

Ramey, Ashleigh

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Wednesday, October 26, 2022 2:58 PM
To: Madden, Melissa; SWD_Waste
Cc: Cope, Ronald; Byer, Kimberly; Ruiz, Larry; O'Neill, Joseph; Spradlin, Kollan (KSpradlin@scsengineers.com); Curtis, Bob
Subject: RE: WACS ID 41193 - Qtr. 2 2022 Water Balance & Waste Tire Report for Southeast County
Attachments: 3Q2022 Water Balance Report.pdf

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Ms. Madden,

The updated Quarterly Water Balance for the Southeast County Landfill are attached (WACS ID 41193). The summary page of September didn't fully populate the cells.

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

From: Wiesman, Ronald
Sent: Friday, October 14, 2022 3:32 PM
To: Melissa.Madden@dep.state.fl.us; 'SWD_Waste@dep.state.fl.us' <SWD_Waste@dep.state.fl.us>
Cc: Cope, Ronald <Cope@epchc.org>; Byer, Kimberly <ByerK@hillsboroughcounty.org>; Ruiz, Larry <RuizLE@HillsboroughCounty.ORG>; O'Neill, Joseph <ONeillJ@hillsboroughcounty.org>; Spradlin, Kollan (KSpradlin@scsengineers.com) <kspradlin@scsengineers.com>; Curtis, Bob <BCurtis@scsengineers.com>
Subject: WACS ID 41193 - Qtr. 2 2022 Water Balance & Waste Tire Report for Southeast County

Ms. Madden,

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 Department
Public Utilities Department

P: (813) 671-7707 VOIP 42801

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Hillsborough County

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Hillsborough County Florida

SOLID WASTE MANAGEMENT

PO Box 1110, Tampa, FL 33601-1110
813-612-7718

October 14, 2022

Ms. Melissa Madden
Solid Waste Section
Florida Department of Environmental
Protection
Southwest District
13051 N. Telecom Pkwy
Temple Terrace, Florida 33637

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George Cassady

RE: Southeast County Landfill –Leachate Data Quarterly Report

Dear Ms. Madden:

In accordance with Specific Condition No. C.12.d of Permit No. 35435-022-SO/01, the Solid Waste Management Department (SWMD) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending September 30, 2022. The data is being submitted as separate monthly reports for July, August and September 2022.

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

Sincerely,

Larry E. Ruiz

Manager Landfill Operations
Solid Waste Management Department

LER/rw

Attachments

xc: Ron Cope, EPC

Kimberly Byer, SWMD



SOLID WASTE MANAGEMENT

PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: August 15, 2022

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 2022
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 2022 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 8.54 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 2.3 feet.

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George Cassady

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 leachate in Pond B was 3.2 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 18 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 15.5 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 25.5 inches.

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

Column VIII 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 62,641 gallons. A total of 1,941,881 gallons of leachate was pumped this month.

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

Column IX 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 731 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 X 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 222,776 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column XI 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 2,164,657 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column XII 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 137,649 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XIII 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 646 gallons of leachate was removed from the leak detection system.

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

Column XIV 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 331,903 gallons of leachate was stored in the tank.

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

Column XV 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 232,097 gallons of leachate was stored in the tank.

Leachate Treated at LEF (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,348,377 gallons of leachate was treated at the evaporator.

Leachate Treated at LTRF (Column XVII)

Column XVII 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 781,390 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVIII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 608,224 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XIX)

Column XIX 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 zero gallons of leachate was used for dust control.

Pond A Storage (Column XX)

Column XX 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 77,516 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI presents the daily amount of leachate, 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 pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 216,806 gallons of leachate was stored in Pond B.

Effluent Irrigation (Column XXII)

Column XXII 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 450,113 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIII 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 XXIV 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 XXV 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 1,355,000 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 2,307,372 gallons. Total outflow quantity from the LTRF was 2,737,991 gallons. The change in storage for the month decreased by 430,619 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM																								
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 at LEF (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)	
1	0.82	1.1	3.2	14.4	12.9	25.3	59,002	42	4,123	63,125	11,067	7	322,000	202,000	38,409	19,531	0	0	28,000	265,000	0	0	0	346,000
2	0.00	1.7	3.0	13.2	18.5	25.4	61,496	0	3,199	64,695	9,758	0	336,000	202,000	55,207	24,236	0	0	48,000	242,000	0	0	0	492,000
3	1.60	2.2	3.1	11.7	16.1	25.4	61,138	41	4,688	65,825	10,841	0	341,000	202,000	41,800	24,236	0	0	70,000	242,000	0	0	0	376,000
4	0.05	2.6	3.1	10.2	13.7	25.3	58,441	41	4,688	63,129	12,981	0	345,000	202,000	41,800	24,236	0	0	88,000	254,000	0	0	0	376,000
5	0.00	2.7	3.2	10.2	15.7	25.6	53,751	0	3,218	56,969	11,558	0	348,000	202,000	47,575	24,239	0	0	93,000	265,000	0	0	0	424,000
6	0.65	3.1	3.0	15.0	16.5	25.4	59,842	40	3,194	63,036	10,397	0	345,000	202,000	53,570	19,794	0	0	113,000	242,000	0	0	0	482,000
7	1.77	2.6	3.2	19.1	14.2	25.6	61,127	0	4,484	65,611	1,082	0	362,000	202,000	30,260	22,553	0	0	88,000	265,000	0	0	0	272,000
8	0.00	3.3	3.4	17.4	15.1	25.4	59,748	39	4,566	64,314	12,874	0	389,000	202,000	17,798	30,762	0	0	123,000	289,000	0	0	0	160,000
9	0.00	3.7	3.2	12.6	18.9	25.5	63,948	0	7,746	71,694	5,028	365	408,000	202,000	42,647	30,762	0	0	151,000	265,000	50,321	0	0	78,000
10	0.00	2.6	3.1	13.8	13.3	25.6	65,405	41	6,514	71,919	1,565	2	389,000	250,000	49,953	30,762	0	0	88,000	254,000	27,806	0	0	672,000
11	0.38	2.6	3.2	11.4	16.2	25.6	66,894	0	7,916	74,810	21	0	394,000	264,000	38,182	30,762	0	0	88,000	265,000	0	0	0	344,000
12	0.00	3.2	3.2	16.2	12.9	25.6	60,845	41	5,861	66,806	1,697	0	389,000	264,000	50,215	35,972	0	0	118,000	265,000	0	0	0	452,000
13	0.00	3.7	3.2	13.8	12.7	25.3	59,659	39	6,313	65,972	1,181	1	405,000	264,000	39,940	36,555	0	0	151,000	265,000	55,191	0	0	801,000
14	1.55	3.1	3.2	28.2	18.6	25.3	57,957	6	4,951	62,908	6	0	379,000	264,000	53,580	36,456	0	0	113,000	265,000	0	0	0	482,000
15	0.25	3.8	3.1	21.0	13.1	25.3	58,839	38	6,270	65,109	6,563	0	374,000	264,000	56,583	38,383	6,216	0	157,000	254,000	0	0	0	509,000
16	0.32	3.5	3.2	24.0	17.9	25.6	65,752	35	6,203	71,955	55	0	374,000	264,000	56,046	25,867	24,845	0	140,000	265,000	50,684	0	0	91,000
17	0.00	2.4	3.2	25.2	17.6	25.6	67,149	0	8,425	75,574	698	1	374,000	264,000	58,520	25,867	12,843	0	79,000	265,000	31,841	0	0	78,100
18	0.00	2.1	3.2	18.0	17.5	25.5	69,025	37	8,283	77,308	1,317	0	367,000	266,000	55,331	25,868	53,782	0	65,000	265,000	0	0	0	493,000
19	0.00	2.5	3.2	19.7	18.6	25.5	67,529	0	9,477	77,006	1,317	0	367,000	271,000	0	20,796	42,310	0	83,000	265,000	0	0	0	0
20	0.00	2.8	3.3	13.2	15.0	25.6	67,854	40	9,125	76,979	3,068	0	358,000	271,000	21,815	22,406	48,135	0	98,000	277,000	52,426	0	0	61,600
21	0.00	2.1	3.2	23.0	12.2	25.6	66,688	0	10,778	77,466	21,312	5	355,000	271,000	55,525	22,112	45,176	0	65,000	265,000	63,732	0	0	101,000
22	0.00	1.2	3.2	24.0	14.1	25.5	63,399	41	7,819	71,218	1,417	1	307,000	264,000	33,663	21,735	61,960	0	32,000	265,000	5,996	0	0	351,000
23	0.00	1.3	3.1	24.0	17.7	25.5	64,934	0	9,148	74,082	1,850	0	302,000	264,000	45,880	21,735	40,910	0	36,000	254,000	30,931	0	0	66,000
24	0.00	1.3	3.2	21.6	15.3	25.5	63,982	41	9,251	73,233	5	0	288,000	264,000	55,059	21,735	6,238	0	36,000	254,000	0	0	0	49,000
25	0.00	1.3	3.2	19.2	12.9	25.5	63,199	41	9,251	72,450	5	0	274,000	264,000	55,059	21,736	80,286	0	36,000	265,000	0	0	0	49,000
26	0.45	1.7	3.2	15.0	18.6	25.5	63,599	0	8,773	72,372	4,386	0	209,000	264,000	51,970	19,670	67,477	0	48,000	265,000	0	0	0	46,800
27	0.70	1.5	3.2	14.4	17.3	25.5	65,808	39	20,035	85,843	1,925	0	211,000	235,000	29,810	22,676	22,976	0	40,000	265,000	18,632	0	0	41,700
28	0.00	1.1	3.2	24.0	17.9	25.5	61,925	0	6,431	68,356	4,998	0	250,000	206,000	15,565	21,948	35,566	0	28,000	265,000	0	0	0	14,000
29	0.00	1.5	3.2	25.8	12.9	25.6	62,317	40	6,814	69,131	4	264	238,000	151,000	55,058	24,250	44,301	0	40,000	265,000	42,013	0	0	83,200
30	0.00	1.1	3.2	16.8	15.8	25.3	62,229	37	9,219	71,448	81	0	240,000	144,000	57,487	16,975	15,203	0	28,000	265,000	20,540	0	0	68,200
31	0.00	1.2	3.1	21.6	11.1	25.4	58,303	20	6,014	64,317	1	0	249,000	144,000	44,072	16,975	0	0	32,000	254,000	0	0	0	39,700
Total	8.54						1,941,881	731	222,776	2,164,657	137,649	646				1,348,377	781,390	608,224			450,113			1,573,700
Daily Average		2.3	3.2	18.0	15.5	25.5	62,641						331,903	232,097	43,496	25,206	19,620		77,516	261,806				50,765
Mo. Average																								

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 is 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, IV, 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. Column IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.

10. Columns XIV and XV, calculated from depth in 575000 gal. tanks.

11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.

12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

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. True is less than 0.01 inches and is not included in total.
6. Columns II 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. Column 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-XXII, XVI-XXIX, and XXXI-XXXIV, quantities from flow meters.
12. Column XXXV includes 80% of the daily values from Columns XIX, XXII, XXIII, plus 90% of Column XVI.

TABLE 2. FIELD DATA ENTRY FORM
July 2022
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

MONTH/YEAR

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pumps (gal.)	Section 9 LDS (gal.)	Section 7-8 Pump (gal.)	Section 7-8 LDS (gal.)	MLPS to Pond B (gal.)	Pond B to LEF (gal.)	Pond B Depth (ft.)	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 (gal.)	Dust Control (Spreayed) (gal.)	Effluent Hauled (gal.)	Dust Control (Spreayed) (gal.)
1	0.82	35,661,436	14.4	3,478,167	52,297	7,152,183	539	493,679	13,239,691	3.2	1.1	0	11.17	7.00	19,531	0	0	0	0
2	0.00	35,709,216	13.2	3,487,192	52,297	7,155,828	539	535,228	13,336,698	3.1	2.2	0	11.67	7.00	24,236	0	0	0	0
3	1.60	35,756,638	11.7	3,498,766	52,297	7,160,070	580	566,355	13,336,698	3.1	2.2	0	11.84	7.00	24,236	0	0	0	0
4	0.05	35,804,060	10.2	3,511,747	52,297	7,164,757	620	597,481	13,378,497	3.1	2.6	0	12.00	7.00	24,236	0	0	0	0
5	0.00	35,844,532	10.2	3,523,105	52,297	7,167,975	620	651,121	13,436,072	3.2	2.7	0	12.08	7.00	24,239	0	0	0	0
6	0.65	35,891,544	15.0	3,533,502	52,297	7,171,169	660	699,990	13,479,642	3.0	3.1	0	12.00	7.00	19,794	0	0	0	0
7	1.77	35,939,944	19.1	3,534,584	52,297	7,175,653	660	722,483	13,509,902	3.2	2.6	0	12.58	7.00	22,353	0	0	0	0
8	0.00	35,987,172	17.4	3,547,458	52,297	7,180,219	699	735,706	13,527,700	3.4	3.3	0	13.50	7.00	30,762	0	0	0	0
9	0.00	36,036,428	12.6	3,552,486	52,662	7,187,965	699	758,070	13,570,347	3.2	3.7	50,321	14.17	7.00	30,762	0	0	0	0
10	0.00	36,086,728	13.8	3,554,051	52,664	7,194,479	740	812,960	13,620,300	3.1	2.6	27,806	13.50	8.67	30,762	0	0	0	0
11	0.38	36,139,084	11.4	3,554,072	52,664	7,202,395	740	850,662	13,658,482	3.2	2.6	0	13.67	9.17	30,762	0	0	0	0
12	0.00	36,186,672	16.2	3,555,769	52,664	7,208,256	781	891,387	13,708,697	3.2	3.2	0	13.50	9.17	35,972	0	0	0	0
13	0.00	36,234,420	13.8	3,556,950	52,665	7,214,569	820	927,303	13,748,637	3.2	3.7	55,191	14.08	9.17	36,555	0	0	0	0
14	1.55	36,279,664	28.2	3,556,956	52,665	7,219,520	820	984,017	13,802,217	3.2	3.1	0	13.17	9.17	36,456	0	0	0	0
15	0.25	36,325,260	21.0	3,563,519	52,665	7,225,790	858	1,011,066	13,858,800	3.1	3.8	0	13.00	9.17	38,383	6,216	0	0	0
16	0.32	36,375,024	24.0	3,563,574	52,665	7,231,993	893	1,031,066	13,914,846	3.2	3.5	50,684	13.00	9.17	25,867	24,845	0	0	0
17	0.00	36,427,912	25.2	3,564,272	52,666	7,240,418	893	1,073,834	13,973,366	3.2	2.4	31,841	13.00	9.17	25,867	12,843	0	0	0
18	0.00	36,482,736	18.0	3,564,380	52,666	7,248,701	930	1,128,830	14,028,697	3.2	2.1	0	12.75	9.25	25,868	53,782	0	0	0
19	0.00	36,534,956	19.7	3,565,697	52,666	7,258,178	930	1,135,902	14,028,697	3.2	2.5	0	12.75	9.42	20,796	42,310	0	0	0
20	0.00	36,586,780	13.2	3,568,765	52,666	7,267,303	970	1,157,595	14,050,512	3.3	2.8	52,426	12.42	9.42	22,406	48,135	0	0	0
21	0.00	36,639,044	23.0	3,590,077	52,671	7,278,081	970	1,203,285	14,106,037	3.2	2.1	63,732	12.33	9.42	22,112	45,176	0	0	0
22	0.00	36,688,572	24.0	3,591,494	52,672	7,285,900	1,011	1,248,543	14,139,700	3.2	1.2	5,996	10.67	9.17	21,735	61,960	0	0	0
23	0.00	36,739,144	24.0	3,593,344	52,672	7,295,048	1,011	1,280,311	14,185,580	3.1	1.3	30,931	10.50	9.17	21,735	40,910	0	0	0
24	0.00	36,788,764	21.6	3,593,349	52,672	7,304,299	1,052	1,334,877	14,240,639	3.2	1.3	0	10.00	9.17	21,735	6,238	0	0	0
25	0.00	36,838,384	19.2	3,593,354	52,672	7,313,550	1,092	1,389,442	14,295,697	3.2	1.3	0	9.50	9.17	21,736	80,286	0	0	0
26	0.45	36,887,784	15.0	3,597,740	52,672	7,322,323	1,092	1,441,515	14,347,667	3.2	1.7	0	7.25	9.17	19,670	67,477	0	0	0
27	0.70	36,939,164	14.4	3,599,665	52,672	7,342,358	1,131	1,479,250	14,377,477	3.2	1.5	18,632	7.33	8.17	22,676	22,976	0	0	0
28	0.00	36,987,048	24.0	3,604,663	52,672	7,348,789	1,131	1,488,618	14,393,042	3.2	1.1	0	8.67	7.17	21,948	35,566	0	0	0
29	0.00	37,034,988	25.8	3,604,667	52,936	7,355,603	1,171	1,544,398	14,448,100	3.2	1.5	42,013	8.25	5.25	24,250	44,301	0	0	0
30	0.00	37,086,288	16.8	3,604,748	52,936	7,364,822	1,208	1,602,322	14,505,587	3.2	1.1	20,540	8.33	5.00	16,975	15,203	0	0	0
31	0.00	37,133,662	21.6	3,604,749	52,936	7,370,836	1,228	1,640,195	14,549,639	3.1	1.2	0	8.67	5.00	16,975	0	0	0	0
Totals	8.54	37,181,036	26.4	36,047,490	0.0	73,768,500	12,470	16,780,670	14,593,731.0	3	1.3	450,113	9	5.00	781,390	608,224	0	0	0

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 I include quantities from leak detection system.
- Column B, trace is less than 0.01 inches.
- Columns C-K, N, and Q-U are quantities from flow meters.

Type of Cover	Phases 1-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

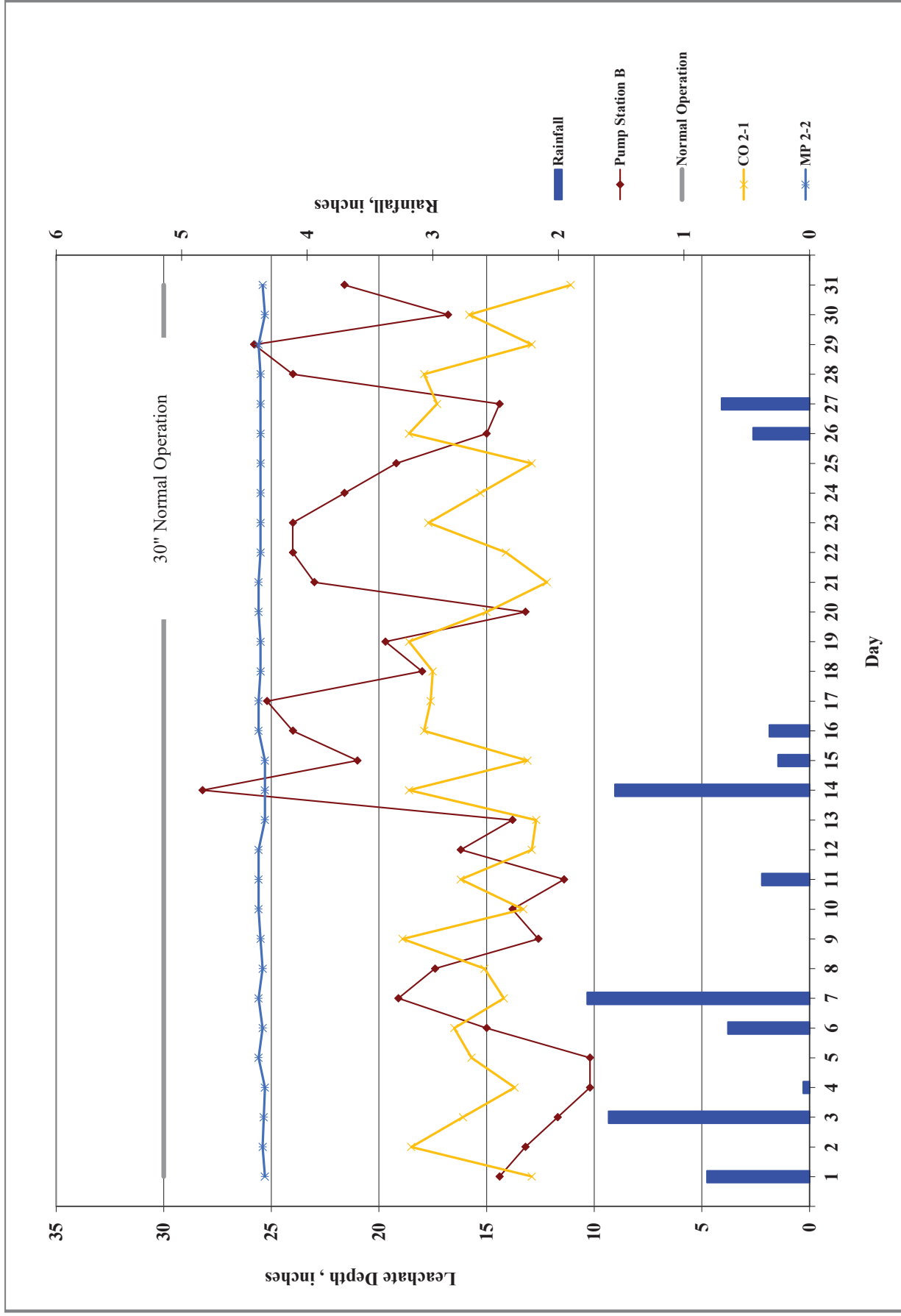


Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2022.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2022**

Month	Rainfall (in.)	Leachate Arriving at LTRF				Leachate Leaving LTRF				LEF Leachate Treated at LEF (gal.)	Effluent Disposal			Inflow / Outflow For LTRF		Change in Storage ² (gal.)
		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.)		
January	1.94	177	267,905	237,637	2,946,654	1,665,014	0	310,423	1,281,386	0	0	327,064	3,452,373	3,256,823	195,550	
February	0.60	70	207,603	171,218	2,282,000	1,658,498	0	390,783	1,024,398	0	0	39,931	2,660,891	3,073,679	-412,788	
March	3.00	272	187,103	184,958	2,360,014	1,305,276	0	573,348	1,108,913	0	0	374,378	2,732,347	2,987,537	-255,191	
April	5.16	587	130,992	151,989	2,006,957	654,652	0	355,573	1,388,533	0	0	242,565	2,290,525	2,398,758	-108,233	
May	3.26	455	121,539	145,455	1,965,984	243,391	0	401,147	1,444,252	0	0	275,271	2,233,433	2,088,790	144,643	
June	6.84	4,289	49,171	123,341	1,872,286	338,274	0	502,013	1,332,130	0	0	195,057	2,049,087	2,172,417	-123,331	
July	8.54	4,420	138,295	222,776	1,941,881	608,224	0	781,390	1,348,377	0	0	450,113	2,307,372	2,737,991	-430,619	
August																
September																
October																
November																
December																
YTD Total																

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.



SOLID WASTE MANAGEMENT

PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: September 15, 2022

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 2022
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 2022 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 5.7 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 leachate in Pond B was 3.3 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 21.3 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 18 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 26.2 inches.

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

Column VIII 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 66,953 gallons. A total of 2,008,596 gallons of leachate was pumped this month.

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

Column IX 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 751 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 X 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 181,260 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column XI 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 2,189,856 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column XII 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 127,345 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XIII 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 32 gallons of leachate was removed from the leak detection system.

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

Column XIV 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 352,700 gallons of leachate was stored in the tank.

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

Column XV 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 194,267 gallons of leachate was stored in the tank.

Leachate Treated at LEF (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,173,508 gallons of leachate was treated at the evaporator.

Leachate Treated at LTRF (Column XVII)

Column XVII 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 764,531 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVIII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 443,507 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XIX)

Column XIX 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 zero gallons of leachate was used for dust control.

Pond A Storage (Column XX)

Column XX 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 70,627 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI presents the daily amount of leachate, 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 pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 272,800 gallons of leachate was stored in Pond B.

Effluent Irrigation (Column XXII)

Column XXII 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 503,739 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIII 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 XXIV 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 XXV 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 1,459,200 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 2,321,731 gallons. Total outflow quantity from the LTRF was 2,381,546 gallons. The change in storage for the month decreased by 59,815 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM																								
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 Sections 7-8 LDS (gal.)	Leachate Pumped to MLPS from Sections 7-8 LDS (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 LEF (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond Storage (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.00	1.3	3.0	26.4	6.4	25.4	17,120	6,014	23,134	0	0	259,000	144,000	44,072	16,976	0	0	36,000	242,000	45,289	0	0	0	75,900
2	0.00	1.6	3.2	21.6	18.2	25.5	67,905	74,437	2,099	0	264,000	144,000	48,891	13,273	0	0	0	44,000	265,000	54,193	0	0	0	87,400
3	0.00	0.6	3.2	16.2	18.3	25.7	72,476	8,232	80,708	1,989	18	302,000	144,000	50,130	22,617	0	0	10,000	265,000	0	0	0	0	45,100
4	0.00	1.1	3.2	24.2	15.8	25.5	67,851	6,018	73,869	1,533	0	336,000	144,000	13,145	23,523	0	0	28,000	265,000	0	0	0	0	11,800
5	0.00	1.7	3.2	19.8	17.0	25.5	66,894	6,378	73,272	432	0	348,000	144,000	33,930	23,798	0	0	48,000	265,000	29,887	0	0	0	54,400
6	0.00	1.5	3.2	25.4	18.6	25.2	65,220	6,908	72,128	51	0	386,000	144,000	8,965	26,781	0	0	40,000	265,000	0	0	0	0	8,100
7	0.28	1.6	3.3	20.5	17.8	25.4	61,894	5,955	67,939	383	0	404,000	144,000	17,513	26,781	0	0	44,000	265,000	0	0	0	0	15,500
8	0.00	1.7	3.3	15.6	16.9	25.5	64,447	5,955	70,602	383	0	422,000	144,000	17,513	26,783	0	0	48,000	277,000	0	0	0	0	15,800
9	0.00	2.5	3.4	25.8	18.0	25.4	65,771	7,359	73,130	1,338	1	437,000	144,000	38,935	40,001	0	0	83,000	289,000	38,935	0	0	0	66,200
10	0.00	2.2	3.2	18.0	16.2	25.3	66,530	5,681	72,611	1,996	0	415,000	144,000	54,635	43,154	41,766	0	70,000	265,000	17,504	0	0	0	63,200
11	0.00	2.7	3.2	13.2	15.7	25.4	66,807	4,151	68,320	492	0	365,000	144,000	29,980	38,075	58,826	0	93,000	265,000	0	0	0	0	27,000
12	0.27	2.3	3.2	18.6	18.8	25.5	71,026	7,455	73,455	326	0	322,000	144,000	37,195	28,453	68,188	0	74,000	265,000	51,552	0	0	0	74,700
13	0.00	1.6	3.2	26.3	13.9	25.5	72,004	12,233	84,237	205	0	281,000	144,000	52,775	28,453	54,390	0	44,000	265,000	49,772	0	0	0	87,300
14	0.00	1.7	3.2	25.2	21.0	25.6	71,066	6,562	77,627	386	0	277,000	144,000	49,745	28,453	0	0	48,000	265,000	0	0	0	0	44,800
15	0.00	1.7	3.2	24.0	14.2	25.5	70,877	6,562	77,439	386	0	264,000	144,000	49,745	28,455	0	0	48,000	265,000	0	0	0	0	44,800
16	0.00	2.2	3.2	23.0	15.6	25.5	68,265	4,798	73,063	2,006	0	266,000	144,000	50,585	23,119	0	0	70,000	265,000	0	0	0	0	45,500
17	0.00	1.5	3.2	23.4	14.6	25.4	69,389	6,604	75,993	833	0	271,000	144,000	46,505	21,725	0	0	40,000	265,000	36,802	0	0	0	71,300
18	0.00	1.2	3.2	25.8	15.1	25.5	66,201	4,791	70,992	41,525	0	302,000	144,000	53,060	23,414	0	0	32,000	265,000	27,840	0	0	0	70,000
19	0.00	1.1	3.2	26.4	15.1	25.2	66,248	6,262	72,510	35,934	2	322,000	144,000	53,223	22,259	0	0	28,000	265,000	0	0	0	0	47,900
20	1.10	1.6	3.2	20.3	15.2	25.0	58,743	4,741	63,484	11,549	3	355,000	144,000	33,400	7,819	0	0	44,000	265,000	0	0	0	0	30,100
21	0.00	1.7	3.2	19.2	26.2	25.1	56,669	5,845	62,814	1,286	1	402,000	144,000	33,524	7,819	0	0	48,000	265,000	0	0	0	0	30,200
22	0.00	1.7	3.2	18.0	22.0	25.4	71,201	5,845	77,045	1,286	1	449,000	144,000	33,524	7,819	0	0	48,000	265,000	0	0	0	0	30,200
23	0.00	2.2	3.1	13.8	22.7	25.5	56,278	5,606	61,884	669	5	422,000	192,000	25,975	29,668	0	0	70,000	254,000	0	0	0	0	23,400
24	2.40	2.3	3.2	22.0	24.4	25.1	65,990	4,660	70,650	14,681	0	396,000	214,000	54,170	29,863	0	0	74,000	265,000	45,458	0	0	0	85,100
25	0.42	2.5	3.1	16.8	18.1	24.9	60,951	6,051	64,867	814	0	367,000	278,000	53,355	39,852	0	0	83,000	254,000	0	0	0	0	48,000
26	0.90	3.3	3.1	19.8	17.6	25.3	62,899	1,873	62,899	1,873	0	336,000	307,000	18,505	40,195	0	0	123,000	254,000	10,002	0	0	0	24,700
27	0.23	3.3	3.2	24.0	18.1	25.4	63,943	11,812	75,755	676	1	295,000	367,000	53,048	20,278	25,128	0	123,000	265,000	0	0	0	0	47,700
28	0.00	3.6	3.2	19.2	24.8	25.4	69,043	5,456	75,059	429	0	307,000	367,000	35,706	20,278	6,005	0	145,000	265,000	0	0	0	0	32,100
29	0.00	3.8	3.2	14.4	13.3	25.2	68,412	5,456	73,668	429	0	319,000	367,000	35,706	20,278	68,354	0	157,000	265,000	38,998	0	0	0	63,300
30	0.00	3.6	3.1	16.2	13.1	25.4	67,370	5,476	72,846	858	0	333,000	309,000	45,915	13,535	70,019	0	145,000	254,000	0	0	0	0	41,100
31	0.10	3.5	3.2	16.8	16.8	25.3	67,559	5,663	73,222	500	0	362,000	259,000	140	21,034	50,831	0	140,000	265,000	57,507	0	0	0	46,100
Total	5.70						2,008,596	181,260	2,189,856	127,345	32			1,173,508	764,531	443,507		70,933	272,800					1,459,200
Daily Average		2.2	3.3	21.3	18.0	26.2						352,700	194,267											
Mos. Average																								
Notes																								
1. NR = No Records, N/A = 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 2-1.																								
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. Column III, Trace is less than 0.01 inches and is not included in total.																								
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.																								

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, Truse is less than 0.01 inches and is not included in total.
6. Columns II 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. Column 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-XIII, XVI-XXIX, and XXXI-XXXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII-XXIII, plus 90% of Column XVI.

TABLE 2. FIELD DATA ENTRY FORM
August 2022
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

MONTH/YEAR

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pumps (gal.)	Section 9 LDS (gal.)	Section 7-8 Pump (gal.)	Section 7-8 LDS (gal.)	MLPS to Pond B (gal.)	Pond B to LEF (gal.)	Pond B Depth (ft.)	Pond A Depth (ft.)	Effluent Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled (gal.)	Dust Control (Sprayed) (gal.)
1	0.00	37,181,036	26.4	3,604,749	52,936	7,376,850	1,247	1,678,067	14,593,731	3.0	1.3	45,289	9.00	5.00	16,976	0	0	0	0
2	0.00	37,230,096	21.6	3,606,848	52,936	7,383,382	1,247	1,732,776	14,642,622	3.2	1.6	54,193	9.17	5.00	13,273	0	0	0	0
3	0.00	37,285,140	16.2	3,608,837	52,954	7,391,614	1,287	1,775,202	14,692,752	3.2	0.6	0	10.50	5.00	22,617	0	0	0	0
4	0.00	37,336,344	24.2	3,610,370	52,954	7,397,632	1,325	1,791,285	14,705,897	3.2	1.1	0	11.67	5.00	23,523	0	0	0	0
5	0.00	37,388,632	19.8	3,610,802	52,954	7,404,010	1,325	1,831,612	14,739,827	3.2	1.7	29,887	12.08	5.00	23,798	0	0	0	0
6	0.00	37,439,500	25.4	3,610,853	52,954	7,410,918	1,364	1,831,612	14,748,792	3.2	1.5	0	13.42	5.00	26,781	0	0	0	0
7	0.28	37,487,132	20.3	3,611,236	52,954	7,416,605	1,385	1,854,853	14,766,305	3	1.6	0	14.0	5.00	26,781	0	0	0	0
8	0.00	37,534,764	15.6	3,611,618	52,954	7,422,828	1,405	1,878,093	14,783,817	3.3	1.7	0	14.67	5.00	26,783	0	0	0	0
9	0.00	37,584,072	25.8	3,612,956	52,955	7,430,187	1,443	1,903,277	14,822,752	3.4	2.5	38,935	15.17	5.00	40,001	0	0	0	0
10	0.00	37,634,208	18.0	3,614,952	52,955	7,435,868	1,443	1,956,073	14,877,387	3.2	2.2	17,504	14.42	5.00	43,154	0	0	0	0
11	0.00	37,682,556	13.2	3,615,444	52,955	7,437,381	1,483	1,993,609	14,907,367	3.2	2.7	0	12.67	5.00	38,075	0	0	0	0
12	0.27	37,732,308	18.6	3,615,770	52,955	7,439,810	1,521	2,022,071	14,944,562	3.2	2.3	51,552	11.17	5.00	28,453	0	0	0	0
13	0.00	37,784,200	26.3	3,615,975	52,955	7,452,043	1,521	2,064,086	14,997,337	3.20	1.6	49,772	9.75	5.00	28,453	0	0	0	0
14	0.00	37,835,154	25.2	3,616,361	52,955	7,458,605	1,540	2,113,421	15,047,082	3.2	1.7	0	9.46	5.00	28,453	0	0	0	0
15	0.00	37,886,108	24.0	3,616,746	52,955	7,465,166	1,558	2,162,756	15,096,827	3.2	1.7	0	9.17	5.00	28,455	0	0	0	0
16	0.00	37,937,216	23.0	3,618,752	52,955	7,469,964	1,597	2,218,190	15,147,412	3.2	2.2	0	9.25	5.00	23,119	0	0	0	0
17	0.00	37,988,648	23.4	3,619,585	52,955	7,476,568	1,635	2,259,631	15,193,917	3.2	1.5	36,802	9.42	5.00	21,725	0	0	0	0
18	0.00	38,038,476	25.8	3,661,110	52,955	7,481,359	1,635	2,313,159	15,246,977	3.2	1.2	27,840	10.50	5.00	23,414	0	0	0	0
19	0.00	38,087,252	26.4	3,697,044	52,957	7,487,621	1,674	2,355,808	15,300,200	3.2	1.1	0	11.17	5.00	22,259	0	0	0	0
20	1.10	38,135,800	20.3	3,708,593	52,960	7,492,362	1,711	2,387,849	15,333,600	3.2	1.6	0	12.33	5.00	7,819	0	0	0	0
21	0.00	38,182,574	19.2	3,709,879	52,961	7,498,207	1,731	2,471,431	15,367,124	3.2	1.7	0	13.96	5.00	7,819	0	0	0	0
22	0.00	38,229,348	18.0	3,711,165	52,962	7,504,051	1,751	2,435,013	15,400,647	3.2	1.7	0	15.58	5.00	7,819	0	0	0	0
23	0.00	38,279,336	13.8	3,711,834	52,967	7,509,657	1,751	2,463,742	15,426,622	3.1	2.2	0	14.67	6.67	29,668	0	0	0	0
24	2.40	38,329,084	22.0	3,726,515	52,967	7,514,317	1,792	2,518,871	15,480,792	3.2	2.3	45,458	13.75	7.42	29,863	0	0	0	0
25	0.42	38,379,468	16.8	3,727,329	52,967	7,518,233	1,830	2,537,986	15,534,147	3.1	2.5	0	12.75	9.67	39,852	0	0	0	0
26	0.90	38,427,916	19.8	3,729,202	52,967	7,518,233	1,830	2,564,732	15,552,652	3.1	3.3	10,002	11.67	10.67	40,195	0	0	0	0
27	0.23	38,476,120	24.0	3,729,878	52,968	7,530,045	1,872	2,593,188	15,605,700	3.2	3.3	0	10.25	12.75	20,278	25,128	0	0	0
28	0.00	38,529,984	19.2	3,730,307	52,968	7,535,301	1,890	2,627,902	15,641,406	3.2	3.6	0	10.67	12.75	20,278	6,005	0	0	0
29	0.00	38,583,848	14.4	3,730,736	52,968	7,540,957	1,907	2,662,616	15,677,112	3.2	3.8	38,998	11.08	12.75	20,278	68,354	0	0	0
30	0.00	38,636,028	16.2	3,731,594	52,968	7,546,433	1,943	2,695,787	15,723,027	3.1	3.6	0	11.58	10.75	13,535	70,019	0	0	0
31	0.10	38,688,600	16.8	3,732,094	52,968	7,552,096	1,979	2,708,427	15,723,167	3.2	3.5	57,507	12.6	9.0	21,034	50,831	0	0	0
Totals	5:70											503,739			764,531				
																443,507			

- Notes:
- NR = No Records, NA = Not Available.
 - Values in bold are estimated; values in *italics* are substitutes for missing data and are based on averaged values
 - Columns G and I include quantities from leak detection system.
 - Column B, trace is less than 0.01 inches.
 - Columns C-K, N, and Q-U are quantities from flow meters.

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

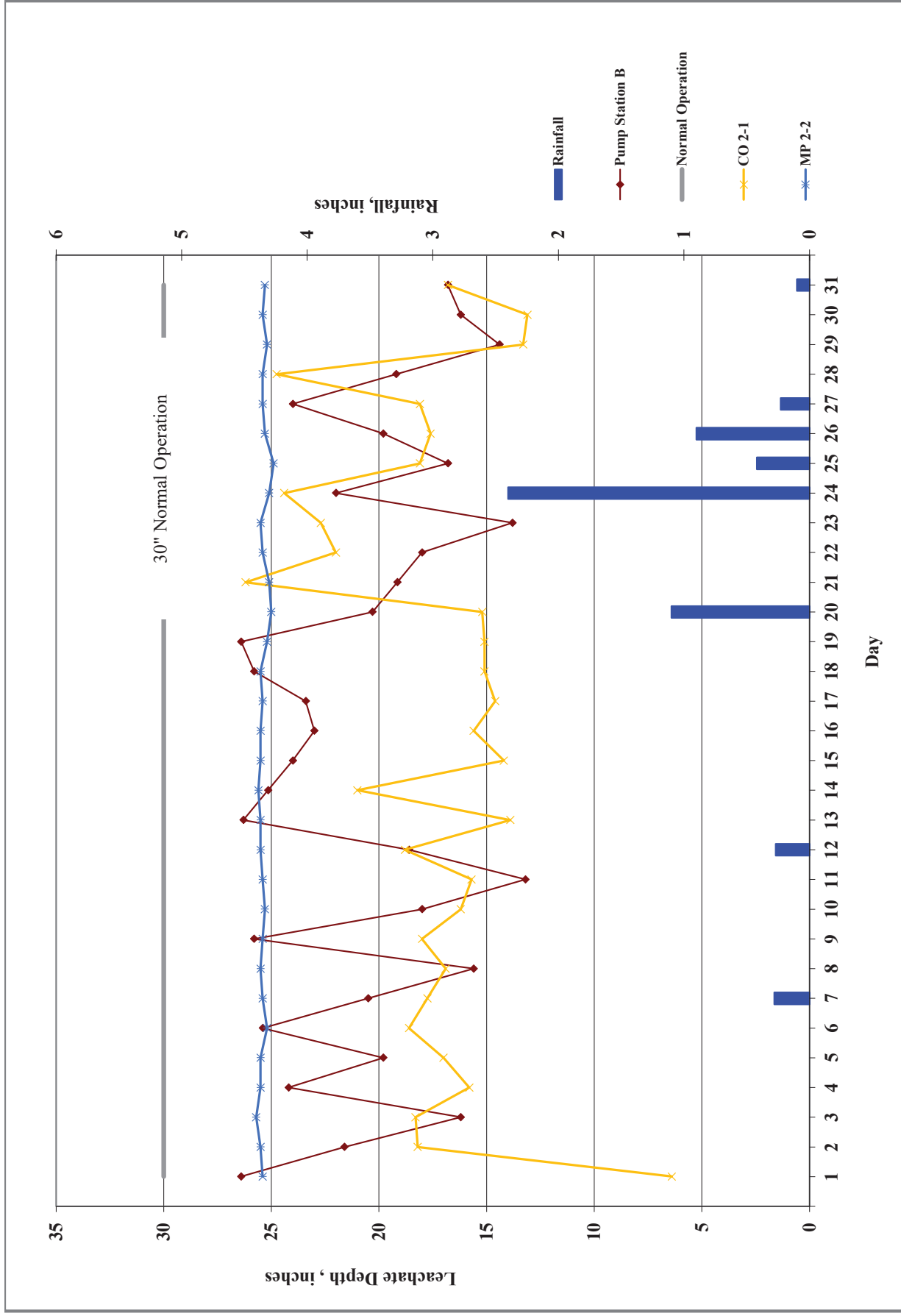


Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2022.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2022**

Month	Rainfall (in.)	Leachate Arriving at LTRF			Leachate Leaving LTRF			LEF			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.)	Leachate Treated at LEF (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 ² (gal.)
January	1.94	177	267,905	237,637	2,946,654	1,665,014	0	310,423	1,281,386	0	0	327,064	3,452,373	3,256,823	195,550
February	0.60	70	207,603	171,218	2,282,000	1,658,498	0	390,783	1,024,398	0	0	39,931	2,660,891	3,073,679	-412,788
March	3.00	272	187,103	184,958	2,360,014	1,305,276	0	573,348	1,108,913	0	0	374,378	2,732,347	2,987,537	-255,191
April	5.16	587	130,992	151,989	2,006,957	654,652	0	355,573	1,388,533	0	0	242,565	2,290,525	2,398,758	-108,233
May	3.26	455	121,539	145,455	1,965,984	243,391	0	401,147	1,444,252	0	0	275,271	2,233,433	2,088,790	144,643
June	6.84	4,289	49,171	123,341	1,872,286	338,274	0	502,013	1,332,130	0	0	195,057	2,049,087	2,172,417	-123,331
July	8.54	4,420	138,295	222,776	1,941,881	608,224	0	781,390	1,348,377	0	0	450,113	2,307,372	2,737,991	-430,619
August	5.70	4,498	127,377	181,260	2,008,596	443,507	0	764,531	1,173,508	0	0	503,739	2,321,731	2,381,546	-59,815
September															
October															
November															
December															
YTD Total															

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.



SOLID WASTE MANAGEMENT

PO Box 1110, Tampa, FL 33601-1110

MEMORANDUM

DATE: October 14, 2022

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 2022
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 2022 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 14.76 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 2.3 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 leachate 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 level recorded on the 30th was high to due to no power from hurricane Ian. The average recorded depth of leachate in the PS-B sump was 24.2 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 level recorded on the 30th was high to due to no power from hurricane Ian. The average recorded depth of leachate in the CO 2-1 was 16 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 22 inches.

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

Column VIII 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 75,948 gallons. A total of 2,278,454 gallons of leachate was pumped this month.

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

Column IX 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 2,756 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 X 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 296,981 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column XI)

Column XI 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 2,575,435 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XII)

Column XII 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 9,767 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XIII)

Column XIII 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 2,391 gallons of leachate was removed from the leak detection system.

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

Column XIV 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 296,300 gallons of leachate was stored in the tank.

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

Column XV 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 204,133 gallons of leachate was stored in the tank.

Leachate Treated at LEF (Column XVI)

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,177,033 gallons of leachate was treated at the evaporator.

Leachate Treated at LTRF (Column XVII)

Column XVII 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 663,815 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVIII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 1,192,324 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XIX)

Column XIX 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 zero gallons of leachate was used for dust control.

Pond A Storage (Column XX)

Column XX 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 82,020 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI presents the daily amount of leachate, 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 pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 249,467 gallons of leachate was stored in Pond B.

Effluent Irrigation (Column XXII)

Column XXII 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 598,107 gallons of effluent was sprayed.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIII 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 XXIV 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 XXV 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 1,538,000 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 2,602,358 gallons. Total outflow quantity from the LTRF was 3,033,172 gallons. The change in storage for the month decreased by 430,814 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM

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 from Section 9 (gal.)	Leachate Pumped from LDS (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LEF (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Pond A Storage (gal.)	Pond B Storage (gal.)	Effluent Irrigation (gal.)	Effluent Dust Control (Sprayed) (gal.)	Total Effluent Hauled (gal.)	Total Evaporation (gal.)
1	0.08	2.8	3.2	25.8	17.1	25.4	66,750	1,979	5,530	72,280	359	0	348,000	259,000	52,085	21,142	40,782	0	98,000	265,000	52,682	0	0	89,000
2	0.33	1.7	3.2	25.2	18.7	25.3	66,924	38	4,693	71,617	386	0	309,000	257,000	52,448	22,497	43,500	0	48,000	265,000	49,224	0	0	86,000
3	0.00	1.0	3.3	24.0	17.0	25.2	63,206	0	4,621	67,827	384	0	293,000	257,000	30,400	22,497	6,417	0	24,000	277,000	0	0	0	27,400
4	0.00	1.4	3.3	25.2	17.0	25.3	66,552	27	5,345	71,797	877	0	305,000	257,000	42,849	22,497	6,421	0	36,000	277,000	0	0	0	38,600
5	0.06	1.8	3.3	26.4	18.0	25.3	67,995	27	5,345	73,140	1,754	0	310,000	261,000	42,849	22,497	0	0	52,000	277,000	0	0	0	38,600
6	0.00	2.2	3.2	20.4	17.5	25.4	67,459	27	5,346	72,805	0	0	333,000	259,000	42,849	22,497	61,704	0	70,000	265,000	0	0	0	38,600
7	0.25	2.3	3.2	26.4	17.5	25.4	71,262	39	5,489	76,751	1,927	0	295,000	259,000	26,965	22,598	58,331	0	83,000	265,000	34,453	0	0	51,800
8	0.60	2.3	3.2	26.2	13.6	25.7	73,198	38	5,616	78,814	824	0	324,000	214,000	17,435	18,571	71,135	0	74,000	265,000	38,281	0	0	46,500
9	1.47	1.0	3.2	27.0	18.0	9.0	72,268	0	6,241	78,509	6	0	309,000	180,000	57,255	25,401	53,235	0	24,000	265,000	7,699	0	0	57,700
10	0.00	2.6	3.2	25.8	17.1	11.1	68,216	37	4,524	72,740	0	0	326,000	144,000	33,598	26,401	14,471	0	88,000	265,000	0	0	0	30,200
11	0.00	3.0	3.2	25.5	17.1	12.7	67,666	17	5,396	73,062	48	0	323,000	144,000	47,636	26,401	0	0	108,000	265,000	17,400	0	0	42,900
12	0.45	3.4	3.2	25.2	17.1	12.0	72,027	48	5,396	77,423	48	0	319,000	144,000	47,636	26,403	51,806	0	129,000	265,000	17,486	0	0	56,900
13	0.22	3.5	3.2	24.0	17.7	11.1	74,678	38	6,078	80,756	12	0	281,000	144,000	47,150	24,752	51,739	0	140,000	265,000	0	0	0	42,400
14	0.42	3.8	3.1	23.0	17.2	11.3	73,271	36	4,905	78,176	10	0	266,000	144,000	51,732	24,752	72,566	0	157,000	254,000	58,660	0	0	93,500
15	0.18	3.1	3.1	24.6	11.5	12.0	69,150	0	6,501	75,651	12	0	272,000	144,000	37,878	24,936	0	0	113,000	254,000	46,743	0	0	71,500
16	0.00	2.7	3.1	25.7	12.6	12.6	70,328	38	6,695	77,023	368	0	317,000	144,000	19,975	25,620	0	0	93,000	254,000	25,551	0	0	38,400
17	2.55	2.9	3.1	26.4	18.2	25.7	78,659	2	5,854	84,513	0	0	362,000	144,000	49,685	27,180	0	0	103,000	254,000	0	0	0	44,700
18	0.00	3.3	3.2	24.0	15.0	26.1	101,291	38	16,847	118,138	1	0	429,000	144,000	26,448	27,180	0	0	123,000	254,000	0	0	0	23,400
19	0.00	3.6	3.2	21.6	11.8	26.0	99,960	38	16,847	116,807	1	0	497,000	144,000	26,448	27,182	25,037	0	145,000	265,000	0	0	0	23,400
20	0.28	4.0	3.2	22.8	15.3	25.8	109,273	0	17,753	127,026	1,356	148	444,000	223,000	50,041	26,175	81,864	0	168,000	265,000	42,100	0	0	78,700
21	0.00	3.7	3.2	24.0	12.3	25.9	103,524	39	18,150	121,674	320	203	348,000	329,000	54,099	26,647	85,218	0	151,000	265,000	66,216	0	0	101,700
22	0.00	2.9	3.1	18.0	14.4	25.8	104,538	36	16,241	120,779	146	536	324,000	329,000	53,745	25,423	125,576	0	103,000	254,000	69,014	0	0	103,600
23	0.27	2.1	3.2	14.4	15.4	25.6	97,367	0	16,369	113,736	78	0	285,000	288,000	48,719	25,691	105,457	0	65,000	265,000	66,391	0	0	97,000
24	0.00	1.1	3.2	24.0	12.8	25.6	91,213	42	14,762	105,975	68	0	245,000	274,000	35,009	24,927	107,294	0	38,000	265,000	23,607	0	0	50,400
25	0.00	1.4	3.2	20.7	15.6	25.7	94,401	39	14,078	108,478	33	0	239,000	276,000	52,648	24,927	6,398	0	36,000	265,000	0	0	0	47,400
26	2.55	1.6	3.2	17.4	25.8	25.8	95,382	39	14,078	109,459	33	0	233,000	278,000	52,648	24,929	95,313	0	44,000	265,000	0	0	0	47,400
27	1.28	1.7	3.6	20.4	14.0	26.1	96,174	36	13,532	109,706	96	705	240,000	242,000	23,382	24,092	79,970	0	48,000	312,000	0	0	0	21,000
28	3.93	0.0	0.0	0.0	NA	26.7	0	0	0	0	0	0	0	0	0	0	0	0	800	0	0	0	0	0
29	0.00	0.0	0.0	0.0	NA	27.4	261	0	0	261	0	0	0	0	0	0	0	0	800	0	0	0	0	0
30	0.00	3.0	3.6	91.9	50.7	26.5	95,907	93	44,750	140,657	419	793	302,000	242,000	53,422	0	13,400	0	108,000	312,000	0	0	0	48,100
Total	14.76						2,278,454	2,756	296,981	2,575,435	9,767	2,391	296,300	204,133	1,177,033	663,815	1,192,324	0	\$2,020	249,467	598,107	0.00	0.00	1,538,000
Daily Average		2.3	3.0	24.2	16.0	22.0	75,948																	51,267
Mo. Average																								

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, True is less than 0.01 inches and is not included in total.
6. Columns II 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. Column 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-XIII, XVI-XXIX, and XXXI-XXXIV, quantities from flow meters.
12. Column XXXV includes 80% of the daily values from Columns XIX, XXII-XXIII plus 90% of Column XVI.

TABLE 2. FIELD DATA ENTRY FORM
September 2022
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

MONTH/YEAR

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Day	Rainfall (in.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pumps (gal.)	Section 9 LDS (gal.)	Section 7-8 Pump (gal.)	Section 7-8 LDS (gal.)	MLPS to Pond B (gal.)	Pond B to LEF (gal.)	Pond B Depth (ft.)	Pond A Depth (ft.)	Effluent Spray Irrigation (ft.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled (gal.)	Dust Control (Sprayed) (gal.)
1	0.08	38,740,644	25.8	3,732,453	52,968	7,557,626	1,979	2,749,574	15,775,252	3.2	2.8	52,682	12.08	9.00	21,142	40,782	0	0	0
2	0.33	38,794,576	25.2	3,733,039	52,968	7,566,319	2,017	2,775,498	15,827,700	3.2	1.7	49,224	10.75	8.92	22,497	43,500	0	0	0
3	0.00	38,843,848	24.0	3,733,423	52,968	7,566,940	2,017	2,781,359	15,858,100	3.3	1.0	0	10.17	8.92	22,497	64,17	0	0	0
4	0.00	38,896,366	25.2	3,734,300	52,968	7,572,285	2,044	2,808,982	15,900,949	3.3	1.4	0	10.58	8.92	22,497	64,21	0	0	0
5	0.00	38,948,884	26.4	3,736,054	52,968	7,577,630	2,071	2,836,605	15,943,798	3.3	1.8	0	11.08	9.08	22,497	0	0	0	0
6	0.00	39,001,404	20.4	3,736,054	52,969	7,582,976	2,098	2,864,228	15,986,647	3.2	2.2	0	11.58	9.00	22,497	61,704	0	0	0
7	0.25	39,052,424	26.4	3,737,981	52,970	7,588,465	2,137	2,897,103	16,013,612	3.2	2.5	34,453	10.25	9.00	22,598	58,331	0	0	0
8	0.60	39,106,044	26.2	3,738,805	52,972	7,594,081	2,175	2,912,208	16,031,047	3.2	2.3	38,281	11.25	7.42	18,571	71,135	0	0	0
9	1.47	39,163,378	27.0	3,738,811	52,972	7,600,322	2,175	2,947,717	16,088,302	3.2	1.0	7,699	10.75	6.25	25,401	53,235	0	0	0
10	0.00	39,216,880	25.8	3,738,811	52,972	7,604,846	2,212	2,963,356	16,121,900	3.2	2.6	0	11.33	5.00	26,401	14,471	0	0	0
11	0.00	39,269,772	25.5	3,738,859	52,972	7,610,242	2,229	3,009,041	16,169,536	3.2	3.0	0	11.21	5.00	26,401	0	0	0	0
12	0.45	39,322,664	25.2	3,738,907	52,972	7,615,638	2,245	3,054,726	16,217,172	3.2	3.4	17,486	11.08	5.00	26,403	51,806	0	0	0
13	0.22	39,378,868	24.0	3,738,919	52,972	7,621,716	2,283	3,095,438	16,264,322	3.2	3.5	0	10.00	5.00	24,752	51,739	0	0	0
14	0.42	39,434,936	23.0	3,738,929	52,972	7,626,621	2,319	3,113,324	16,316,054	3.1	3.8	58,660	9.08	5.00	24,752	7,256	0	0	0
15	0.18	39,488,920	24.6	3,738,941	52,972	7,633,122	2,319	3,130,146	16,353,932	3.1	3.1	46,743	9.50	5.00	24,936	0	0	0	0
16	0.00	39,542,704	25.7	3,739,309	52,973	7,639,817	2,357	3,157,888	16,373,907	3.1	2.7	25,551	11.00	5.00	25,620	0	0	0	0
17	2.55	39,597,500	26.4	3,739,311	52,974	7,645,671	2,357	3,175,756	16,423,592	3.1	2.9	0	12.58	5.00	27,180	0	0	0	0
18	0.00	39,674,928	24.0	3,739,312	52,974	7,662,518	2,395	3,197,454	16,450,040	3.2	3.3	0	14.92	5.00	27,180	0	0	0	0
19	0.00	39,752,356	21.6	3,739,313	52,974	7,679,365	2,433	3,219,152	16,476,487	3.2	3.6	0	17.25	5.00	27,182	25,037	0	0	0
20	0.28	39,837,064	22.8	3,740,669	53,122	7,697,118	2,433	3,259,392	16,526,528	3.2	4.0	42,100	15.42	7.75	26,175	81,864	0	0	0
21	0.00	39,918,668	24.0	3,740,989	53,325	7,715,268	2,472	3,295,571	16,580,627	3.2	3.7	66,216	12.08	11.42	26,647	85,218	0	0	0
22	0.00	39,999,472	18.0	3,741,135	53,861	7,731,509	2,508	3,342,128	16,634,372	3.1	2.9	69,014	11.25	11.42	25,423	125,576	0	0	0
23	0.27	40,079,044	14.4	3,741,213	53,861	7,747,878	2,508	3,390,536	16,683,091	3.2	2.1	66,391	9.83	10.00	25,691	105,457	0	0	0
24	0.00	40,149,632	24.0	3,741,281	53,861	7,762,640	2,550	3,423,052	16,718,100	3.2	1.1	23,607	8.50	9.50	24,927	107,294	0	0	0
25	0.00	40,223,408	20.7	3,741,314	53,861	7,776,718	2,589	3,468,742	16,770,748	3.2	1.4	0	8.29	9.59	24,927	6,398	0	0	0
26	2.55	40,297,184	17.4	3,741,346	53,861	7,790,795	2,627	3,514,431	16,823,396	3.2	1.6	0	8.08	9.67	24,929	95,313	0	0	0
27	1.28	40,371,712	20.4	3,741,442	54,566	7,804,327	2,663	3,534,861	16,846,778	3.6	1.7	0	8.33	8.42	24,092	79,970	0	0	0
28	3.83	0	0.0	0	0	0	0	0	0	0.0	0.0	0	0.00	0.00	0	0	0	0	0
29	0.00	0	0.0	0	0	0	0	0	0	0.0	0.0	0	0.00	0.00	0	0	0	0	0
30	0.00	40,467,424	91.9	3,741,861	55,359	7,849,077	2,756	3,534,861	16,900,200	3.6	3.0	0	10.50	8.42	0	13,400	0	0	0
31	14.76																		
Totals												598,107			663,815	1,192,324			0

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 I include quantities from leak detection system.
- Column B, trace is less than 0.01 inches.
- Columns C-K, N, and Q-U are quantities from flow meters.

Type of Cover	Phases 1-VI acres	Section 7-9 acres
Open	5	0
Intermediate	134.4	34.5
Final	23	0
Not Opened	0	0

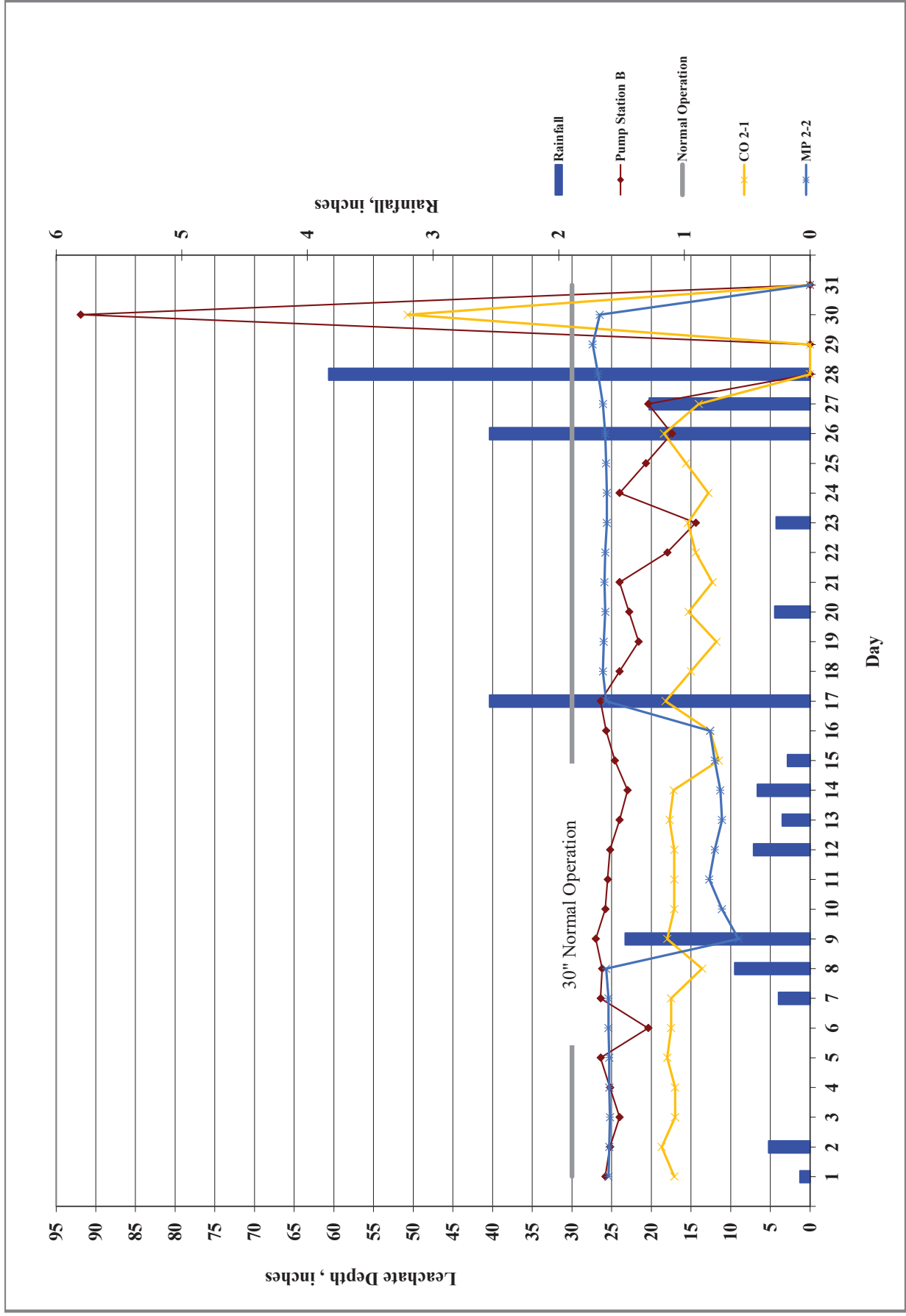


Figure 1. Leachate Levels in Pump Station B and Rainfall for September 2022.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2022**

		Leachate Arriving at LTRF				Leachate Leaving LTRF				LEF		Effluent Disposal			Inflow / Outflow For LTRF	
	Rainfall	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.)	Leachate Treated at LEF (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 ² (gal.)	
Month	(in.)															
January	1.94	177	267,905	237,637	2,946,654	1,665,014	0	310,423	1,281,386	0	0	327,064	3,452,373	3,256,823	195,550	
February	0.60	70	207,603	171,218	2,282,000	1,658,498	0	390,783	1,024,398	0	0	39,931	2,660,891	3,073,679	-412,788	
March	3.00	272	187,103	184,958	2,360,014	1,305,276	0	573,348	1,108,913	0	0	374,378	2,732,347	2,987,537	-255,191	
April	5.16	587	130,992	151,989	2,006,957	654,652	0	355,573	1,388,533	0	0	242,565	2,290,525	2,398,758	-108,233	
May	3.26	455	121,539	145,455	1,965,984	243,391	0	401,147	1,444,252	0	0	275,271	2,233,433	2,088,790	144,643	
June	6.84	4,289	49,171	123,341	1,872,286	338,274	0	502,013	1,332,130	0	0	195,057	2,049,087	2,172,417	-123,331	
July	8.54	4,420	138,295	222,776	1,941,881	608,224	0	781,390	1,348,377	0	0	450,113	2,307,372	2,737,991	-430,619	
August	5.70	4,498	127,377	181,260	2,008,596	443,507	0	764,531	1,173,508	0	0	503,739	2,321,731	2,381,546	-59,815	
September	14.76	14,765	12,158	296,981	2,278,454	1,192,324	0	663,815	1,177,033	0	0	598,107	2,602,358	3,033,172	-430,814	
October																
November																
December																
YTD Total																

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.