000	0	0	0	0	0
17	0.07	4.0	2.8	22.8	22.7	24.6	79,598	47	8,474	88,072	4,952	1	180,000	353,000	21,300	78,412	0	118,000	152,000	0	0	0	0	0
18	0.00	3.4	3.3	16.8	15.4	24.9	92,021	0	3,616	95,637	5,759	1,037	178,000	336,000	22,800	98,262	0	118,000	182,000	110,332	34,572	0	0	33,200
19	0.18	3.0	3.3	18.6	22.8	24.8	78,833	46	10,828	89,661	4,444	5	221,000	300,000	13,154	96,346	0	108,000	182,000	18,662	0	0	0	900
20	0.00	2.9	3.3	27.0	24.6	24.2	66,954	45	6,879	73,833	5,527	1,494	238,000	281,000	5,532	14,462	0	103,000	182,000	91,917	36,892	0	0	34,100
21	0.00	2.0	3.3	25.3	20.6	24.3	71,209	0	5,664	76,873	3,835	1	293,000	281,000	5,532	0	0	61,000	182,000	0	39,944	0	0	32,000
22	0.05	2.0	3.2	22.8	17.5	24.8	100,008	47	2,474	102,482	5,313	0	345,000	283,000	5,532	85,999	0	61,000	182,000	0	15,580	0	0	12,500
23	0.00	2.5	2.1	20.4	22.5	24.8	88,447	0	9,740	98,187	5,758	0	360,000	269,000	33,196	97,966	0	83,000	88,000	0	17,279	0	0	13,800
24	0.00	2.2	2.8	21.0	19.5	24.6	86,856	49	9,190	96,046	2,988	1	348,000	254,000	16,284	103,761	0	70,000	152,000	0	19,089	0	0	15,300
25	0.00	3.3	2.8	24.6	21.6	24.7	65,939	45	4,473	70,412	4,465	1,493	329,000	223,000	24,542	77,394	3,048	118,000	152,000	0	0	0	0	2,400
26	0.00	3.4	2.9	25.8	23.8	24.6	97,058	0	7,350	104,408	4,581	128	326,000	204,000	25,448	123,096	0	118,000	162,000	0	34,482	0	0	27,600
27	0.00	3.3	2.9	18.6	22.7	24.6	88,171	48	6,450	94,621	4,110	1	329,000	185,000	24,367	14,446	0	118,000	162,000	0	0	0	0	0
28	0.00	3.3	2.9	23.1	20.3	24.6	92,013	0	4,452	96,465	3,904	872	309,000	281,000	24,367	0	0	118,000	162,000	0	0	0	0	0
Total	4.53					586	691	2,334,983	1,059	184,430	2,519,433	120,412	7,688		515,325	1,989,793	3,048			220,891	402,814	0	0	335,900
Daily Average		3.3	2.6	20.5	20.9	24.7	83,392	38	6,588	89,980	4,300	275	252,900	230,900				109,700	128,900		14,400	0	0	12,000
Mts. Average						20	20											100						

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Columns XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VII-XI, XVI, XVII, XVIII and XXI-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XVIII, XXII - XXV, plus 5% of the daily values from column XXIII.

**TABLE 2. FIELD DATA ENTRY FORM
FEBRUARY 2021
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Contractor (gal.)	Leachate Hauled County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	Effluent Hauled County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.00	3,131,496	21.5	3,432,324	3,137,238	0	2,521,802	6,705	2.2	0	3.3	0	9.75	7.00	25,826	120,150	19,556	0	0	0	0
2	0.00	3,209,959	17.5	3,435,711	3,137,238	0	2,536,842	6,705	2.2	0	3.6	19,551	9.00	5.83	22,168	94,963	19,562	0	0	0	0
3	0.00	3,281,915	18.5	3,440,499	3,137,238	0	2,541,082	6,953	2.2	0	3.7	19,901	8.17	4.42	24,046	58,141	18,666	0	0	0	0
4	0.00	3,346,925	19.6	3,442,702	3,137,238	0	2,545,255	7,038	2.2	0	3.8	26,444	7.42	4.25	24,056	63,391	18,656	0	0	0	0
5	0.00	3,417,100	18.2	3,442,702	3,137,238	0	2,554,184	7,073	2.2	0	3.7	11,806	6.33	4.25	24,102	83,726	13,470	0	0	0	0
6	0.23	59,125	21.6	3,451,352	3,137,238	0	2,560,892	7,119	2.2	0	3.4	41,964	7.67	4.25	3,219	0	0	0	0	0	0
7	1.00	137,796	18.6	3,456,297	3,137,238	0	2,563,341	7,167	2.3	0	3.1	0	7.75	7.50	3,219	0	0	0	0	0	0
8	0.00	206,971	20.4	3,460,999	3,137,238	0	2,567,348	7,167	2.3	0	3.1	0	7.00	10.25	3,219	83,246	19,532	0	0	0	0
9	0.00	271,702	16.8	3,464,178	3,137,238	0	2,575,631	7,197	2.2	0	3.4	23,317	6.33	9.92	19,136	109,299	19,550	0	0	0	0
10	0.00	339,600	18.6	3,469,199	3,137,238	0	2,585,498	7,245	2.2	0	3.3	24,233	5.58	9.00	21,330	65,851	18,322	0	0	0	0
11	0.00	410,752	19.8	0	0	0	2,591,731	7,291	2.2	0	3.3	14,713	6.33	8.00	21,046	97,658	18,336	0	0	0	0
12	0.00	478,405	20.4	0	0	0	2,594,520	7,291	2.2	0	3.3	20,357	5.75	7.67	20,660	72,272	19,538	0	0	0	0
13	1.05	554,881	18.6	8,780	0	20	2,601,030	7,342	2.2	0	3.3	2,690	7.67	6.58	22,418	7,030	0	0	0	0	0
14	0.97	628,780	20.2	13,941	0	1,618	2,610,368	7,389	2.4	0	3.8	0	10.17	6.58	22,418	0	0	0	0	0	0
15	0.00	699,930	18.0	17,322	0	1,619	2,618,958	7,389	2.5	0	4.0	0	11.75	6.83	22,418	60,012	19,564	0	0	0	0
16	0.98	770,298	18.0	22,562	0	2,655	2,619,662	7,437	2.8	0	3.7	0	9.25	9.33	13,990	66,124	13,034	0	0	0	0
17	0.07	837,867	22.8	27,514	0	2,656	2,628,136	7,484	2.8	0	4.0	0	6.25	12.25	21,300	60,076	18,336	0	0	0	0
18	0.00	908,900	16.8	33,273	0	3,693	2,631,752	7,484	3.3	110,332	3.4	34,572	6.17	11.67	22,800	79,938	18,324	0	0	0	0
19	0.18	977,927	18.6	38,117	0	3,698	2,642,580	7,530	3.3	18,642	3.0	0	7.67	10.42	13,154	79,994	16,352	0	0	0	0
20	0.00	1,035,310	27.0	43,644	0	5,192	2,649,459	7,575	3.3	91,917	2.9	36,892	8.25	9.75	5,532	14,462	0	0	0	0	0
21	0.00	1,093,400	25.3	47,479	0	5,193	2,655,123	7,575	3.3	0	2.0	39,944	10.17	9.75	5,532	0	0	0	0	0	0
22	0.05	1,174,657	22.8	52,792	0	5,193	2,657,597	7,622	3.2	0	2.0	15,580	12.00	9.83	5,532	66,425	19,574	0	0	0	0
23	0.00	1,249,559	20.4	58,550	0	5,193	2,667,337	7,622	2.1	0	2.5	17,279	12.50	9.33	33,196	78,366	19,600	0	0	0	0
24	0.00	1,320,716	21.0	61,538	0	5,194	2,676,527	7,671	2.8	0	2.2	19,089	12.08	8.83	16,284	85,267	18,494	0	0	0	0
25	0.00	1,373,696	24.6	66,003	0	6,687	2,681,000	7,716	2.8	0	3.3	0	11.42	7.75	24,542	58,886	18,508	3,048	0	0	0
26	0.00	1,456,501	25.8	70,584	0	6,815	2,688,350	7,716	2.9	0	3.4	34,482	11.33	7.08	25,448	103,508	19,588	0	0	0	0
27	0.00	1,533,000	18.6	74,694	0	6,816	2,694,800	7,764	2.9	0	3.3	0	11.42	6.42	24,367	14,446	0	0	0	0	0
28	0.00	1,604,543	23.1	78,598	0	7,688	2,699,252	7,764	2.9	0	3.3	0	10.75	9.75	24,367	0	0	0	0	0	0
Totals	4.53									220,891		402,814			515,325	1,623,231	366,562	3,048	0	0	0

balance\2021\2-21\bal.xls

Notes:

- NR = No Records, NA = Not Available.
- Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
- Columns G and J include quantities from leak detection system.
- Column B, trace is less than 0.01 inches.
- Columns C, D, E, F, G, H, I, J, K, L, N, and R-V are quantities from flow meters.
- Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

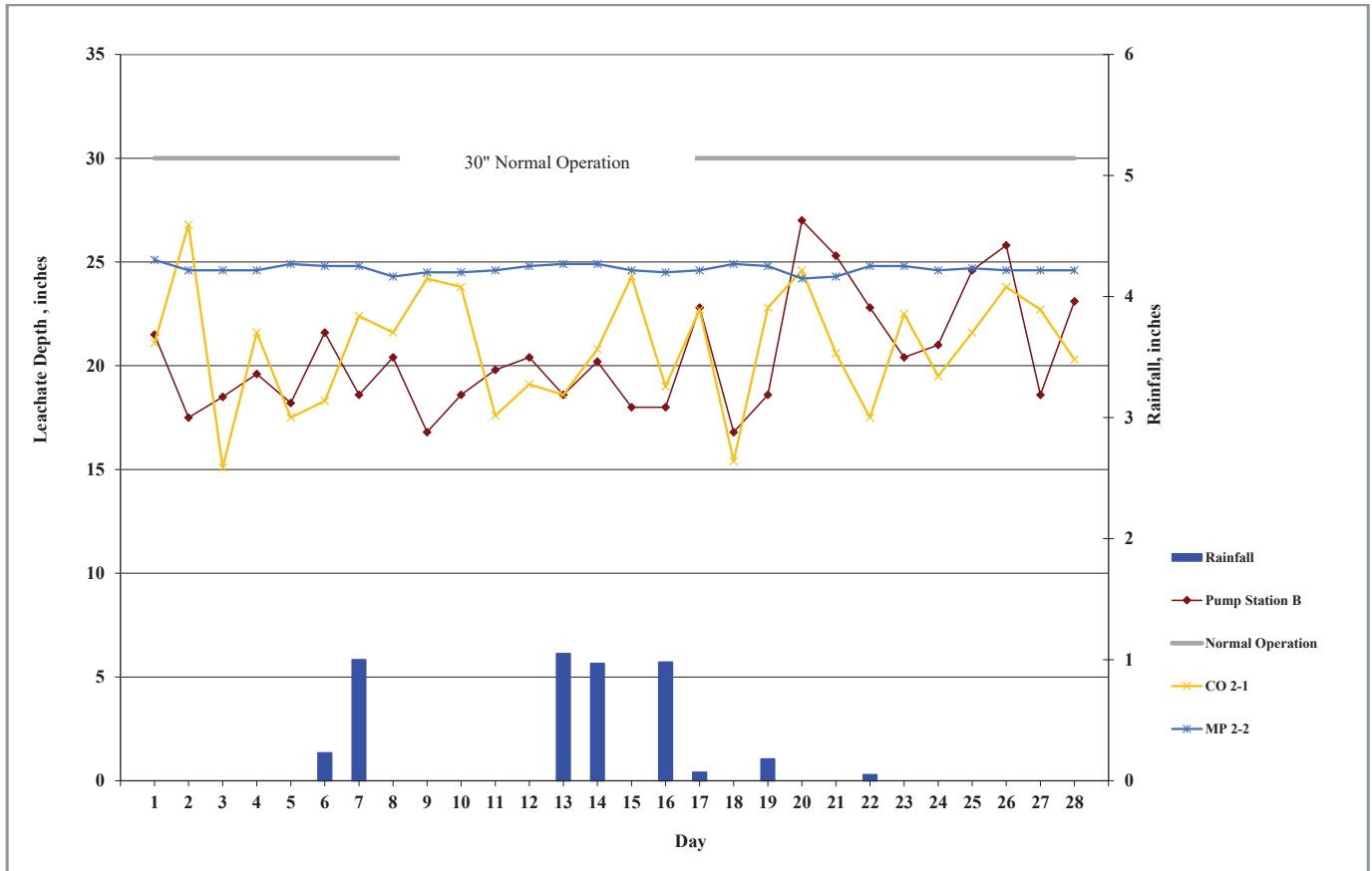


Figure 1. Leachate Levels in Pump Station B and Rainfall for February 2021.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2021**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	933,772	3,255,768	3,367,132	-111,365
February	4.53	532	128,100	184,450	2,334,983	1,989,793	3,048	515,325	0	0	402,814	2,648,065	2,508,166	139,899
March														
April														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	5.91	772	279,903	436,664	5,186,494	4,482,382	10,091	1,382,825	0	0	1,336,586	5,903,833	5,875,298	28,535

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.



**Hillsborough
County Florida**

PUBLIC UTILITIES

PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: April 12, 2021

TO: Larry E. Ruiz, Manager Landfill Operations, Solid
Waste Management Division

FROM: Ron W. Wiesman, Manager, Solid Waste
Management Division

SUBJECT: Leachate Water Balance Report Forms for March 2021
Southeast County Landfill, Hillsborough County, Florida

The Solid Waste Management Division (SWMD) staff has compiled and reviewed the leachate management operational data from the Southeast County Landfill Phases I-VI, Sections 7-8, and Section 9. Attached are the Leachate Water Balance Report Form (Table 1), the Leachate Field Data Entry Form (Table 2), and the 2021 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.75 inches of rainfall recorded at the Southeast County Landfill (SCLF).

Depth in Pond A (Column III)

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 3.1 feet.

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Depth in Pond B (Column IV)

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of effluent in Pond B was 3.0 feet.

Estimated Depth at Pump Station B Sump (PS-B) (Column V)

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The average recorded depth of leachate in the PS-B sump was 21.8 inches.

Depth in Clean Out 2-1 (CO 2-1) (Column VI)

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The level recorded on the 28 was caused by a tripped breaker, the breaker was reset and the level returned to an normal level in a couple of hours. The average recorded depth of leachate in the CO 2-1 was 21.4 inches.

Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column. The average recorded depth of leachate in the MP 2-2 was 24.6 inches.

Leachate Pumped to MLPS from Phases I-VI (Column VIII)

Column VI presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 78,433 gallons. A total of 2,431,421 gallons of leachate was pumped this month.

Leachate Pumped from Sections 7-8 LDS (Column IV)

Column VII presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 893 gallons of leachate was removed from the leak detection system of Sections 7-8.

Leachate Pumped to MLPS from Sections 7-8 (Column X)

Column VIII presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 194,837 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column IX presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 2,626,258 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column X presents the daily amount of leachate, in gallons, collected from Section 9 and pumped to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. A total of 120,311 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XI presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 3,007 gallons of leachate was removed from the leak detection system.

Leachate in 575,000-Gallon Tank (Column XIV)

Column XII presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 261,000 gallons of leachate was stored in the tank.

Effluent in 575,000-Gallon Tank (Column XV)

Column XIII typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 279,700 gallons of leachate was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XIV presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 816,961 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XV presents the daily amount of leachate, in gallons, hauled off site. This month a total of 2,249,071 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

Column XVI presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of 3,534 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

Column XVII presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 116,300 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XVIII presents the daily amount of effluent, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate/effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; was stored in Pond B. This month a daily average of 175,400 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XIX presents the daily amount of effluent, in gallons, sprayed for evaporation at Pond B. The amount evaporated is calculated by using 5 percent of the daily flow meter quantity sprayed at Pond B and it is included in Column XX. This month zero gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXII)

Column XX presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 791,751 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXI presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

Total Effluent Hauled (Column XXIV)

Column XXII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXIII presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 636,100 gallons.

TABLE 2

Table 2 presents data assembled from daily logs compiled by the SWMD staff.

TABLE 3

Leachate Balance Summary

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 2,749,866 gallons. Total outflow quantity from the LTRF was 3,069,566 gallons. The change in storage for the month decreased by 319,701 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MARCH 2020
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in)	Depth in CO 2-1 (in)	Depth in MP 2-2 (in.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 (gal.)	Leachate Pumped to LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Sprayed Pond B (gal)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	3.3	3.2	18.6	20.9	24.8	84,561	50	0	84,561	4,196	0	278,000	358,000	24,367	102,833	0	123,000	192,000	0	0	0	0	0
2	0.00	3.4	2.2	19.8	23.0	24.9	90,125	47	18,014	108,139	4,332	0	274,000	353,000	23,678	92,241	0	129,000	97,000	0	22,268	0	0	17,800
3	0.00	3.4	2.3	17.4	17.9	24.9	87,788	0	11,486	99,274	4,135	6	278,000	341,000	24,158	71,766	0	129,000	106,000	0	0	0	0	0
4	0.00	3.5	3.2	17.4	23.5	24.7	88,080	61	2,695	90,775	6,542	1,461	302,000	309,000	23,914	103,250	3,534	140,000	192,000	0	22,870	0	0	21,100
5	0.00	3.4	3.2	26.0	23.2	24.4	70,870	0	2,493	73,363	4,477	0	278,000	281,000	22,497	102,670	0	129,000	192,000	0	15,830	0	0	12,700
6	0.15	3.4	3.2	24.0	23.8	24.8	94,550	47	6,425	100,985	3,201	45	302,000	284,000	24,362	14,487	0	129,000	192,000	0	18,154	0	0	14,500
7	0.00	3.5	3.2	24.6	25.1	24.2	75,549	0	9,233	84,782	3,044	2	355,000	266,000	24,362	0	0	140,000	192,000	0	47,910	0	0	38,300
8	0.00	3.2	3.2	24.0	24.1	23.9	52,588	49	2,174	54,762	3,676	0	360,000	271,000	24,362	97,138	0	118,000	192,000	0	14,778	0	0	11,800
9	0.00	3.0	3.2	17.4	24.1	24.1	77,265	45	8,465	85,730	3,137	3	307,000	288,000	22,855	66,033	0	108,000	192,000	0	0	0	0	0
10	0.00	3.4	3.2	19.8	23.1	24.5	75,361	0	5,589	80,950	4,707	4	214,000	360,000	21,920	90,085	0	129,000	192,000	0	20,546	0	0	16,400
11	0.00	3.4	3.2	18.0	19.2	24.6	76,039	48	4,231	80,270	3,248	4	187,000	353,000	21,982	90,899	0	129,000	192,000	0	15,090	0	0	12,100
12	0.00	3.5	3.2	21.6	22.3	24.6	83,448	0	9,923	93,371	2,765	0	189,000	329,000	24,282	129,648	0	140,000	192,000	0	14,143	0	0	11,300
13	0.00	3.5	3.3	23.4	24.4	24.7	79,922	49	5,433	85,355	4,260	3	194,000	300,000	24,216	14,305	0	140,000	202,000	0	29,904	0	0	23,900
14	0.00	3.3	3.3	19.2	16.2	24.8	79,788	46	3,327	83,115	2,941	7	252,000	300,000	24,216	0	0	123,000	202,000	0	24,046	0	0	19,200
15	0.00	3.2	3.2	17.4	20.3	24.8	89,149	0	4,207	93,356	2,725	4	302,000	300,000	24,216	85,492	0	118,000	192,000	0	30,027	0	0	24,000
16	0.00	3.4	3.3	21.6	20.1	24.8	81,799	47	9,343	91,142	4,598	1,446	302,000	288,000	22,688	86,300	0	129,000	202,000	0	29,775	0	0	23,800
17	0.00	3.3	3.3	25.8	24.5	24.8	83,470	0	6,210	89,680	2,557	0	307,000	266,000	23,364	90,632	0	123,000	202,000	0	37,506	0	0	30,000
18	0.10	3.0	3.3	21.0	23.4	24.8	86,893	48	7,097	93,990	3,988	1	324,000	235,000	22,872	94,723	0	108,000	202,000	0	36,086	0	0	28,900
19	0.00	2.7	3.3	25.8	22.3	24.9	80,785	0	2,892	83,597	3,532	0	326,000	211,000	29,683	99,100	0	93,000	202,000	0	40,335	0	0	32,300
20	0.00	2.5	3.3	24.6	15.8	24.4	77,494	49	6,124	83,618	5,309	0	302,000	294,000	34,681	14,354	0	83,000	202,000	0	60,953	0	0	48,800
21	0.00	2.6	3.3	21.6	15.0	24.6	78,235	23	4,183	82,418	4,137	0	271,000	266,000	34,681	0	0	88,000	192,000	0	0	0	0	0
22	0.00	2.6	3.2	18.6	14.2	24.7	80,426	23	4,183	84,609	4,137	0	240,000	329,000	34,681	100,321	0	88,000	192,000	0	0	0	0	0
23	0.00	2.8	3.2	21.0	14.9	24.7	82,321	46	13,013	95,334	5,105	0	125,000	415,000	35,434	94,270	0	98,000	192,000	0	23,876	0	0	19,100
24	0.00	2.4	3.2	24.0	21.1	24.8	80,150	0	11,247	91,397	2,972	0	125,000	374,000	32,843	107,785	0	79,000	192,000	0	22,869	0	0	18,300
25	0.00	3.2	3.2	28.2	18.3	24.7	72,318	36	5,761	78,079	3,984	4	161,000	300,000	34,290	87,981	0	118,000	192,000	0	30,395	0	0	24,300
26	0.00	2.8	3.1	22.8	20.2	24.5	69,513	0	3,070	72,583	3,257	0	209,000	238,000	11,841	106,033	0	98,000	182,000	0	63,992	0	0	51,200
27	0.00	3.4	2.4	25.8	24.9	24.4	70,028	82	7,793	77,821	3,729	2	230,000	182,000	28,885	14,411	0	129,000	115,000	0	67,152	0	0	53,700
28	0.00	2.8	2.4	28.2	31.0	24.4	66,105	0	3,088	69,193	6,047	3	266,000	182,000	28,885	0	0	98,000	115,000	0	27,215	0	0	21,900
29	0.90	2.8	2.4	16.8	23.2	24.5	78,771	34	3,599	82,370	3,316	3	290,000	185,000	28,885	92,989	0	98,000	115,000	0	38,048	0	0	30,400
30	0.60	3.3	2.4	19.8	22.0	24.4	76,178	32	7,009	83,187	1,414	1	276,000	175,000	27,325	98,854	0	123,000	115,000	0	0	0	0	0
31	0.00	3.4	2.3	20.4	20.2	24.5	61,927	32	6,530	68,457	4,643	7	266,000	149,000	30,536	100,471	0	129,000	106,000	0	37,873	0	0	30,300
Total	1.75				664	763	2,431,421	893	194,837	2,626,258	120,311	3,007			816,961	2,249,071	3,534			0	791,751	0	0	636,100
Daily Average		3.1	3.0	21.8	21.4	24.6	78,433	29	6,285	84,718	3,881	97	261,000	279,700				116,300	175,400		25,500		0	20,520
Mts. Average				20	20												100							

Notes:
1. NR = No Records, NA= Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XI, XVI, XVII, XVIII and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XVIII, XXII - XXIV, plus 5% of the daily values from column XXII.

**TABLE 2. FIELD DATA ENTRY FORM
MARCH 2020
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

A	B	C	D	E	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump (gal.)	Section 9 LDS (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled Contractor (gal.)	Leachate Hauled County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	Effluent Hauled County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.00	1,674,899	18.6	82,794	7,694	2,699,252	7,814	3.2	0.0	3.3	0	9.67	12.42	24,367	83,279	19,554	0	0	0	0
2	0.00	1,747,577	19.8	87,126	7,695	2,717,266	7,861	2.2	0.0	3.4	22,268	9.50	12.25	23,678	72,679	19,562	0	0	0	0
3	0.00	1,821,359	17.4	91,261	7,701	2,728,752	7,861	2.3	0.0	3.4	0	9.67	11.83	24,158	65,634	6,132	0	0	0	0
4	0.00	1,895,150	17.4	97,803	9,162	2,731,447	7,922	3.2	0	3.5	22,870	10.50	10.75	23,914	84,856	18,394	3,534	0	0	0
5	0.00	1,951,550	26.0	102,680	9,162	2,733,940	7,922	3.2	0.0	3.4	15,830	9.67	9.75	22,497	84,305	18,365	0	0	0	0
6	0.15	2,034,792	24.0	105,681	9,207	2,740,365	7,969	3.2	0	3.4	18,184	10.50	9.17	24,362	14,487	0	0	0	0	0
7	0.00	2,106,400	24.6	108,725	9,210	2,749,598	7,969	3.2	0	3.5	47,910	12.33	9.25	24,362	0	0	0	0	0	0
8	0.00	2,153,070	24.0	112,401	9,210	2,751,772	8,018	3.2	0.0	3.2	14,778	12.50	9.42	24,362	77,520	19,618	0	0	0	0
9	0.00	2,219,374	17.4	115,538	9,213	2,760,237	8,063	3.2	0.0	3.0	0	10.67	10.00	22,855	46,462	19,571	0	0	0	0
10	0.00	2,282,948	19.8	120,245	9,217	2,765,826	8,063	3.2	0	3.4	20,546	7.42	12.50	21,920	71,730	18,355	0	0	0	0
11	0.00	2,345,600	18.0	123,493	9,221	2,770,057	8,111	3.2	0.0	3.4	15,090	6.50	12.25	21,982	72,587	18,312	0	0	0	0
12	0.00	2,415,250	21.6	126,258	9,221	2,779,980	8,111	3.2	0.0	3.5	14,143	6.58	11.42	24,282	110,102	19,546	0	0	0	0
13	0.00	2,479,931	23.4	130,518	9,224	2,785,413	8,160	3.3	0	3.5	29,904	6.75	10.42	24,216	14,305	0	0	0	0	0
14	0.00	2,544,281	19.2	133,459	9,231	2,788,740	8,206	3.3	0.0	3.3	24,046	8.75	10.42	24,216	0	0	0	0	0	0
15	0.00	2,617,317	17.4	136,184	9,235	2,792,947	8,206	3.2	0.0	3.2	30,027	10.50	10.42	24,216	65,952	19,540	0	0	0	0
16	0.00	2,685,111	21.6	140,782	10,681	2,802,290	8,253	3.3	0.0	3.4	29,775	10.50	10.00	22,688	66,734	19,566	0	0	0	0
17	0.00	2,752,218	25.8	143,339	10,681	2,808,500	8,253	3.3	0.0	3.3	37,506	10.67	9.25	23,364	72,235	18,397	0	0	0	0
18	0.10	2,822,600	21.0	147,327	10,682	2,815,597	8,301	3.3	0.0	3.0	36,066	11.25	8.17	22,872	70,820	23,903	0	0	0	0
19	0.00	2,892,894	25.8	150,859	10,682	2,818,489	8,301	3.3	0.0	2.7	40,335	11.33	7.33	29,683	73,203	25,897	0	0	0	0
20	0.00	2,957,717	24.6	156,168	10,682	2,824,613	8,350	3.3	0.0	2.5	60,953	10.50	7.08	34,681	14,354	0	0	0	0	0
21	0.00	3,023,281	21.6	160,305	10,682	2,828,796	8,373	3.3	0.0	2.6	0	9.42	9.25	34,681	0	0	0	0	0	0
22	0.00	3,088,845	18.6	164,442	10,682	2,832,979	8,395	3.2	0.0	2.6	0	8.33	11.42	34,681	72,445	27,876	0	0	0	0
23	0.00	3,157,354	21.0	169,547	10,682	2,845,992	8,441	3.2	0.0	2.8	23,876	4.33	14.42	35,434	73,011	21,259	0	0	0	0
24	0.00	3,224,858	24.0	172,519	10,682	2,857,239	8,441	3.2	0.0	2.4	22,869	4.33	13.00	32,843	79,105	28,680	0	0	0	0
25	0.00	3,286,547	28.2	176,503	10,686	2,863,000	8,477	3.2	0.0	3.2	30,395	5.58	10.42	34,290	66,893	21,088	0	0	0	0
26	0.00	3,347,863	22.8	179,760	10,686	2,866,070	8,477	3.1	0.0	2.8	63,992	7.25	8.25	11,841	84,916	21,117	0	0	0	0
27	0.00	3,409,683	25.8	183,489	10,688	2,873,863	8,559	2.4	0.0	3.4	67,152	8.00	6.33	28,885	14,411	0	0	0	0	0
28	0.00	3,474,051	28.2	189,536	10,691	2,876,951	8,559	2.4	0.0	2.8	27,315	9.25	6.33	28,885	0	0	0	0	0	0
29	0.90	3,533,955	16.8	192,852	10,694	2,880,550	8,593	2.4	0.0	2.8	38,048	10.08	6.42	28,885	66,439	26,550	0	0	0	0
30	0.60	3,596,728	19.8	194,266	10,695	2,887,559	8,625	2.4	0.0	3.3	0	9.58	6.00	27,325	78,946	19,908	0	0	0	0
31	0.00	3,656,989	20.4	198,909	10,702	2,894,089	8,657	2.3	0.0	3.4	37,873	9.25	5.17	30,536	79,341	21,130	0	0	0	0
Totals	1.75								0		791,751			816,961	1,776,751	472,320	3,534	0	0	0

balance\2020\3-20bal.xls

Notes:

- NR = No Records, NA = Not Available.
- Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
- Columns G and J include quantities from leak detection system.
- Column B, trace is less than 0.01 inches.
- Columns C, D, E, F, G, H, I, J, K, L, N, and R-V are quantities from flow meters.
- Columns K and M measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

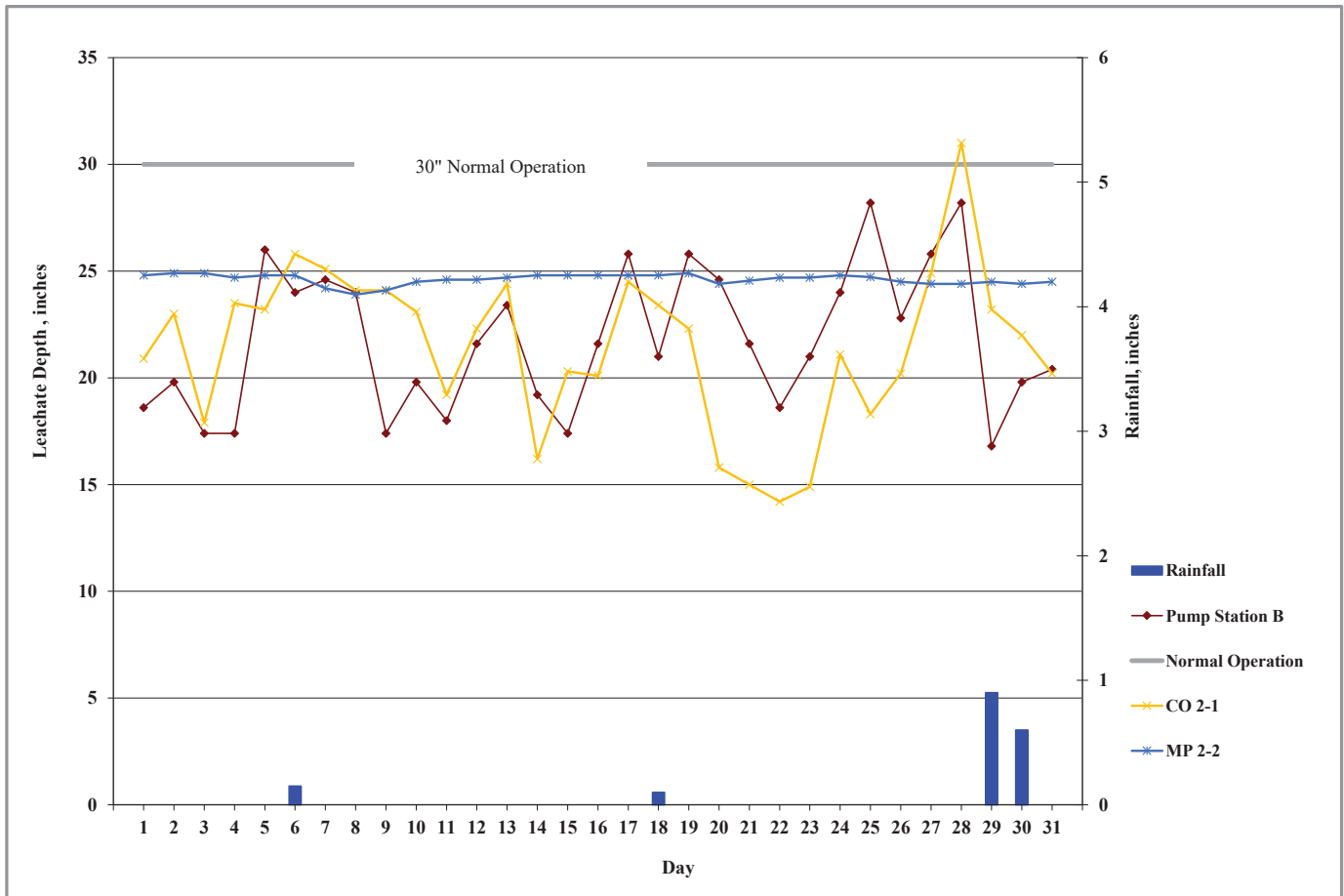


Figure 1. Leachate Levels in Pump Station B and Rainfall for March 2020.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2021**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Condensate from LFG CS-1 (gal.)	Leachate from Section 9 Pumped to LTRF (gal.)	Leachate from Section 7-8 Pumped to LTRF (gal.)	Leachate from Phases I-VI Pumped to LTRF (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	1.38	240	151,803	252,214	2,851,511	2,492,589	7,043	867,500	0	0	933,772	3,255,768	3,367,132	-111,365
February	4.53	532	128,100	184,450	2,334,983	1,989,793	3,048	515,325	0	0	402,814	2,648,065	2,508,166	139,899
March	1.75	290	123,318	194,837	2,431,421	2,249,071	3,534	816,961	0	0	791,751	2,749,866	3,069,566	-319,701
April														
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	7.66	1,062	403,221	631,501	7,617,914	6,731,453	13,625	2,199,786	0	0	2,128,337	8,653,698	8,944,864	-291,166

Note:

1. If the bypass at the effluent pond is ever used to pump effluent back to the LTRF, this table must be modified.
2. Change in storage represents total inflow to LTRF minus total outflow from LTRF.