

Johnson, Sabrina O

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Thursday, October 15, 2020 4:48 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. 3 2020 Water Balance & Waste Tire Report for Southeast County
Attachments: 3Q2020 Water Balance Report.pdf; 3Q2020 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

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Hillsborough County

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Hillsborough County Florida

SOLID WASTE MANAGEMENT

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

October 15, 2020

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-
005-WT/02

Dear Mr. Morgan:

In accordance with Rule 62-711, F.A.C. and Permit No 126787-005-WT/02, the Solid Waste Management Division (SWMD) is submitting the Quarterly Report for the Waste Tire Facility for the period July 1, 2020 through September 30, 2020. 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
THIRD QUARTER 2020**

		THIRD QUARTER	Beginning Tonnage (Jul. 1, 2020)	
				654.33
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2020	268.11	87.92	134.0	5.36
Beginning Tons	654.33			
	922.44	-87.92	-134.02	-5.36
			Ending Tonnage	695.14
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Aug. 2020	260.15	170.61	143.63	18.69
Beginning Tons	695.14			
	955.29	-170.61	-143.63	-18.69
			Ending Tonnage	622.36
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Sep. 2020	284.90	0.00	91.12	25.56
Beginning Tons	622.36			
	907.26	0.00	-91.12	-25.56
			Ending Tonnage	790.58
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jul. 2020	268.11	87.92	134.02	5.36
Aug. 2020	260.15	170.61	143.63	18.69
Sep. 2020	284.90	0.00	91.12	25.56
Sub-Total	813.16	258.53	368.77	49.61
Beginning Tons	654.33			
TOTAL	1,467.49	-258.53	-368.77	-49.61
			Ending Tonnage	790.58



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 7/1/20 thru 9/30/20 (First quarter begins on January 1 of any given year)

1. Facility name: Hillsborough County Southeast Landfill Waste Tire Facility
2. Facility mailing address: 332 N. Falkenburg Road
City: Tampa County: Hillsborough Zip: 33619
3. Facility permit number: 126787-005-WT/02
4. Facility telephone number (813) 671-7707
5. Authorized person preparing report: Larry E. Ruiz
6. Affiliation with facility: Owner Representative - Manager Landfill Operations
7. Telephone number (if different from above): ()
8. Activity: Report in tons

	Beginning Inventory	Received	Processed	Consumed	Removed	Adjustments	Ending Inventory
Used Tires	654.33	813.16			627.30	49.61	790.58
Other whole Tires							
Processed tires							
Processing Waste							
Other							
Total	654.33	813.16			627.30	49.61	790.58

- a. Explain all inventory adjustments. 49.61
49.61 tons of unprocessed truck tires.
- b. 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

10/15/2020

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

October 15, 2020

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. 35435-023-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 September 30, 2020.

The data is being submitted as separate monthly reports for July, August and September 2020. The attached reports include the leachate level in Pump Station B (PS-B).

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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**Hillsborough
County Florida**

SOLID WASTE MANAGEMENT

PO Box 1110 Tampa, FL 33601-1110

813-272-5680

MEMORANDUM

DATE: August 12, 2020

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 July 2020
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 2020 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 4.29 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 1.7 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 zero 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 16.4 inches.

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

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 56,668 gallons. A total of 1,756,704 gallons of leachate was pumped this month.

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

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 412 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

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 116,733 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

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 1,873,437 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

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 70,062 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

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 1,312 gallons of leachate was removed from the leak detection system.

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

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 243,800 gallons of leachate was stored in the tank.

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

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 229,900 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XIV)

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 946,614 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XV)

Column XV presents the daily amount of leachate, in gallons, hauled off site. This month a total of 917,944 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVI)

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 1,532 gallons of leachate was used for dust control.

Pond A Storage (Column XVII)

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 53,100 gallons of effluent was stored in Pond A.

Pond B Storage (Column XVIII)

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 effluent was not stored in Pond B.

Effluent Sprayed at Pond B (Column XIX)

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 effluent was not sprayed in Pond B.

Effluent Irrigation (Column XX)

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 601,561 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXI)

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 effluent was not sprayed as dust control.

Total Effluent Hauled (Column XXII)

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 a total of 317,789 gallons of effluent was hauled off site.

Total Evaporation (Column XXIII)

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 482,500 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 1,945,256 gallons. Total outflow quantity from the LTRF was 1,866,090 gallons. The change in storage for the month increased by 79,166 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 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
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (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	1.7	0.0	14.2	62,387	0	5,320	67,707	1,350	0	238,000	209,000	35,912	74,890	0	48,000	0	0	26,576	0	0	21,300
2	0.00	1.3	0.0	18.5	61,599	0	3,637	65,236	3,378	0	194,000	230,000	26,239	13,184	0	36,000	0	0	0	0	45,245	0
3	0.20	1.3	0.0	16.1	61,777	0	1,940	63,717	2,428	126	218,000	216,000	26,395	0	0	36,000	0	0	32,563	0	0	26,100
4	0.00	1.1	0.0	18.5	59,874	0	0	59,874	2,796	13	245,000	216,000	32,724	0	0	28,000	0	0	22,684	0	0	18,100
5	0.20	1.3	0.0	15.6	58,694	57	0	58,694	2,621	23	269,000	216,000	32,724	0	0	36,000	0	0	33,475	0	0	26,800
6	0.22	1.5	0.0	14.1	54,993	0	0	54,993	3,730	14	288,000	216,000	37,724	33,190	0	40,000	0	0	0	0	5,951	0
7	0.17	2.1	0.0	13.8	55,854	0	0	55,854	2	100	271,000	216,000	24,973	70,406	0	65,000	0	0	0	0	0	0
8	0.00	2.4	0.0	14.3	59,445	0	0	59,445	2,972	23	235,000	216,000	26,698	58,094	0	79,000	0	0	41,305	0	0	33,000
9	0.00	2.4	0.0	17.0	57,240	0	12,720	69,960	1,362	0	221,000	216,000	33,481	33,300	0	79,000	0	0	47,008	0	0	37,600
10	0.68	2.2	0.0	17.5	50,070	0	11,428	61,498	2,879	100	218,000	216,000	40,260	52,872	0	70,000	0	0	0	0	0	0
11	0.00	2.8	0.0	17.1	57,384	0	90	57,474	4,046	0	209,000	216,000	34,115	0	0	98,000	0	0	45,169	0	0	36,100
12	0.00	2.5	0.0	14.1	59,153	0	1,754	60,907	2,361	51	235,000	214,000	34,116	0	0	83,000	0	0	46,624	0	0	37,300
13	0.00	2.3	0.0	12.4	57,329	0	2,654	59,983	0	100	252,000	216,000	34,115	46,172	0	74,000	0	0	0	0	0	0
14	0.00	2.8	0.0	13.3	57,027	0	6,217	63,244	85	52	218,000	216,000	31,565	82,796	0	98,000	0	0	33,461	0	0	26,800
15	0.22	2.7	0.0	14.2	56,628	0	3,451	60,079	409	9	189,000	216,000	31,564	6,856	0	93,000	0	0	54,113	0	33,289	43,300
16	0.00	2.4	0.0	19.3	52,025	45	7,577	59,602	0	0	206,000	178,000	35,643	19,362	0	79,000	0	0	0	0	26,723	0
17	0.45	2.8	0.0	15.9	55,768	0	4,895	60,663	1	153	216,000	158,000	32,532	45,794	0	98,000	0	0	0	0	0	0
18	0.02	3.0	0.0	18.1	53,740	0	5,461	59,201	1,725	168	194,000	180,000	34,845	0	0	108,000	0	0	37,905	0	0	30,300
19	0.00	2.3	0.0	16.9	57,851	43	3,451	61,302	1,315	35	218,000	209,000	34,846	0	0	74,000	0	0	32,376	0	0	25,900
20	0.00	1.8	0.0	13.2	58,125	0	5,164	63,289	2,176	0	242,000	240,000	34,845	46,472	0	52,000	0	0	0	0	0	0
21	0.01	1.7	0.0	14.5	58,607	46	3,510	62,117	1,821	31	235,000	261,000	33,868	68,932	0	48,000	0	0	0	0	6,791	0
22	0.00	1.5	0.0	12.8	55,771	0	3,525	59,296	8,214	50	209,000	293,000	34,383	0	0	40,000	0	0	34,600	0	51,145	27,700
23	0.00	1.0	0.0	20.2	54,279	44	3,545	57,824	4,228	53	259,000	238,000	26	0	0	24,000	0	0	10,387	0	38,729	8,300
24	0.03	0.0	0.0	18.3	53,305	0	3,591	56,896	2,700	88	281,000	221,000	32,403	52,394	0	800	0	0	0	0	6,736	0
25	0.10	1.0	0.0	15.8	55,445	0	5,338	60,783	3,031	43	269,000	245,000	39,584	0	0	24,000	0	0	39,659	0	0	31,700
26	0.35	0.0	0.0	18.4	53,165	45	3,454	56,618	2,052	0	288,000	266,000	39,585	0	0	800	0	0	0	0	0	0
27	1.58	0.4	0.0	21.0	53,604	45	3,454	57,058	2,052	0	308,000	288,000	39,584	46,592	0	4,000	0	0	0	0	0	0
28	0.06	1.0	0.0	17.1	54,728	0	3,146	57,874	4,034	28	288,000	319,000	34,467	52,346	0	24,000	0	0	0	0	18,078	0
29	0.00	1.7	0.0	17.5	56,768	44	4,527	61,295	1,200	39	250,000	312,000	30,817	30,594	0	48,000	0	0	35,702	0	51,923	28,600
30	0.00	1.3	0.0	20.0	54,980	0	3,447	58,427	2,584	6	266,000	252,000	5,726	12,056	0	36,000	0	0	27,954	0	33,179	22,400
31	0.00	1.0	0.0	17.3	59,093	44	3,438	62,531	2,511	7	329,000	221,000	855	71,642	1,532	24,000	0	0	0	0	0	1,200
Total	4.29				1,756,704	412	116,733	1,873,437	70,062	1,312			946,614	917,944	1,532			0	601,561	0	317,789	482,500
Daily Average		1.7	0.0	16.4	56,668	13	3,766	60,433	2,260	42	243,800	229,900				53,100	0					
Mo. Average															0				19,400	0	10,300	15,560

balance 2020/7-20bal.xls

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. Columns VII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XII and XIII, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XI, XIV, XV, XVI and XIX-XXII, quantities from flow meters.
10. Column XXIII includes 80% of the daily values from Columns XVI, XX - XXI, plus 5% of the daily values from column XIX.

TABLE 2. FIELD DATA ENTRY FORM
JULY 2020
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		Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled		Effluent Dust Control (Sprayed) (gal.)
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	9,614,874	14.2	2,972,553	2,546,296	5,888,443	728,828	94,903	0.0	0.0	1.7	26,576	8.25	7.25	35,912	74,890	0	0	0	0	0
2	0.00	9,662,118	18.5	2,972,553	2,549,674	5,888,481	732,465	94,903	0.0	0.0	1.3	0	6.75	8.00	26,239	13,184	0	0	45,245	0	0
3	0.20	9,710,978	16.1	2,972,553	2,552,102	5,888,607	734,405	94,903	0.0	0.0	1.3	32,563	7.58	7.50	26,395	0	0	0	0	0	0
4	0.00	9,754,988	18.5	2,972,553	2,554,898	5,888,620	734,405	94,903	0.0	0	1.1	22,684	8.50	7.50	32,724	0	0	0	0	0	0
5	0.20	9,802,514	15.6	2,972,555	2,557,517	5,888,643	734,405	94,960	0.0	0.0	1.3	33,475	9.33	7.50	32,724	0	0	0	0	0	0
6	0.22	9,844,436	14.1	2,973,523	2,560,279	5,888,657	734,405	94,960	0.0	0	1.5	0	10.00	7.50	37,724	33,190	0	0	5,951	0	0
7	0.17	9,888,709	13.8	2,973,523	2,560,281	5,888,757	734,405	94,960	0.0	0	2.1	0	9.42	7.50	24,973	70,406	0	0	0	0	0
8	0.00	9,934,608	14.3	2,973,523	2,563,253	5,888,780	734,405	94,960	0.0	0.0	2.4	41,305	8.17	7.50	26,698	58,094	0	0	0	0	0
9	0.00	9,979,724	17.0	2,973,523	2,564,615	5,888,780	747,125	94,960	0.0	0.0	2.4	47,008	7.67	7.50	33,481	33,300	0	0	0	0	0
10	0.68	29,795	17.5	2,973,523	2,567,494	5,888,880	758,553	94,960	0.0	0	2.2	0	7.58	7.50	40,260	52,872	0	0	0	0	0
11	0.00	74,429	17.1	2,973,523	2,571,540	5,888,880	758,643	94,960	0.0	0.0	2.8	45,169	7.25	7.50	34,115	0	0	0	0	0	0
12	0.00	120,823	14.1	2,973,681	2,573,743	5,888,931	760,397	94,960	0.0	0.0	2.5	46,624	8.17	7.42	34,116	0	0	0	0	0	0
13	0.00	166,761	12.4	2,973,681	2,573,743	5,889,031	763,051	94,960	0.0	0	2.3	0	8.75	7.50	34,115	46,172	0	0	0	0	0
14	0.00	212,191	13.3	2,973,766	2,573,743	5,889,083	769,268	94,960	0.0	0.0	2.8	33,461	7.58	7.50	31,565	82,796	0	0	0	0	0
15	0.22	257,396	14.2	2,973,766	2,574,152	5,889,092	772,719	66	0.0	0.0	2.7	54,113	6.58	7.50	31,564	6,856	0	0	33,289	0	0
16	0.00	298,912	19.3	2,973,766	2,574,152	5,889,092	780,296	111	0.0	0.0	2.4	0	7.17	6.17	35,643	19,362	0	0	26,723	0	0
17	0.45	343,448	15.9	2,973,767	2,574,152	5,889,245	785,191	111	0.0	0.0	2.8	0	7.50	5.50	32,532	45,794	0	0	0	0	0
18	0.02	385,499	18.1	2,973,846	2,575,798	5,889,413	790,652	111	0.0	0.0	3.0	37,905	6.75	6.25	34,845	0	0	0	0	0	0
19	0.00	431,165	16.9	2,973,939	2,577,020	5,889,448	794,103	154	0.0	0.0	2.3	32,376	7.58	7.25	34,846	0	0	0	0	0	0
20	0.00	478,184	13.2	2,973,939	2,579,196	5,889,448	799,267	154	0.0	0.0	1.8	0	8.42	8.33	34,845	46,472	0	0	0	0	0
21	0.01	524,777	14.5	2,974,260	2,580,696	5,889,479	802,777	200	0.0	0.0	1.7	0	8.17	9.08	33,868	68,932	0	0	6,791	0	0
22	0.00	569,035	12.8	2,974,260	2,588,910	5,889,529	806,302	200	0.0	0.0	1.5	34,600	7.25	10.17	34,383	0	0	0	51,145	0	0
23	0.00	612,434	20.2	2,974,260	2,593,138	5,889,582	809,847	244	0.0	0.0	1.0	10,387	9.00	8.25	26	0	0	0	38,729	0	0
24	0.03	653,611	18.3	2,974,260	2,595,838	5,889,670	813,438	244	0.0	0.0	0.0	0	9.75	7.67	32,403	52,394	0	0	6,736	0	0
25	0.10	697,502	15.8	2,974,260	2,598,869	5,889,713	818,776	244	0.0	0.0	1.0	39,659	9.33	8.50	39,584	0	0	0	0	0	0
26	0.35	739,113	18.4	2,974,260	2,600,921	5,889,708	822,230	289	0.0	0.0	0.0	0	10.02	9.25	39,585	0	0	0	0	0	0
27	1.58	780,724	21.0	2,974,260	2,602,972	5,889,703	825,683	333	0.0	0.0	0.4	0	10.70	10.00	39,584	46,592	0	0	0	0	0
28	0.06	826,046	17.1	2,974,260	2,607,006	5,889,731	828,829	333	0.0	0.0	1.0	0	10.00	11.08	34,467	52,346	0	0	18,078	0	0
29	0.00	872,346	17.5	2,974,260	2,608,206	5,889,770	833,356	377	0.0	0.0	1.7	35,702	8.67	10.83	30,817	30,594	0	0	51,923	0	0
30	0.00	917,786	20.0	2,974,260	2,610,790	5,889,776	836,803	377	0.0	0.0	1.3	27,954	9.25	8.75	5,726	12,056	0	0	33,179	0	0
31	0.00	962,742	17.3	2,974,260	2,613,301	5,889,783	840,241	421	0.0	0.0	1.0	0	11.42	7.67	855	71,642	0	1,532	0	0	0
Totals	4.29									0		601,561			946,614	917,944	0	1,532	317,789	0	0

balance\2020\7-20bal.xls

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. Columns G and J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, R-V and W are quantities from flow meters.
6. 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

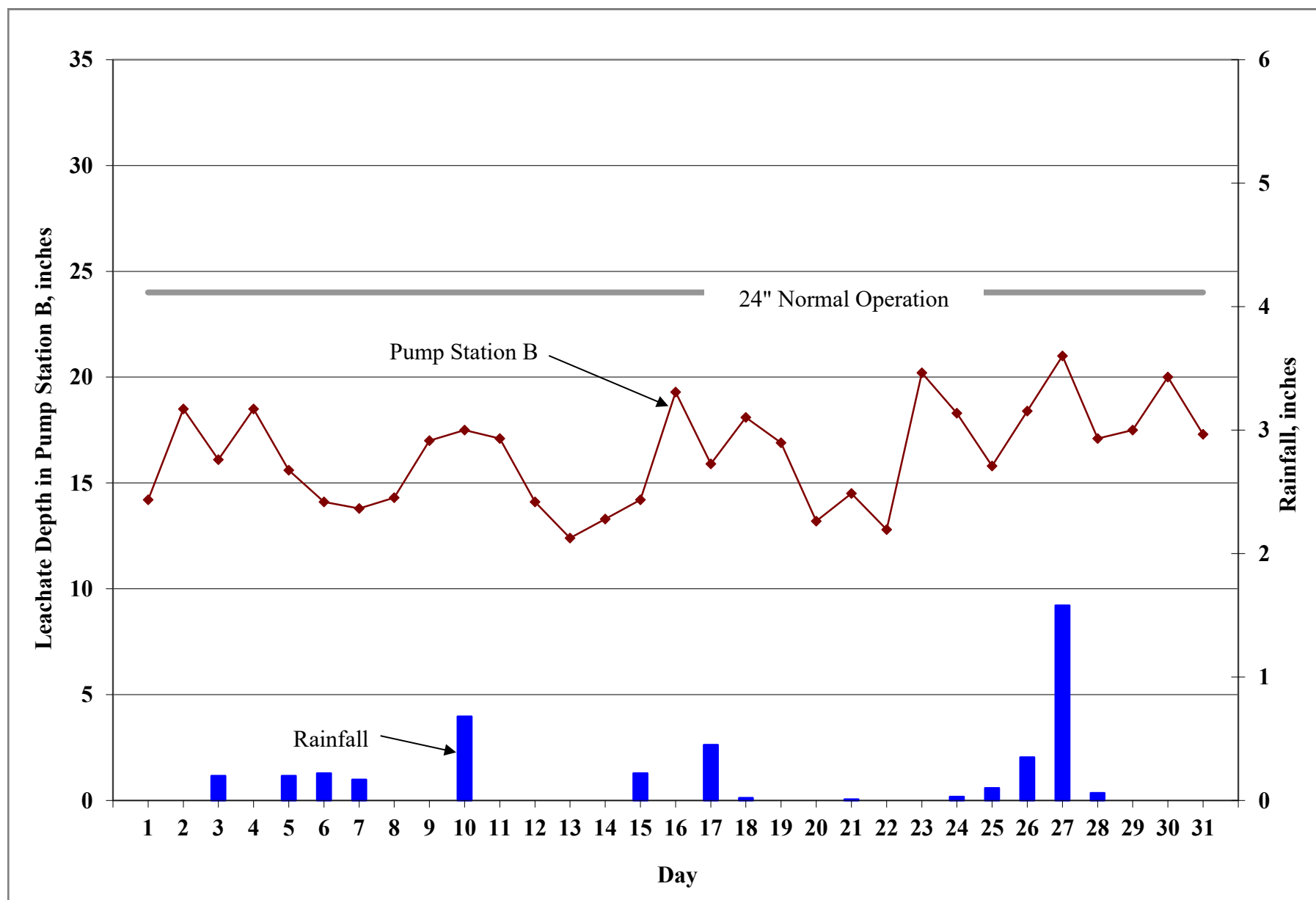


Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2020.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2020**

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	0.58	909	141,635	217,468	3,079,565	2,360,372	0	853,457	0	0	544,716	3,439,577	3,213,829	225,748
February	1.66	1,881	89,491	152,518	2,483,841	1,621,644	0	883,611	507,900	0	435,684	2,727,731	2,505,255	222,476
March	0.01	110	90,346	145,289	2,365,967	1,725,217	0	716,248	200,623	0	342,461	2,601,712	2,441,465	160,247
April	4.09	425	78,504	135,658	2,084,835	873,490	3,686	1,402,034	878,540	0	340,495	2,299,422	2,279,210	20,212
May	2.68	550	77,800	125,479	2,037,642	529,404	9,982	1,199,946	378,802	0	913,270	2,241,471	1,739,332	502,139
June	5.93	603	76,843	129,957	1,908,443	565,723	31,878	1,575,161	656,231	0	863,573	2,115,846	2,172,762	-56,916
July	4.29	445	71,374	116,733	1,756,704	917,944	1,532	946,614	317,789	0	601,561	1,945,256	1,866,090	79,166
August														
September														
October														
November														
December														
YTD Total	19.24	4,923	625,993	1,023,102	15,716,996	8,593,794	47,078	7,577,071	2,939,885	0	4,041,760	17,371,014	16,217,943	1,153,071

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**

SOLID WASTE MANAGEMENT

PO Box 1110 Tampa, FL 33601-1110

813-272-5680

MEMORANDUM

DATE: September 14, 2020

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 August 2020
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 2020 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 10.7 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 2.2 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 0.5 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). The number recorded on the twenty-first was caused by a pump malfunction. The contractor was notified and depth measurements returned to normal in a couple of hours. 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 17.2 inches.

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

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 56,542 gallons. A total of 1,752,794 gallons of leachate was pumped this month.

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

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 555 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

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 151,985 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column IX)

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 1,904,779 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column X)

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 73,742 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XI)

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 445 gallons of leachate was removed from the leak detection system.

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

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 282,700 gallons of leachate was stored in the tank.

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

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 195,100 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XIV)

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 698,576 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XV)

Column XV presents the daily amount of leachate, in gallons, hauled off site. This month a total of 1,192,207 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVI)

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 14,102 gallons of leachate was used for dust control.

Pond A Storage (Column XVII)

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 71,100 gallons of effluent was stored in Pond A.

Pond B Storage (Column XVIII)

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 14,800 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XIX)

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 effluent was not sprayed in Pond B.

Effluent Irrigation (Column XX)

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 538,771 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXI)

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 effluent was not sprayed as dust control.

Total Effluent Hauled (Column XXII)

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 a total of 6,516 gallons of effluent was hauled off site.

Total Evaporation (Column XXIII)

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 442,100 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 1,980,215 gallons. Total outflow quantity from the LTRF was 1,904,885 gallons. The change in storage for the month increased by 75,330 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 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
Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (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	1.7	0.0	14.5	54,918	0	3,527	58,445	2,683	0	288,000	202,000	25,521	0	0	48,000	0	0	37,053	0	0	29,600
2	0.02	1.0	0.0	15.9	61,806	22	4,216	66,022	2,866	0	324,000	204,000	25,522	0	0	24,000	0	0	0	0	0	0
3	0.00	1.7	0.0	17.3	60,582	22	4,216	64,798	2,866	0	360,000	206,000	25,521	45,636	0	48,000	0	0	0	0	0	0
4	0.40	2.0	0.0	18.4	55,654	0	3,439	59,093	1,401	36	360,000	206,000	17,744	96,110	2,012	61,000	0	0	31,255	0	0	26,600
5	0.00	2.2	0.0	14.5	59,122	48	3,332	62,454	2,942	29	288,000	202,000	17,348	83,418	0	70,000	0	0	18,366	0	0	14,700
6	0.00	1.8	0.0	15.9	49,655	0	4,465	54,120	2,460	0	288,000	202,000	17,347	32,224	0	52,000	0	0	42,574	0	0	34,100
7	0.19	1.4	0.0	16.5	52,424	47	3,243	55,667	1,573	74	300,000	199,000	21,242	45,708	4,024	36,000	0	0	31,257	0	0	28,200
8	0.45	1.2	0.0	20.6	54,373	0	3,246	57,619	2,559	0	274,000	194,000	23,742	0	0	32,000	0	0	20,904	0	0	16,700
9	0.06	1.5	0.0	18.1	53,379	22	4,018	57,397	2,233	0	301,000	194,000	23,742	0	0	40,000	0	0	0	0	0	0
10	0.00	1.8	0.0	15.5	53,472	22	4,018	57,490	2,233	0	329,000	194,000	23,742	27,058	0	52,000	0	0	0	0	0	0
11	0.00	2.3	0.0	13.9	51,448	0	3,572	55,020	3,004	0	333,000	194,000	25,683	77,352	4,068	74,000	0	0	24,727	0	6,516	23,000
12	0.10	2.3	0.0	14.2	57,993	43	6,302	64,295	1,485	23	300,000	182,000	25,683	83,072	3,998	74,000	0	0	35,414	0	0	31,500
13	0.42	2.0	0.0	14.4	57,830	0	9,520	67,350	2,483	1	259,000	182,000	24,593	83,272	0	61,000	0	0	54,670	0	0	43,700
14	0.00	1.3	0.0	17.0	55,899	46	0	55,899	2,564	0	221,000	182,000	26,263	52,444	0	36,000	0	0	13,667	0	0	10,900
15	0.01	1.5	0.0	19.5	54,698	0	1,656	56,354	2,256	0	218,000	182,000	30,422	0	0	40,000	0	0	39,424	0	0	31,500
16	0.00	1.7	0.0	18.7	57,115	19	3,267	60,382	4,380	0	247,000	182,000	30,422	0	0	48,000	0	0	0	0	0	0
17	0.33	1.9	0.0	17.9	56,944	19	3,267	60,211	4,380	0	276,000	182,000	30,422	6,407	0	57,000	0	0	0	0	0	0
18	0.40	2.5	0.0	16.9	56,264	48	4,670	60,934	2,532	4	288,000	182,000	31,180	49,661	0	83,000	0	0	0	0	0	0
19	0.00	3.0	0.0	17.3	56,371	0	5,923	62,294	4	25	278,000	182,000	30,202	70,039	0	108,000	0	0	0	0	0	0
20	1.20	3.3	0.0	21.5	53,791	0	6,210	60,001	1,771	93	233,000	182,000	19,963	81,523	0	123,000	0	0	32,337	0	0	25,900
21	1.43	3.3	0.0	37.3	40,596	45	10,304	50,900	1,580	0	189,000	182,000	29,095	38,706	0	123,000	0	0	0	0	0	0
22	0.40	3.7	1.0	12.4	65,320	0	13,492	78,812	2,652	0	216,000	182,000	24,554	0	0	151,000	19,000	0	0	0	0	0
23	0.00	3.6	1.4	15.1	50,469	22	12,801	63,270	1,692	0	247,000	184,000	24,554	0	0	145,000	33,000	0	0	0	0	0
24	0.30	3.5	1.7	17.8	57,077	22	12,801	69,878	1,692	0	278,000	185,000	24,554	44,705	0	140,000	57,000	0	41,633	0	0	33,300
25	0.00	3.1	1.7	15.4	58,186	36	648	58,834	2,803	0	288,000	185,000	24,704	45,353	0	113,000	57,000	0	23,523	0	0	18,800
26	0.00	2.7	1.7	12.9	60,660	0	3,157	63,817	2,662	59	290,000	187,000	2,463	56,381	0	93,000	57,000	0	17,377	0	0	13,900
27	0.00	2.3	1.7	22.9	55,779	35	2,883	58,662	2,711	0	288,000	192,000	7,916	63,509	0	74,000	57,000	0	30,092	0	0	24,100
28	0.12	1.7	1.7	18.5	59,331	0	0	59,331	2,691	48	276,000	211,000	23,846	64,757	0	48,000	57,000	0	21,498	0	0	17,200
29	0.70	1.3	1.7	14.6	58,955	37	6,840	65,795	1,527	0	264,000	223,000	13,468	0	0	36,000	57,000	0	23,000	0	0	18,400
30	1.45	1.3	1.3	14.0	66,133	0	3,477	69,610	2,529	27	309,000	235,000	13,648	0	0	36,000	33,000	0	0	0	0	0
31	2.72	2.4	1.3	13.4	66,552	0	3,477	70,029	2,529	27	355,000	247,000	13,470	44,872	0	79,000	33,000	0	0	0	0	0
Total	10.70				1,752,794	555	151,985	1,904,779	73,742	445			698,576	1,192,207	14,102			0	538,771	0	6,516	442,100
Daily Average		2.2	0.5	17.2	56,542	18	4,903	61,444	2,379	14	282,700	195,100				71,100	14,800					
Mo. Average															500				17,400	0	200	14,260

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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. Columns VII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XII and XIII, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XI, XIV, XV, XVI and XIX-XXII, quantities from flow meters.
10. Column XXIII includes 80% of the daily values from Columns XVI, XX - XXI, plus 5% of the daily values from column XIX.

TABLE 2. FIELD DATA ENTRY FORM
AUGUST 2020
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		Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled		Effluent Dust Control (Sprayed) (gal.)
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	1,004,411	14.5	2,974,260	2,615,984	5,889,783	843,768	421	0.0	0.0	1.7	37,053	10.00	7.00	25,521	0	0	0	0	0	0
2	0.02	1,052,969	15.9	2,974,260	2,618,850	5,889,777	847,984	443	0.0	0.0	1.0	0	11.25	7.09	25,522	0	0	0	0	0	0
3	0.00	1,101,526	17.3	2,974,260	2,621,715	5,889,771	852,200	465	0.0	0.0	1.7	0	12.50	7.17	25,521	45,636	0	0	0	0	0
4	0.40	1,146,135	18.4	2,974,260	2,623,116	5,889,807	855,639	465	0.0	0	2.0	31,255	12.50	7.17	17,744	96,110	0	2,012	0	0	0
5	0.00	1,195,341	14.5	2,974,260	2,626,058	5,889,836	858,971	513	0.0	0.0	2.2	18,366	10.00	7.00	17,348	83,418	0	0	0	0	0
6	0.00	1,235,241	15.9	2,974,260	2,628,518	5,889,836	863,436	513	0.0	0	1.8	42,574	10.00	7.00	17,347	32,224	0	0	0	0	0
7	0.19	1,277,361	16.5	2,974,260	2,630,091	5,889,910	866,679	560	0.0	0	1.4	31,257	10.42	6.92	21,242	45,708	0	4,024	0	0	0
8	0.45	1,321,136	20.6	2,974,260	2,632,650	5,889,910	869,925	560	0.0	0.0	1.2	20,904	9.50	6.75	23,742	0	0	0	0	0	0
9	0.06	1,363,917	18.1	2,974,260	2,634,883	5,889,909	873,943	582	0.0	0.0	1.5	0	10.46	6.75	23,742	0	0	0	0	0	0
10	0.00	1,406,698	15.5	2,974,260	2,637,116	5,889,907	877,961	604	0.0	0	1.8	0	11.42	6.75	23,742	27,058	0	0	0	0	0
11	0.00	1,447,240	13.9	2,974,260	2,640,120	5,889,907	881,533	604	0.0	0.0	2.3	24,727	11.58	6.75	25,683	77,352	0	4,068	6,516	0	0
12	0.10	1,494,090	14.2	2,974,260	2,641,605	5,889,930	887,835	647	0.0	0.0	2.3	35,414	10.42	6.33	25,683	83,072	0	3,998	0	0	0
13	0.42	1,541,346	14.4	2,974,566	2,643,782	5,889,931	897,355	647	0.0	0	2.0	54,670	9.00	6.33	24,593	83,272	0	0	0	0	0
14	0.00	1,586,992	17.0	2,974,999	2,645,913	5,889,931	897,355	693	0.0	0.0	1.3	13,667	7.67	6.33	26,263	52,444	0	0	0	0	0
15	0.01	1,630,636	19.5	2,975,272	2,647,896	5,889,931	899,011	693	0.0	0.0	1.5	39,424	7.58	6.33	30,422	0	0	0	0	0	0
16	0.00	1,676,697	18.7	2,977,105	2,650,443	5,889,931	902,278	712	0.0	0.0	1.7	0	8.58	6.33	30,422	0	0	0	0	0	0
17	0.33	1,722,758	17.9	2,978,938	2,652,990	5,889,931	905,544	731	0.0	0.0	1.9	0	9.58	6.33	30,422	6,407	0	0	0	0	0
18	0.40	1,767,265	16.9	2,981,470	2,652,990	5,889,935	910,214	779	0.0	0.0	2.5	0	10.00	6.33	31,180	49,661	0	0	0	0	0
19	0.00	1,813,765	17.3	2,981,474	2,652,990	5,889,960	916,137	779	0.0	0.0	3.0	0	9.67	6.33	30,202	70,039	0	0	0	0	0
20	1.20	1,856,708	21.5	2,983,245	2,652,990	5,890,053	922,347	779	0.0	0.0	3.3	32,337	8.08	6.33	19,963	81,523	0	0	0	0	0
21	1.43	1,886,744	37.3	2,983,246	2,654,569	5,890,053	932,651	824	0.0	0.0	3.3	0	6.58	6.33	29,095	38,706	0	0	0	0	0
22	0.40	1,948,615	12.4	2,983,246	2,657,221	5,890,053	946,143	824	1.0	0.0	3.7	0	7.50	6.33	24,554	0	0	0	0	0	0
23	0.00	1,995,636	15.1	2,983,246	2,658,913	5,890,053	958,944	846	1.4	0.0	3.6	0	8.59	6.38	24,554	0	0	0	0	0	0
24	0.30	2,042,656	17.8	2,983,246	2,660,605	5,890,053	971,745	868	1.7	0.0	3.5	41,633	9.67	6.42	24,554	44,705	0	0	0	0	0
25	0.00	2,091,005	15.4	2,983,246	2,663,408	5,890,053	972,393	904	1.7	0.0	3.1	23,523	10.00	6.42	24,704	45,353	0	0	0	0	0
26	0.00	2,142,422	12.9	2,983,246	2,666,070	5,890,112	975,550	904	1.7	0.0	2.7	17,377	10.08	6.50	2,463	56,381	0	0	0	0	0
27	0.00	2,188,202	22.9	2,983,246	2,668,781	5,890,112	978,433	939	1.7	0.0	2.3	30,092	10.00	6.67	7,916	63,509	0	0	0	0	0
28	0.12	2,236,857	18.5	2,983,246	2,671,472	5,890,160	978,433	939	1.7	0.0	1.7	21,498	9.58	7.33	23,846	64,757	0	0	0	0	0
29	0.70	2,284,779	14.6	2,983,246	2,672,999	5,890,160	985,273	976	1.7	0.0	1.3	23,000	9.17	7.75	13,468	0	0	0	0	0	0
30	1.45	2,339,880	14.0	2,983,246	2,675,528	5,890,187	988,750	976	1.3	0.0	1.3	0	10.75	8.17	13,648	0	0	0	0	0	0
31	2.72	2,394,980	13.4	2,983,246	2,678,057	5,890,213	992,226	976	1.3	0.0	2.4	0	12.33	8.58	13,470	44,872	0	0	0	0	0
Totals	10.70									0		538,771			698,576	1,192,207	0	14,102	6,516	0	0

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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. Columns G and J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, R-V and W are quantities from flow meters.
6. 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

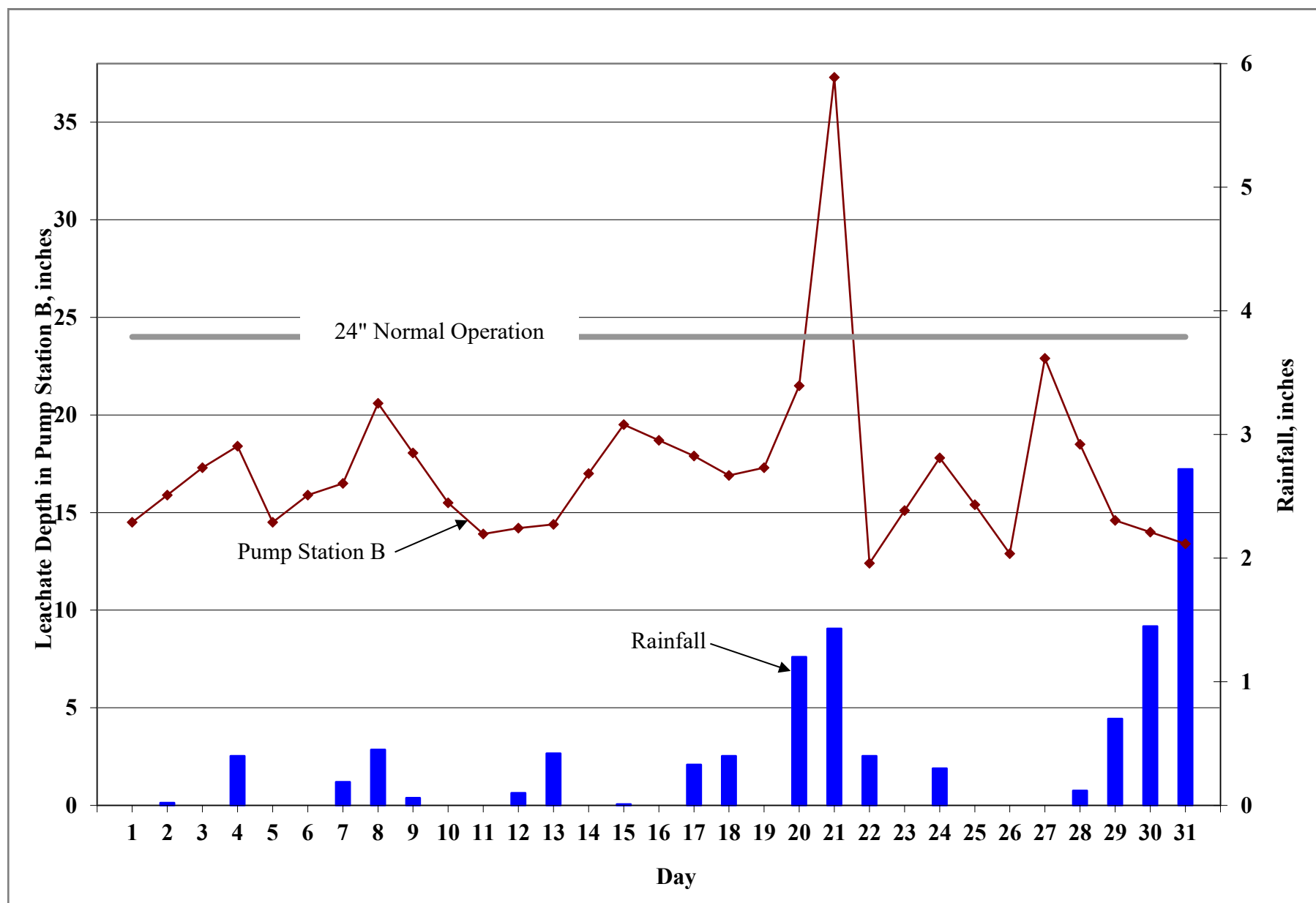


Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2020.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2020**

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	0.58	909	141,635	217,468	3,079,565	2,360,372	0	853,457	0	0	544,716	3,439,577	3,213,829	225,748
February	1.66	1,881	89,491	152,518	2,483,841	1,621,644	0	883,611	507,900	0	435,684	2,727,731	2,505,255	222,476
March	0.01	110	90,346	145,289	2,365,967	1,725,217	0	716,248	200,623	0	342,461	2,601,712	2,441,465	160,247
April	4.09	425	78,504	135,658	2,084,835	873,490	3,686	1,402,034	878,540	0	340,495	2,299,422	2,279,210	20,212
May	2.68	550	77,800	125,479	2,037,642	529,404	9,982	1,199,946	378,802	0	913,270	2,241,471	1,739,332	502,139
June	5.93	603	76,843	129,957	1,908,443	565,723	31,878	1,575,161	656,231	0	863,573	2,115,846	2,172,762	-56,916
July	4.29	445	71,374	116,733	1,756,704	917,944	1,532	946,614	317,789	0	601,561	1,945,256	1,866,090	79,166
August	10.70	1,249	74,187	151,985	1,752,794	1,192,207	14,102	698,576	6,516	0	538,771	1,980,215	1,904,885	75,330
September														
October														
November														
December														
YTD Total	29.94	6,172	700,180	1,175,087	17,469,790	9,786,001	61,180	8,275,647	2,946,401	0	4,580,531	19,351,229	18,122,828	1,228,401

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: September 9, 2020

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 September 2020
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 2020 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 5.89 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 2.7 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 1.7 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 17.5 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 20.8 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 24.4 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 70,409 gallons. A total of 2,112,257 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 412 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 249,855 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 2,362,112 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 124,846 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 201 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 332,400 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 291,200 gallons of effluent 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 829,823 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 1,686,575 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 50,311 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 97,200 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 68,600 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 249,888 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 860,723 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 14,828 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 no 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 753,100 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 2,487,585 gallons. Total outflow quantity from the LTRF was 2,566,709 gallons. The change in storage for the month decreased by 79,125 gallons. Please advise should you have any questions concerning the information provided.

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 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	2.7	1.5	14.9	18.2	24.4	96,837	40	4,084	100,921	3,276	0	403,000	259,000	15,931	88,436	0	93,000	44,000	0	0	0	0	0
2	0.00	2.7	1.5	17.3	27.4	24.7	93,043	0	5,818	98,861	3,763	0	413,000	274,000	13,296	51,890	0	93,000	44,000	0	0	0	0	0
3	0.00	2.7	1.5	13.3	20.7	24.6	79,490	39	7,039	86,529	5,497	22	437,000	288,000	29,462	39,798	0	93,000	44,000	92,326	30,178	0	0	28,800
4	0.00	2.7	1.5	18.8	16.9	24.3	66,984	0	5,678	72,662	0	0	434,000	302,000	45,230	72,072	0	93,000	44,000	74,444	43,204	0	0	38,300
5	0.23	2.5	1.3	13.0	17.9	24.1	68,277	37	7,058	75,335	2,634	46	403,000	317,000	34,537	0	0	83,000	33,000	0	82,560	0	0	66,000
6	0.23	2.8	0.0	14.5	22.1	24.3	66,401	0	5,376	71,777	3,857	0	432,000	329,000	34,536	0	26,047	98,000	0	0	47,761	0	0	59,000
7	0.03	2.6	0.0	16.7	25.1	24.1	68,617	37	6,473	75,090	3,887	0	466,000	329,000	34,537	0	0	88,000	0	0	84,974	0	0	68,000
8	0.65	0.8	0.0	19.4	21.9	24.5	60,341	0	5,386	65,727	5,489	1	497,000	329,000	34,536	88,308	0	17,000	0	0	0	0	0	0
9	0.00	3.6	0.0	18.5	20.4	24.1	74,042	37	7,514	81,556	2,637	21	473,000	202,000	23,025	91,301	18,375	145,000	0	0	69,141	0	0	70,000
10	0.00	3.6	1.9	18.5	26.2	23.9	64,216	0	6,262	70,478	4,405	0	410,000	86,000	44,002	84,394	2,523	145,000	72,000	83,118	26,063	0	0	27,000
11	0.10	3.4	2.1	19.4	22.6	24.3	66,447	36	7,139	73,586	3,925	1	317,000	151,000	44,002	52,958	3,366	129,000	88,000	0	0	0	0	2,700
12	0.66	3.5	2.3	15.0	18.0	24.3	69,634	0	5,273	74,907	4,331	0	250,000	242,000	33,201	77,545	0	140,000	106,000	0	60,942	0	0	48,800
13	0.15	2.9	2.4	15.7	17.9	24.5	67,456	37	6,511	73,967	2,651	0	189,000	302,000	33,202	0	0	103,000	115,000	0	35,874	0	0	28,700
14	0.01	2.8	2.4	16.7	27.0	24.5	66,546	0	6,362	72,908	4,331	42	153,000	367,000	33,201	83,613	0	98,000	115,000	0	0	0	0	0
15	1.17	2.9	2.4	18.2	23.7	24.0	59,362	37	6,926	66,288	3,000	0	187,000	331,000	8,870	84,923	0	103,000	115,000	0	0	0	0	0
16	0.00	3.2	2.5	18.8	15.7	24.2	73,485	0	5,966	79,451	4,117	0	230,000	242,000	8,870	66,805	0	118,000	124,000	0	0	0	0	0
17	0.45	3.3	2.5	18.1	26.2	24.6	75,655	38	7,719	83,374	2,929	0	278,000	216,000	8,870	59,871	0	123,000	124,000	0	28,292	0	0	22,600
18	0.27	2.9	2.5	15.8	16.7	24.6	79,373	0	11,160	90,533	4,699	25	326,000	197,000	15,011	46,689	0	103,000	124,000	0	0	0	0	0
19	0.00	3.3	2.6	15.3	15.7	24.4	71,979	37	12,432	84,411	4,824	1	302,000	238,000	15,011	6,535	0	123,000	133,000	0	29,256	0	0	23,400
20	0.07	3.1	2.6	18.7	20.1	24.4	59,530	0	15,799	75,329	5,168	1	295,000	302,000	15,011	0	0	113,000	133,000	0	84,694	0	0	67,800
21	0.00	1.5	2.6	15.7	24.5	25.5	70,585	37	18,071	88,656	6,233	30	290,000	384,000	15,011	90,754	0	40,000	133,000	0	0	0	0	0
22	0.00	1.4	2.6	18.8	20.7	25.5	68,127	0	22,923	91,050	5,117	1	240,000	420,000	72	90,059	0	36,000	133,000	0	0	0	0	0
23	0.00	1.5	2.5	22.1	17.6	24.1	68,380	0	6,190	74,570	4,796	2	286,000	394,000	18,875	65,959	0	40,000	124,000	0	23,601	6,793	0	24,300
24	0.01	3.7	1.1	21.5	18.5	24.4	70,859	0	8,171	79,030	5,070	1	278,000	362,000	18,874	72,627	0	151,000	23,000	0	31,228	0	0	25,000
25	0.00	3.3	1.3	17.3	20.6	24.3	67,551	0	8,472	76,023	4,132	0	302,000	336,000	38,147	71,831	0	123,000	33,000	0	34,540	0	0	27,600
26	0.01	3.1	1.4	15.7	22.8	24.2	67,118	0	8,525	75,643	5,289	1	295,000	329,000	38,148	0	0	113,000	38,000	0	55,660	0	0	44,500
27	0.23	2.3	1.2	16.7	27.3	24.2	67,012	0	8,425	75,437	5,561	0	300,000	365,000	38,147	0	0	74,000	28,000	0	77,495	0	0	62,000
28	0.47	1.2	1.2	17.6	16.4	24.2	69,919	0	8,075	77,994	4,286	0	367,000	302,000	38,148	104,120	0	32,000	28,000	0	0	0	0	0
29	1.15	2.8	1.2	20.2	16.5	24.4	67,799	0	8,175	75,974	3,825	0	389,000	271,000	50,530	110,182	0	98,000	28,000	0	15,260	8,035	0	18,600
30	0.00	3.0	1.3	22.0	17.9	23.8	67,196	0	6,853	74,049	5,117	6	329,000	271,000	49,530	85,905	0	108,000	33,000	0	0	0	0	0
Total	5.89				623	731	2,112,257	412	249,855	2,362,112	124,846	201			829,823	1,686,575	50,311			249,888	860,723	14,828	0	753,100
Daily Average		2.7	1.7	17.5	20.8	24.4	70,409	14	8,329	78,737	4,162	7	332,400	291,200				97,200	68,600					
Mo. Average					20	20											1,700				28,700	0	0	25,100

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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 XXI-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
SEPTEMBER 2020
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		Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled		Effluent Dust Control (Sprayed) (gal.)
																Contractor (gal.)	County (gal.)		Contractor (gal.)	County (gal.)	
1	0.00	2,477,792	14.9	2,983,246	2,681,333	5,890,213	996,310	1,016	1.5	0	2.7	0	14.00	9.00	15,931	88,436		0	0	0	0
2	0.00	2,556,592	17.3	2,983,246	2,685,096	5,890,213	1,002,128	1,016	1.5	0	2.7	0	14.33	9.50	13,296	51,890		0	0	0	0
3	0.00	2,622,976	13.3	2,983,406	2,690,433	5,890,235	1,009,167	1,055	1.5	92,326	2.7	30,178	15.17	10.00	29,462	39,798		0	0	0	0
4	0.00	2,678,485	18.8	2,983,406	2,690,433	5,890,235	1,014,845	1,055	1.5	74,444	2.7	43,204	15.08	10.50	45,230	72,072		0	0	0	0
5	0.23	2,734,224	13.0	2,983,865	2,692,608	5,890,281	1,021,903	1,092	1.3	0	2.5	82,560	14.00	11.00	34,537	0		0	0	0	0
6	0.23	2,787,563	14.5	2,984,286	2,696,044	5,890,281	1,027,279	1,092	0.0	0	2.8	47,761	15.00	11.42	34,536	0		26,047	0	0	0
7	0.03	2,841,855	16.7	2,985,046	2,699,171	5,890,281	1,033,752	1,129	0.0	0	2.6	84,974	16.17	11.42	34,537	0		0	0	0	0
8	0.65	2,889,498	19.4	2,985,826	2,703,880	5,890,282	1,039,138	1,129	0.0	0	0.8	0	17.25	11.42	34,536	88,308		0	0	0	0
9	0.00	2,951,748	18.5	2,986,359	2,705,984	5,890,303	1,046,652	1,166	0.0	0	3.6	69,141	16.42	7.00	23,025	91,301		18,375	0	0	0
10	0.00	3,003,701	18.5	2,987,495	2,709,253	5,890,303	1,052,914	1,166	1.9	83,118	3.6	26,063	14.25	3.00	44,002	84,394		2,523	0	0	0
11	0.10	3,055,849	19.4	2,988,060	2,712,613	5,890,304	1,060,053	1,202	2.1	0	3.4	0	11.00	5.25	44,002	52,958		3,366	0	0	0
12	0.66	3,112,460	15.0	2,988,663	2,716,341	5,890,304	1,065,326	1,202	2.3	0	3.5	60,942	8.67	8.42	33,201	77,545		0	0	0	0
13	0.15	3,167,895	15.7	2,989,082	2,718,573	5,890,304	1,071,837	1,239	2.4	0	2.9	35,874	6.58	10.50	33,202	0		0	0	0	0
14	0.01	3,223,473	16.7	2,989,756	2,722,230	5,890,346	1,078,199	1,239	2.4	0	2.8	0	5.33	12.75	33,201	83,613		0	0	0	0
15	1.17	3,271,073	18.2	2,990,413	2,724,573	5,890,346	1,085,125	1,276	2.4	0	2.9	0	6.50	11.50	8,870	84,923		0	0	0	0
16	0.00	3,330,527	18.8	2,991,122	2,727,981	5,890,346	1,091,091	1,276	2.5	0	3.2	0	8.00	8.42	8,870	66,805		0	0	0	0
17	0.45	3,392,322	18.1	2,991,779	2,730,253	5,890,346	1,098,810	1,314	2.5	0	3.3	28,292	9.67	7.50	8,870	59,871		0	0	0	0
18	0.27	3,457,342	15.8	2,995,581	2,731,150	5,890,371	1,109,970	1,314	2.5	0	2.9	0	11.33	6.83	15,011	46,689		0	0	0	0
19	0.00	3,518,339	15.3	3,000,405	2,731,150	5,890,372	1,122,402	1,351	2.6	0	3.3	29,256	10.50	8.25	15,011	6,535		0	0	0	0
20	0.07	3,571,188	18.7	3,005,573	2,731,150	5,890,373	1,138,201	1,351	2.6	0	3.1	84,694	10.25	10.50	15,011	0		0	0	0	0
21	0.00	3,629,260	15.7	3,011,806	2,731,150	5,890,403	1,156,272	1,388	2.6	0	1.5	0	10.08	13.33	15,011	90,754		0	0	0	0
22	0.00	3,684,657	18.8	3,016,923	2,731,150	5,890,404	1,179,195	1,388	2.6	0	1.4	0	8.33	14.58	72	90,059		0	0	0	0
23	0.00	3,739,418	22.1	3,021,719	2,731,150	5,890,406	1,185,385	1,388	2.5	0	1.5	23,601	9.92	13.67	18,875	65,959		0	0	0	6,793
24	0.01	3,796,539	21.5	3,026,789	2,731,150	5,890,407	1,193,556	1,388	1.1	0	3.7	31,228	9.67	12.58	18,874	72,627		0	0	0	0
25	0.00	3,851,703	17.3	3,030,921	2,731,150	5,890,407	1,202,028	1,388	1.3	0	3.3	34,540	10.50	11.67	38,147	71,831		0	0	0	0
26	0.01	3,905,846	15.7	3,031,968	2,735,392	5,890,408	1,210,553	1,388	1.4	0	3.1	55,660	10.25	11.42	38,148	0		0	0	0	0
27	0.23	3,958,865	16.7	3,032,452	2,740,469	5,890,408	1,218,978	1,388	1.2	0	2.3	77,495	10.42	12.67	38,147	0		0	0	0	0
28	0.47	4,015,710	17.6	3,033,257	2,743,950	5,890,408	1,227,053	1,388	1.2	0	1.2	0	12.75	10.50	38,148	104,120		0	0	0	0
29	1.15	4,070,082	20.2	3,033,569	2,747,463	5,890,408	1,235,228	1,388	1.2	0	2.8	15,260	13.50	9.42	50,530	110,182		0	0	0	8,035
30	0.00	4,125,623	22.0	3,033,570	2,752,579	5,890,414	1,242,081	1,388	1.3	0	3.0	0	11.42	9.42	49,530	85,905		0	0	0	0
Totals	5.89									249,888		860,723			829,823	1,686,575	0	50,311	0	0	14,828

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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. Columns G and J include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, F, G, H, I, J, K, L, N, and R-V are quantities from flow meters.
6. 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

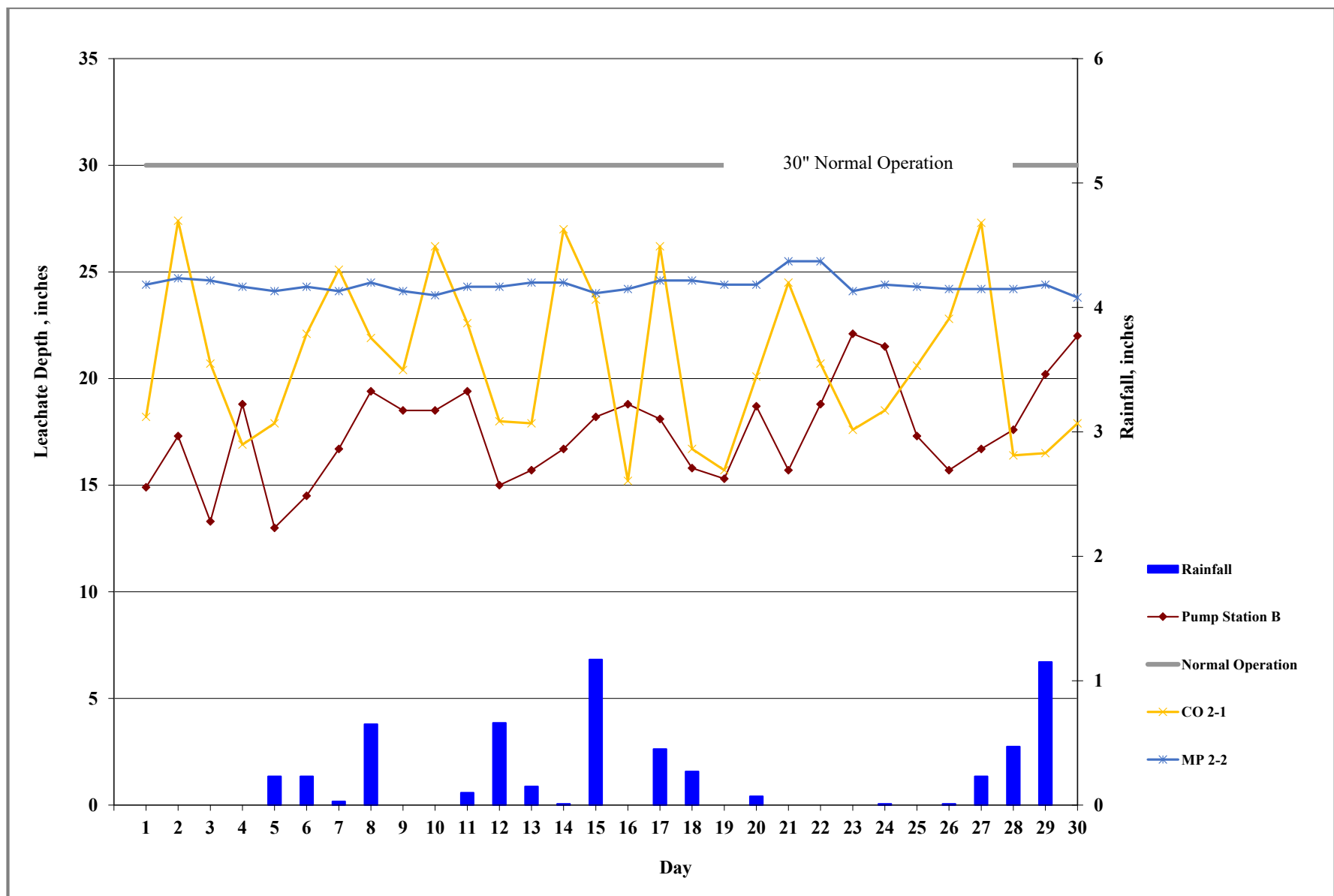


Figure 1. Leachate Levels in Pump Station B and Rainfall for September 2020.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2020**

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	0.58	909	141,635	217,468	3,079,565	2,360,372	0	853,457	0	0	544,716	3,439,577	3,213,829	225,748
February	1.66	1,881	89,491	152,518	2,483,841	1,621,644	0	883,611	507,900	0	435,684	2,727,731	2,505,255	222,476
March	0.01	110	90,346	145,289	2,365,967	1,725,217	0	716,248	200,623	0	342,461	2,601,712	2,441,465	160,247
April	4.09	425	78,504	135,658	2,084,835	873,490	3,686	1,402,034	878,540	0	340,495	2,299,422	2,279,210	20,212
May	2.68	550	77,800	125,479	2,037,642	529,404	9,982	1,199,946	378,802	0	913,270	2,241,471	1,739,332	502,139
June	5.93	603	76,843	129,957	1,908,443	565,723	31,878	1,575,161	656,231	0	863,573	2,115,846	2,172,762	-56,916
July	4.29	445	71,374	116,733	1,756,704	917,944	1,532	946,614	317,789	0	601,561	1,945,256	1,866,090	79,166
August	10.70	1,249	74,187	151,985	1,752,794	1,192,207	14,102	698,576	6,516	0	538,771	1,980,215	1,904,885	75,330
September	5.89	627	124,846	249,855	2,112,257	1,686,575	50,311	780,293	0	14,828	860,723	2,487,585	2,517,179	-29,595
October														
November														
December														
YTD Total	35.83	6,799	825,026	1,424,942	19,582,047	11,472,576	111,491	9,055,940	2,946,401	14,828	5,441,254	21,838,814	20,640,007	1,198,807

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.