

Johnson, Sabrina O

From: Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
Sent: Wednesday, July 15, 2020 4:54 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. 2 2020 Water Balance & Waste Tire Report for Southeast County
Attachments: 2Q2020 Water Balance Report.pdf; 2Q2020 Waste Tire Report.pdf

Mr. Morgan,

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

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

Ron Wiesman II

Manager

Solid Waste Management Division
Public Utilities Department

P: (813) 671-7707 VOIP 42801

M: (813) 455-2194

E: wiesmanr@HCFLGov.net

W: <http://HCFLGOV.net>

Hillsborough County

15960 County Road 672 Lithia, FL 33547

[Facebook](#) | [Twitter](#) | [YouTube](#) | [LinkedIn](#) | [HCFL Stay Safe](#)

Please note: All correspondence to or from this office is subject to Florida's Public Records law.



Hillsborough
County Florida

SOLID WASTE MANAGEMENT

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

July 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 April 1, 2020 through June 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

**BOARD OF COUNTY
COMMISSIONERS**

Ken Hagan
Pat Kemp
Lesley "Les" Miller, Jr.
Sandra L. Murman
Kimberly Overman
Mariella Smith
Stacy R. White

COUNTY ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Christine M. Beck

INTERNAL AUDITOR

Peggy Caskey

INFRASTRUCTURE SERVICES

ADMINISTRATOR

John Lyons

**WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
SECOND QUARTER 2020**

		SECOND QUARTER	Beginning Tonnage (Apr. 1, 2020) 640.01	
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Apr. 2020	294.43	40.89	73.72	38.47
Beginning Tons	640.01			
	934.44	-40.89	-73.72	-38.47
			Ending Tonnage	781.36
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
May 2020	252.57	105.76	124.72	28.62
Beginning Tons	781.36			
	1,033.93	-105.76	-124.72	-28.62
			Ending Tonnage	774.83
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Jun. 2020	257.29	166.10	197.11	14.58
Beginning Tons	774.83			
	1,032.12	-166.10	-197.11	-14.58
			Ending Tonnage	668.91
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & RR	Tons Adjusted
Apr. 2020	294.43	40.89	73.72	38.47
May 2020	252.57	105.76	124.72	28.62
Jun. 2020	257.29	166.10	197.11	14.58
Sub-Total	804.29	312.75	395.55	81.67
Beginning Tons	640.01			
TOTAL	1,444.30	-312.75	-395.55	-81.67
			Ending Tonnage	654.33



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 4/1/20 thru 6/30/20 (First quarter begins on January 1 of any given year)

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

	Beginning Inventory	Received	Processed	Consumed	Removed	Adjustments	Ending Inventory
Used Tires	640.01	804.29			708.30	81.67	654.33
Other whole Tires							
Processed tires							
Processing Waste							
Other							
Total	640.01	804.29			708.30	81.67	654.33

- Explain all inventory adjustments. 81.67
81.67 tons of unprocessed truck tires.
- List any period in which one or more category of inventory exceeded the permitted maximum for that category. How was that condition relieved?

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

9. Certification:

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

Larry E. Ruiz

Print Name of Authorized Agent

Larry E. Ruiz
Signature of Authorized Agent

7/15/2020

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

July 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 June 30, 2020.

The data is being submitted as separate monthly reports for April, May and June 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

BOARD OF COUNTY COMMISSIONERS

Ken Hagan
Pat Kemp
Lesley "Les" Miller, Jr.
Sandra L. Murman
Kimberly Overman
Mariella Smith
Stacy R. White

COUNTY

ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Christine M. Beck

INTERNAL AUDITOR

Peggy Caskey

INFRASTRUCTURE

SERVICES

ADMINISTRATOR

John Lyons



**Hillsborough
County Florida**

SOLID WASTE MANAGEMENT

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

MEMORANDUM

DATE: May 11, 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 April 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 4.09 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 1.4 feet.

**BOARD OF COUNTY
COMMISSIONERS**

Ken Hagan
Pat Kemp
Lesley "Les" Miller, Jr.
Sandra L. Murman
Kimberly Overman
Mariella Smith
Stacy R. White

COUNTY ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Christine M. Beck

INTERNAL AUDITOR

Peggy Caskey

**INFRASTRUCTURE SERVICES
ADMINISTRATOR**

John Lyons

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 0.3 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 18.9 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 69,494 gallons. A total of 2,084,835 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 675 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 133,555 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 2,218,390 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 78,052 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 452 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 229,300 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 319,200 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 1,402,034 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 873,490 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 3,686 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 47,200 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 an average of 5,500 gallons per day 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 209,214 gallons of effluent was 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 340,495 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 878,540 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 285,800 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 2,297,319 gallons. Total outflow quantity from the LTRF was 2,279,210 gallons. The change in storage for the month increased by 18,109 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
APRIL 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	1.3	0.0	18.7	78,364	31	4,949	83,313	2,654	0	259,000	286,000	23,228	114,872	0	36,000	0	0	49,000	0	21,392	39,200
2	0.00	0.0	0.0	13.7	75,627	0	3,333	78,960	2,611	0	185,000	297,000	43,776	57,417	0	800	0	0	0	0	71,343	0
3	0.00	0.0	0.0	19.3	71,494	60	4,931	76,425	2,679	7	189,000	250,000	35,521	43,444	0	800	0	0	0	0	42,980	0
4	0.00	0.0	0.0	15.4	72,557	26	3,395	75,952	2,486	45	211,000	252,000	39,834	0	0	800	0	0	0	0	0	0
5	0.23	0.0	0.0	18.7	73,758	26	4,236	77,993	2,979	6	236,000	288,000	39,835	0	0	800	0	0	0	0	0	0
6	0.00	0.0	0.0	22.0	70,096	26	4,236	74,332	2,979	6	261,000	324,000	39,834	7,167	0	800	0	0	0	0	35,634	0
7	0.00	0.0	0.0	18.4	65,756	33	3,316	69,072	2,205	0	288,000	324,000	41,418	42,995	0	800	0	0	0	0	49,992	0
8	0.00	0.6	0.0	17.6	72,820	0	5,060	77,880	3,055	2	278,000	317,000	41,272	42,966	0	10,000	0	0	0	0	50,078	0
9	0.00	0.6	0.0	20.0	75,863	29	3,416	79,279	1,769	23	276,000	305,000	48,086	50,007	0	10,000	0	0	0	0	49,806	0
10	0.00	0.6	0.0	17.2	74,827	26	5,165	79,992	3,079	18	266,000	300,000	31,818	57,121	0	10,000	0	0	0	0	28,719	0
11	0.00	0.6	0.0	17.3	70,905	23	3,381	74,286	3,018	0	250,000	295,000	36,384	42,812	0	10,000	0	0	0	0	21,345	0
12	0.00	0.6	0.0	18.6	69,779	14	4,241	74,020	2,614	4	263,000	319,000	36,384	0	0	10,000	0	0	0	0	0	0
13	0.00	0.8	0.0	19.9	67,917	14	4,241	72,158	2,614	4	276,000	343,000	36,384	42,980	0	17,000	0	0	34,383	0	7,121	27,500
14	0.00	0.0	0.0	18.2	69,780	29	3,326	73,106	3,105	8	259,000	377,000	46,672	50,116	0	800	0	0	0	0	0	0
15	0.00	1.1	0.0	22.2	69,298	29	3,428	72,726	1,756	20	235,000	405,000	46,672	57,210	0	28,000	0	0	31,610	0	42,909	25,300
16	0.00	0.0	0.0	19.9	65,651	27	5,077	70,728	3,160	24	214,000	394,000	47,086	49,938	0	800	0	0	0	0	43,898	0
17	0.10	0.8	0.0	20.4	60,906	22	3,470	64,376	1,503	15	175,000	389,000	46,149	7,119	0	17,000	0	0	0	0	85,385	0
18	0.90	1.6	0.0	17.4	69,126	0	3,510	72,636	3,075	14	202,000	317,000	46,442	0	0	44,000	0	0	47,888	0	0	38,300
19	0.00	2.9	0.0	19.7	74,433	32	4,723	79,156	2,870	3	227,000	264,000	46,625	0	0	103,000	0	0	0	0	0	0
20	0.13	4.1	0.0	22.0	72,212	32	4,723	76,935	2,870	3	252,000	211,000	46,625	28,673	0	168,000	0	0	32,844	0	14,223	26,300
21	0.00	3.5	0.8	21.0	66,150	28	4,534	70,684	1,608	8	245,000	238,000	46,625	42,955	3,686	140,000	12,000	0	0	0	42,872	2,900
22	0.00	3.5	0.8	18.9	67,795	0	4,744	72,539	3,182	2	233,000	230,000	38,820	64,321	0	140,000	12,000	0	44,218	0	7,135	35,400
23	0.00	2.7	0.8	19.7	66,782	28	3,697	70,479	2,153	52	182,000	278,000	49,184	14,281	0	93,000	12,000	0	13,810	0	35,840	11,000
24	1.80	2.7	0.8	18.5	67,260	36	4,286	71,546	3,698	4	206,000	276,000	55,820	0	0	93,000	12,000	0	0	0	42,106	0
25	0.00	2.7	1.0	19.9	69,736	0	0	69,736	1,708	26	216,000	288,000	57,811	21,369	0	93,000	19,000	0	0	0	21,511	0
26	0.00	2.7	1.0	18.9	64,401	26	3,450	67,851	2,539	9	212,000	336,000	57,812	0	0	93,000	19,000	0	0	0	0	0
27	0.00	2.7	1.0	17.9	62,076	26	3,450	65,525	2,539	9	209,000	384,000	57,811	28,603	0	93,000	19,000	23,064	0	0	14,247	1,200
28	0.00	2.7	1.0	20.9	62,291	29	5,051	67,342	3,089	0	182,000	420,000	73,324	0	0	93,000	19,000	96,123	50,622	0	42,766	45,300
29	0.93	1.6	1.0	17.2	68,787	26	9,048	77,835	1,564	136	187,000	446,000	63,572	0	0	44,000	19,000	90,027	36,120	0	42,730	33,400
30	0.00	2.1	1.1	16.7	68,390	0	13,140	81,530	2,893	7	204,000	422,000	81,210	7,124	0	65,000	23,000	0	0	0	64,508	0
31																						
Total	4.09				2,084,835	675	133,555	2,218,390	78,052	452			1,402,034	873,490	3,686			209,214	340,495	0	878,540	285,800
Daily Average		1.4	0.3	18.9	69,494	23	4,452	73,946	2,602	15	229,300	319,200				47,200	5,500			0		
Mo. Average															100				11,300	0	29,300	9,530

balance 2020/4-20bal.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
APRIL 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	4,884,503	18.7	2,767,985	2,522,479	5,886,703	337,363	93,689	0.0	0	1.3	49,000	9.00	9.92	23,228	43,464	71,408	0	0	21,392	0
2	0.00	4,944,334	13.7	2,770,595	2,522,480	5,886,734	340,696	93,689	0.0	0	0.0	0	6.42	10.33	43,776	43,165	14,252	0	0	71,343	0
3	0.00	4,998,377	19.3	2,773,274	2,522,480	5,886,741	345,627	93,749	0.0	0	0.0	0	6.58	8.67	35,521	43,444	0	0	0	42,980	0
4	0.00	5,053,299	15.4	2,775,759	2,522,481	5,886,786	349,022	93,775	0.0	0	0.0	0	7.33	8.75	39,834	0	0	0	0	0	0
5	0.23	5,109,422	18.7	2,775,759	2,525,460	5,886,792	353,258	93,801	0.0	0	0.0	0	8.21	10.00	39,835	0	0	0	0	0	0
6	0.00	5,165,545	22.0	2,775,759	2,528,438	5,886,797	357,493	93,827	0.0	0	0.0	0	9.08	11.25	39,834	0	7,167	0	0	35,634	0
7	0.00	5,216,415	18.4	2,777,963	2,528,439	5,886,794	360,809	93,860	0.0	0	0.0	0	10.00	11.25	41,418	0	42,995	0	0	49,992	0
8	0.00	5,270,615	17.6	2,781,017	2,528,440	5,886,796	365,869	93,860	0.0	0	0.6	0	9.67	11.00	41,272	0	42,966	0	0	50,078	0
9	0.00	5,328,368	20.0	2,782,786	2,528,440	5,886,819	369,285	93,889	0.0	0	0.6	0	9.58	10.58	48,086	0	50,007	0	0	49,806	0
10	0.00	5,387,625	17.2	2,785,863	2,528,442	5,886,837	374,450	93,915	0.0	0	0.6	0	9.25	10.42	31,818	0	57,121	0	0	28,719	0
11	0.00	5,442,374	17.3	2,788,728	2,528,595	5,886,837	377,831	93,938	0.0	0	0.6	0	8.67	10.25	36,384	0	42,812	0	0	21,345	0
12	0.00	5,495,997	18.6	2,791,342	2,528,595	5,886,841	382,072	93,952	0.0	0	0.6	0	9.13	11.09	36,384	0	0	0	0	0	0
13	0.00	5,549,620	19.9	2,793,956	2,528,595	5,886,844	386,313	93,965	0.0	0	0.8	34,383	9.58	11.92	36,384	0	42,980	0	0	7,121	0
14	0.00	5,602,018	18.2	2,797,061	2,528,595	5,886,852	389,639	93,994	0.0	0	0.0	0	9.00	13.08	46,672	0	50,116	0	0	0	0
15	0.00	5,654,853	22.2	2,798,816	2,528,596	5,886,872	393,067	94,023	0.0	0	1.1	31,610	8.17	14.08	46,672	0	57,210	0	0	42,909	0
16	0.00	5,710,659	19.9	2,801,977	2,528,595	5,886,896	398,144	94,050	0.0	0	0.0	0	7.42	13.67	47,086	0	49,938	0	0	43,898	0
17	0.10	5,760,287	20.4	2,803,478	2,528,597	5,886,911	401,614	94,072	0.0	0	0.8	0	6.08	13.50	46,149	0	7,119	0	0	85,385	0
18	0.90	5,811,143	17.4	2,806,552	2,528,598	5,886,925	405,124	94,072	0.0	0	1.6	47,888	7.00	11.00	46,442	0	0	0	0	0	0
19	0.00	5,867,306	19.7	2,809,422	2,528,598	5,886,928	409,847	94,104	0.0	0	2.9	0	7.88	9.17	46,625	0	0	0	0	0	0
20	0.13	5,923,469	22.0	2,812,291	2,528,598	5,886,930	414,570	94,135	0.0	0	4.1	32,844	8.75	7.33	46,625	0	28,673	0	0	14,223	0
21	0.00	5,976,542	21.0	2,813,898	2,528,599	5,886,938	419,104	94,163	0.8	0	3.5	0	8.50	8.25	46,625	0	42,955	3,686	0	42,872	0
22	0.00	6,030,383	18.9	2,817,078	2,528,601	5,886,940	423,848	94,163	0.8	0	3.5	44,218	8.08	8.00	38,820	0	64,321	0	0	7,135	0
23	0.00	6,080,925	19.7	2,819,147	2,528,685	5,886,992	427,545	94,191	0.8	0	2.7	13,810	6.33	9.67	49,184	0	14,281	0	0	35,840	0
24	1.80	6,133,543	18.5	2,822,844	2,528,686	5,886,996	431,831	94,227	0.8	0	2.7	0	7.17	9.58	55,820	0	0	0	0	42,106	0
25	0.00	6,188,580	19.9	2,824,549	2,528,689	5,887,022	433,934	94,227	1.0	0	2.7	0	7.50	10.00	57,811	0	21,369	0	0	21,511	0
26	0.00	6,238,283	18.9	2,827,087	2,528,690	5,887,031	437,384	94,253	1.0	0	2.7	0	7.38	11.67	57,812	0	0	0	0	0	0
27	0.00	6,287,985	17.9	2,829,625	2,528,691	5,887,040	440,833	94,278	1.0	23,064	2.7	0	7.25	13.33	57,811	0	28,603	0	0	14,247	0
28	0.00	6,335,862	20.9	2,832,712	2,528,693	5,887,040	445,884	94,307	1.0	96,123	2.7	50,622	6.33	14.58	73,324	0		0	0	42,766	0
29	0.93	6,385,781	17.2	2,834,274	2,528,695	5,887,176	454,932	94,333	1.0	90,027	1.6	36,120	6.50	15.50	63,572	0		0	0	42,730	0
30	0.00	6,440,769	16.7	2,837,166	2,528,696	5,887,183	468,072	94,333	1.1	0	2.1	0	7.08	14.67	81,210	0	7,124	0	0	64,508	0
31																					
Totals	4.09									209,214		340,495			1,402,034	130,073	743,417	3,686	0	878,540	0

balance\2020\4-20bal.xls

Notes:

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

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

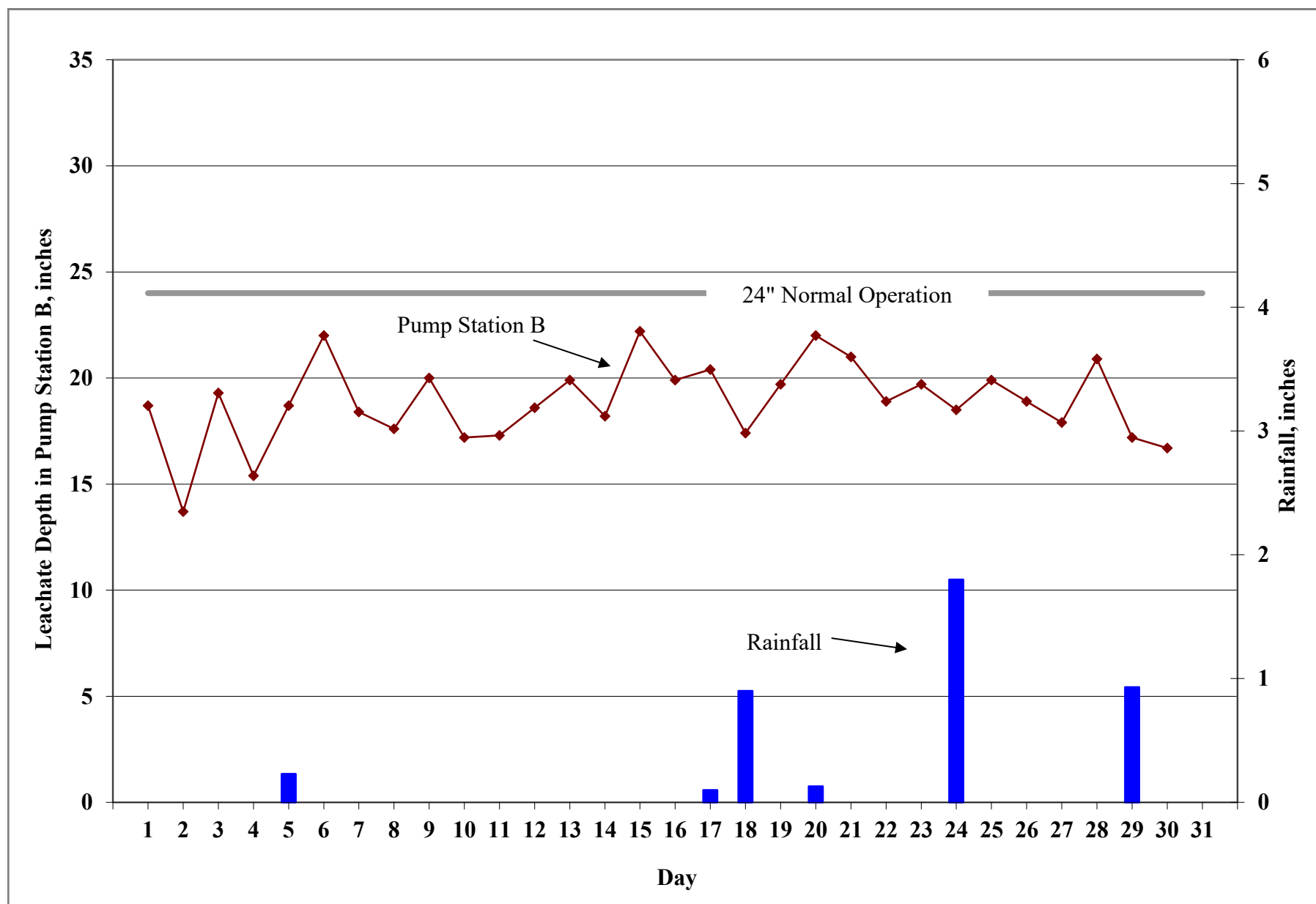


Figure 1. Leachate Levels in Pump Station B and Rainfall for April 2020.

**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	-11,174,541	-334,517	-10,767,955	873,490	0	0	885,659	0	340,495	-22,276,588	873,490	-23,150,078
May														
June														
July														
August														
September														
October														
November														
December														
YTD Total	6.34	3,325	-10,853,069	180,758	-2,838,581	6,580,723	0	2,453,316	1,594,182	0	1,663,356	-13,507,567	9,034,039	-22,541,606

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: June 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 April 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 2.68 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.

**BOARD OF COUNTY
COMMISSIONERS**

Ken Hagan

Pat Kemp

Lesley "Les" Miller, Jr.

Sandra L. Murman

Kimberly Overman

Mariella Smith

Stacy R. White

COUNTY

ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Christine M. Beck

INTERNAL AUDITOR

Peggy Caskey

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 0.7 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 17.7 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 65,730 gallons. A total of 2,037,642 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 524 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 125,479 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 2,163,121 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 77,401 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 400 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 251,500 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 255,500 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 1,199,946 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 529,404 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 9,982 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 72,700 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 an average of 16,900 gallons per day 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 402,265 gallons of effluent was 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 913,270 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 378,802 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 758,700 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 2,241,471 gallons. Total outflow quantity from the LTRF was 1,739,332 gallons. The change in storage for the month increased by 502,139 gallons. Please advise should you have any questions concerning the information provided.

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM
MAY 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	3.5	1.1	17.5	63,999	32	1,179	65,178	1,913	0	211,000	317,000	41,738	0	0	140,000	23,000	87,687	16,064	0	42,933	17,200
2	0.00	3.5	1.8	21.5	65,824	27	1,706	67,530	2,683	0	211,000	257,000	44,588	0	0	140,000	64,000	0	67,934	0	42,947	54,300
3	0.00	2.7	1.8	18.5	64,812	8	3,446	68,258	3,096	16	215,000	287,000	44,588	0	0	93,000	64,000	0	0	0	0	0
4	0.00	2.7	1.7	15.4	63,796	8	3,446	67,242	3,096	16	218,000	317,000	44,588	0	0	93,000	57,000	0	39,874	0	49,866	31,900
5	0.00	1.8	1.7	11.0	78,589	35	3,484	82,073	1,519	15	274,000	295,000	44,588	0	0	52,000	57,000	55,740	38,749	0	42,934	33,800
6	0.00	0.8	1.7	15.0	74,464	0	3,459	77,923	2,594	0	329,000	254,000	28,791	43,012	2,965	17,000	57,000	0	54,644	0	49,995	46,100
7	0.00	1.9	1.0	16.2	68,631	29	3,583	72,214	2,698	37	300,000	216,000	28,791	42,985	0	57,000	19,000	0	0	0	0	0
8	0.00	2.0	1.0	22.7	66,029	37	3,499	69,528	2,594	0	269,000	216,000	58,722	42,848	0	61,000	19,000	0	25,587	0	7,147	20,500
9	0.00	2.5	1.0	20.2	67,756	0	5,317	73,073	1,851	21	230,000	216,000	48,508	42,774	0	83,000	19,000	0	37,586	0	0	30,100
10	0.27	2.5	1.0	19.4	65,439	13	4,255	69,694	2,561	9	230,000	216,000	48,508	42,895	0	83,000	19,000	0	0	0	0	0
11	0.00	3.5	1.0	18.5	64,510	13	4,255	68,765	2,561	9	230,000	216,000	48,508	42,895	0	140,000	19,000	72,246	41,241	0	0	36,600
12	0.00	3.2	1.2	18.4	62,655	22	3,866	66,521	3,696	0	223,000	216,000	48,509	28,553	0	118,000	28,000	0	33,959	0	0	27,200
13	0.00	2.9	1.1	14.0	62,732	17	9,031	71,763	3,733	0	230,000	230,000	34,674	14,283	0	103,000	23,000	92,534	25,681	0	0	25,200
14	0.00	2.4	1.0	23.0	65,877	0	10	65,887	3,576	47	250,000	266,000	35,472	0	0	79,000	19,000	94,058	56,932	0	42,693	50,200
15	0.00	1.7	0.8	18.1	65,825	35	1,719	67,544	1,637	0	278,000	252,000	36,965	0	0	48,000	12,000	0	21,340	0	42,979	17,100
16	0.00	1.2	0.8	19.1	69,507	0	3,442	72,949	1,654	0	319,000	238,000	30,370	35,723	0	32,000	12,000	0	56,223	0	7,129	45,000
17	0.00	1.5	0.8	18.0	68,672	18	4,184	72,856	3,945	42	333,000	240,000	30,371	0	0	40,000	12,000	0	0	0	0	0
18	0.40	1.8	0.0	16.9	68,628	18	4,184	72,812	3,945	42	348,000	242,000	30,370	43,054	0	52,000	0	0	17,152	0	0	13,700
19	0.00	1.9	0.0	18.8	65,453	43	3,474	68,927	2,743	6	348,000	242,000	31,063	35,858	0	57,000	0	0	33,492	0	0	26,800
20	0.00	2.9	0.0	15.2	67,477	36	3,556	71,033	0	0	322,000	242,000	28,263	36,030	0	103,000	0	0	0	0	0	0
21	0.00	2.8	0.0	16.1	66,680	0	3,814	70,494	1,687	0	264,000	242,000	37,427	42,885	1,511	98,000	0	0	0	0	0	1,200
22	0.37	3.3	0.0	18.7	56,870	37	4,319	61,189	1,686	37	216,000	242,000	47,926	21,344	0	123,000	0	0	66,916	0	0	53,500
23	0.00	3.0	0.0	14.0	60,614	0	2,370	62,984	2,494	0	199,000	238,000	41,069	0	0	108,000	0	0	70,272	0	42,954	56,200
24	0.00	1.8	0.0	16.7	62,391	7	9,206	71,596	2,268	11	206,000	273,000	41,069	0	0	52,000	0	0	0	0	0	0
25	0.20	1.8	0.0	19.3	60,722	7	9,206	69,927	2,268	11	214,000	312,000	41,069	0	0	52,000	0	0	31,457	0	0	25,200
26	0.00	1.5	0.0	20.0	43,458	10	5,367	48,825	3,675	18	209,000	331,000	41,069	7,115	0	40,000	0	0	0	0	7,225	0
27	0.00	2.3	0.0	19.6	84,384	0	11,796	96,180	1,570	20	264,000	288,000	37,602	14,312	5,506	74,000	0	0	46,877	0	0	41,900
28	1.22	1.7	0.0	18.9	63,570	5	56	63,626	3,058	7	290,000	254,000	22,772	35,733	0	48,000	0	0	42,334	0	0	33,900
29	0.22	1.7	0.0	18.8	66,429	45	1,710	68,139	4,555	0	238,000	254,000	28,388	0	0	48,000	0	0	27,288	0	0	21,800
30	0.00	1.9	0.0	14.5	66,184	0	3,382	69,566	230	11	218,000	254,000	36,789	0	0	57,000	0	0	61,668	0	0	49,300
31	0.00	1.9	0.0	15.6	65,669	24	3,160	68,829	1,819	26	109,000	254,000	36,790	0	0	57,000	0	0	0	0	0	0
Total	2.68				2,037,642	524	125,479	2,163,121	77,401	400			1,199,946	529,404	9,982			402,265	913,270	0	378,802	758,700
Daily Average		2.3	0.7	17.7	65,730	17	4,048	69,778	2,497	13	251,500	255,500				75,700	16,900					
Mo. Average															300				29,500	0	12,200	24,470

balance 2020/5-20bal.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
MAY 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.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)
1	0.00	6,492,291	17.5	2,839,077	2,528,698	5,887,184	469,251	94,365	1.1	87,687	3.5	16,064	7.33	11.00	41,738	0	0	0	0	42,933	0
2	0.00	6,542,382	21.5	2,841,760	2,528,698	5,887,184	470,957	94,392	1.8	0	3.5	67,934	7.33	8.92	44,588	0	0	0	0	42,947	0
3	0.00	6,591,462	18.5	2,844,854	2,528,700	5,887,200	474,403	94,400	1.8	0	2.7	0	7.46	9.96	44,588	0	0	0	0	0	0
4	0.00	6,640,541	15.4	2,847,948	2,528,701	5,887,216	477,848	94,408	1.7	0	2.7	39,874	7.58	11.00	44,588	0	0	0	0	49,866	0
5	0.00	6,702,822	11.0	2,849,465	2,528,703	5,887,231	481,332	94,443	1.7	55,740	1.8	38,749	9.50	10.25	44,588	0	0	0	0	42,934	0
6	0.00	6,760,921	15.0	2,852,057	2,528,705	5,887,231	484,791	94,443	1.7	0	0.8	54,644	11.42	8.83	28,791	0	43,012	2,965	0	49,995	0
7	0.00	6,816,307	16.2	2,854,548	2,528,912	5,887,268	488,374	94,472	1.0	0	1.9	0	10.42	7.50	28,791	0	42,985	0	0	0	0
8	0.00	6,866,397	22.7	2,857,142	2,528,912	5,887,268	491,873	94,509	1.0	0	2.0	25,587	9.33	7.50	58,722	0	42,848	0	0	7,147	0
9	0.00	6,919,405	20.2	2,858,956	2,528,949	5,887,289	497,190	94,509	1.0	0	2.5	37,586	8.00	7.50	48,508	0	42,774	0	0	0	0
10	0.27	6,970,096	19.4	2,861,515	2,528,951	5,887,298	501,445	94,522	1.0	0	2.5	0	8.00	7.50	48,509	0	0	0	0	0	0
11	0.00	7,020,787	18.5	2,864,074	2,528,952	5,887,307	505,700	94,535	1.0	72,246	3.5	41,241	8.00	7.50	48,508	0	42,895	0	0	0	0
12	0.00	7,069,729	18.4	2,867,770	2,528,952	5,887,307	509,566	94,557	1.2	0	3.2	33,959	7.75	7.50	48,509	0	28,553	0	0	0	0
13	0.00	7,118,935	14.0	2,871,503	2,528,952	5,887,307	518,597	94,574	1.1	92,534	2.9	25,681	8.00	8.00	34,674	0	14,283	0	0	0	0
14	0.00	7,169,587	23.0	2,875,078	2,528,953	5,887,354	518,607	94,574	1.0	94,058	2.4	56,932	8.67	9.25	35,472	0	0	0	0	42,693	0
15	0.00	7,219,797	18.1	2,876,715	2,528,953	5,887,354	520,326	94,609	0.8	0	1.7	21,340	9.67	8.75	36,965	0	0	0	0	42,979	0
16	0.00	7,274,222	19.1	2,878,166	2,529,156	5,887,354	523,768	94,609	0.8	0	1.2	56,223	11.08	8.25	30,370	0	35,723	0	0	7,129	0
17	0.00	7,327,812	18.0	2,881,878	2,529,389	5,887,396	527,952	94,627	0.8	0	1.5	0	11.58	8.34	30,371	0	0	0	0	0	0
18	0.40	7,381,402	16.9	2,885,589	2,529,622	5,887,438	532,136	94,644	0.0	0	1.8	17,152	12.08	8.42	30,370	0	43,054	0	0	0	0
19	0.00	7,433,406	18.8	2,888,332	2,529,622	5,887,444	535,610	94,687	0.0	0	1.9	33,492	12.08	8.42	31,063	0	35,858	0	0	0	0
20	0.00	7,485,742	15.2	2,888,332	2,529,622	5,887,444	539,166	94,723	0.0	0	2.9	0	11.17	8.42	28,263	0	36,030	0	0	0	0
21	0.00	7,541,798	16.1	2,890,019	2,529,622	5,887,443	542,980	94,723	0.0	0	2.8	0	9.17	8.42	37,427	0	42,885	1,511	0	0	0
22	0.37	7,585,514	18.7	2,891,705	2,529,622	5,887,480	547,299	94,760	0.0	0	3.3	66,916	7.50	8.42	47,926	0	21,344	0	0	0	0
23	0.00	7,632,877	14.0	2,894,199	2,529,622	5,887,480	549,669	94,760	0.0	0	3.0	70,272	6.92	8.25	41,069	0	0	0	0	42,954	0
24	0.00	7,682,017	16.7	2,896,467	2,529,622	5,887,491	558,875	94,767	0.0	0	1.8	0	7.17	9.54	41,069	0	0	0	0	0	0
25	0.20	7,731,156	19.3	2,898,734	2,529,622	5,887,501	568,080	94,773	0.0	0	1.8	31,457	7.42	10.83	41,069	0	0	0	0	0	0
26	0.00	7,759,224	20.0	2,902,409	2,529,622	5,887,519	573,447	94,783	0.0	0	1.5	0	7.25	11.50	41,069	0	7,115	0	0	7,225	0
27	0.00	7,832,045	19.6	2,903,979	2,529,622	5,887,539	585,243	94,783	0.0	0	2.3	46,877	9.17	10.00	37,602	0	14,312	5,506	0	0	0
28	1.22	7,884,472	18.9	2,907,037	2,529,622	5,887,546	585,299	94,788	0.0	0	1.7	42,334	10.08	8.83	22,772	0	35,733	0	0	0	0
29	0.22	7,938,786	18.8	2,911,592	2,529,622	5,887,546	587,009	94,833	0.0	0	1.7	27,288	8.25	8.83	28,388	0	0	0	0	0	0
30	0.00	7,993,059	14.5	2,911,592	2,529,852	5,887,557	590,391	94,833	0.0	0	1.9	61,668	7.58	8.83	36,789	0	0	0	0	0	0
31	0.00	8,046,817	15.6	2,911,835	2,531,428	5,887,583	593,551	94,857	0.0	0	1.9	0	3.79	8.83	36,790	0	0	0	0	0	0
Totals	2.68	8100575	16.7	2912078.0	2533003.0	5887608.0	596711.0	94880.0		402,265		913,270			1,199,946	0	529,404	9,982	0	378,802	0

balance\2020\5-20bal.xls

Notes:

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

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

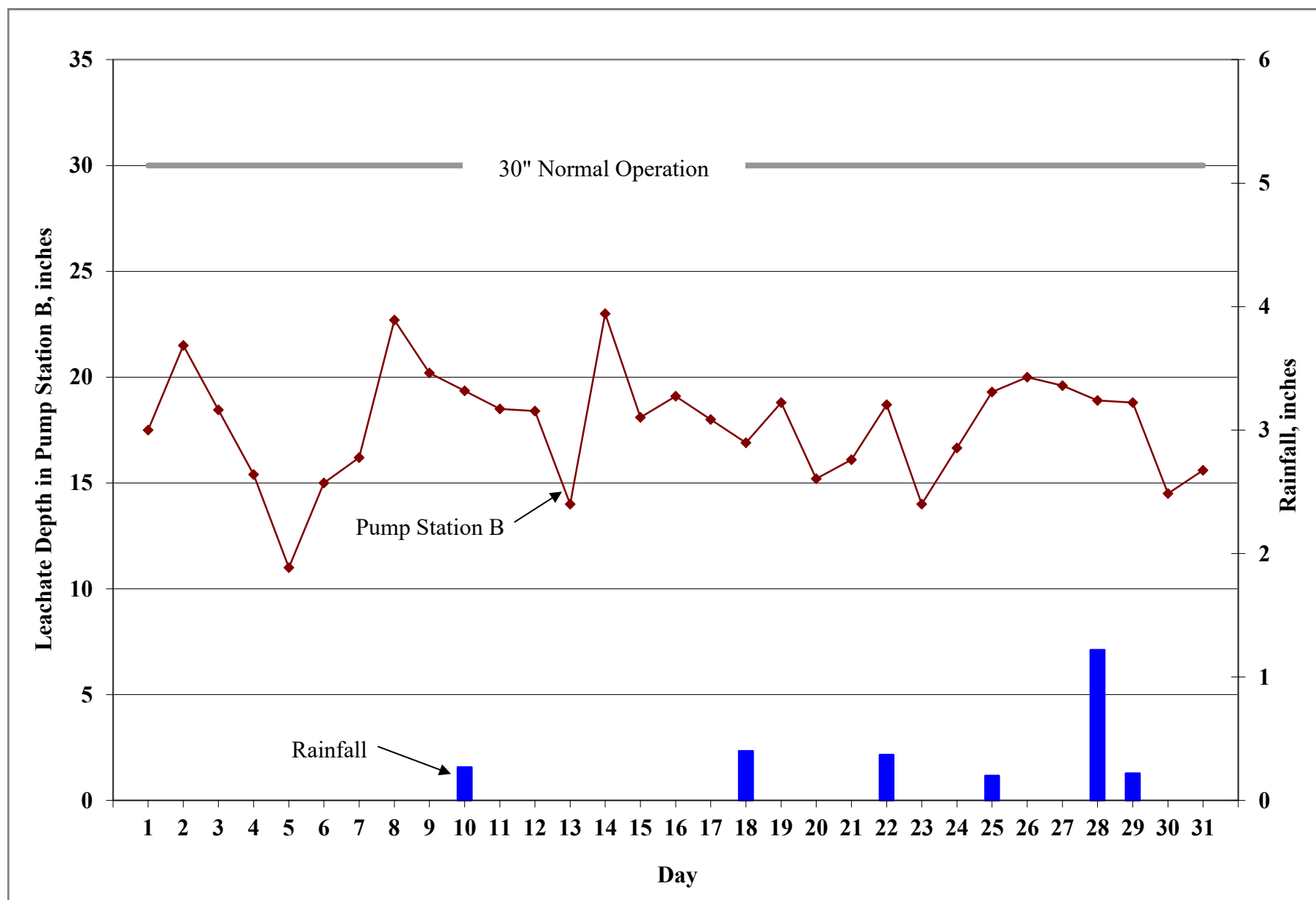


Figure 1. Leachate Levels in Pump Station B and Rainfall for May 2020.

**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														
July														
August														
September														
October														
November														
December														
YTD Total	9.02	3,875	477,776	776,412	12,051,850	7,110,127	13,668	5,055,296	1,965,865	0	2,576,626	13,309,913	12,179,091	1,130,822

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: July 10, 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 June 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 5.93 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 2.1 feet.

**BOARD OF COUNTY
COMMISSIONERS**

Ken Hagan

Pat Kemp

Lesley "Les" Miller, Jr.

Sandra L. Murman

Kimberly Overman

Mariella Smith

Stacy R. White

COUNTY

ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Christine M. Beck

INTERNAL AUDITOR

Peggy Caskey

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). The number recorded on the fourth 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 17.4 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 63,615 gallons. A total of 1,908,443 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 47 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 129,957 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 2,038,400 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 76,055 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 788 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 239,000 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 237,200 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 1,575,161 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 565,723 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 31,878 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 66,100 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 863,573 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 656,231 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 716,400 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 2,115,846 gallons. Total outflow quantity from the LTRF was 2,172,762 gallons. The change in storage for the month decreased by 56,916 gallons. Please advise should you have any questions concerning the information provided.

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JUNE 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	2.0	0.0	16.7	59,889	24	3,160	63,049	3,637	0	271,000	257,000	36,789	87,211	0	61,000	0	0	39,375	0	0	31,500
2	0.00	1.5	0.0	15.2	59,456	9	3,547	63,003	3,571	0	202,000	288,000	49,599	27,024	0	40,000	0	0	22,773	0	12,987	18,200
3	1.28	0.8	0.0	17.5	61,597	0	3,489	65,086	1,741	22	185,000	326,000	75,421	0	0	17,000	0	0	12,007	0	45,882	9,600
4	1.18	2.1	0.0	15.4	73,684	0	3,607	77,291	1,728	1	192,000	235,000	77,350	0	0	65,000	0	0	12,546	0	58,679	10,000
5	0.70	2.9	0.0	28.2	48,746	0	3,904	52,650	3,161	0	182,000	223,000	63,711	0	0	103,000	0	0	32,334	0	58,929	25,900
6	1.42	2.4	0.0	15.7	80,710	0	4,549	85,259	1,532	85	221,000	214,000	45,470	0	0	79,000	0	0	0	0	0	0
7	0.00	2.5	0.0	20.9	74,019	0	5,027	79,046	3,277	0	247,000	266,000	45,471	0	0	83,000	0	0	0	0	0	0
8	0.57	2.5	0.0	14.6	64,133	0	2,470	66,603	1,632	37	274,000	307,000	45,470	35,758	0	83,000	0	0	0	0	39,964	0
9	0.17	2.5	0.0	20.0	80,473	0	9,892	90,365	3,580	35	266,000	322,000	57,026	43,060	0	83,000	0	0	32,039	0	52,865	25,600
10	0.00	2.0	0.0	14.2	64,744	0	10,114	74,858	3,982	62	247,000	324,000	68,422	42,245	0	61,000	0	0	32,326	0	39,497	25,900
11	0.00	2.7	0.0	15.1	68,251	0	315	68,566	3,721	0	202,000	259,000	44,344	20,804	2,506	93,000	0	0	40,839	0	68,936	34,700
12	0.00	2.2	0.0	18.5	62,891	4	1,750	64,641	1,109	35	218,000	223,000	51,015	0	0	70,000	0	0	44,761	0	33,192	35,800
13	0.07	1.5	0.0	16.7	67,373	0	3,560	70,933	1,213	81	235,000	252,000	55,856	0	0	40,000	0	0	27,359	0	0	21,900
14	0.10	2.3	0.0	14.3	62,595	0	5,096	67,691	1,402	0	245,000	230,000	55,856	0	0	74,000	0	0	45,568	0	0	36,500
15	0.00	1.3	0.0	19.4	64,185	0	3,466	67,651	3,027	0	252,000	276,000	55,856	0	0	36,000	0	0	0	0	46,133	0
16	0.01	1.3	0.0	18.9	63,027	0	3,463	66,490	2,583	0	266,000	281,000	52,612	0	3,106	36,000	0	0	31,061	0	33,138	27,300
17	0.00	2.4	0.0	16.1	64,916	0	3,568	68,484	1,866	0	271,000	221,000	52,106	0	2,100	79,000	0	0	50,457	0	33,162	42,000
18	0.00	1.4	0.0	15.9	66,422	0	5,461	71,883	2,725	15	288,000	216,000	59,948	38,909	0	36,000	0	0	29,263	0	6,792	23,400
19	0.00	2.8	0.0	16.2	59,488	0	3,958	63,446	2,021	69	252,000	175,000	50,485	38,864	8,052	98,000	0	0	37,157	0	0	36,200
20	0.00	3.2	0.0	18.2	59,055	0	4,126	63,181	3,268	33	230,000	173,000	60,545	0	0	118,000	0	0	51,486	0	0	41,200
21	0.00	2.6	0.0	12.7	68,757	0	4,447	73,204	1,693	4	238,000	202,000	60,456	0	0	88,000	0	0	41,410	0	0	33,100
22	0.00	1.9	0.0	15.7	51,499	0	4,840	56,339	3,246	0	240,000	252,000	60,545	13,118	4,042	57,000	0	0	56,180	0	26,843	48,200
23	0.00	2.3	0.0	19.6	61,570	0	4,932	66,502	1,605	57	247,000	194,000	58,398	45,426	8,036	74,000	0	0	34,951	0	6,830	34,400
24	0.00	1.6	0.0	22.2	62,701	2	10,537	73,238	3,358	2	211,000	245,000	50,959	6,732	4,036	44,000	0	0	0	0	39,523	3,200
25	0.43	1.5	0.0	22.0	58,501	0	3,245	61,746	1,995	93	216,000	250,000	53,925	6,568	0	40,000	0	0	38,942	0	33,043	31,200
26	0.00	2.3	0.0	16.7	57,450	0	1,745	59,195	3,154	80	238,000	170,000	40,583	43,718	0	74,000	0	0	0	0	19,836	0
27	0.00	2.4	0.0	15.8	62,657	8	3,474	66,131	4,224	25	230,000	187,000	36,700	0	0	79,000	0	0	60,623	0	0	48,500
28	0.00	1.3	0.0	14.5	56,059	0	5,173	61,232	3,111	0	259,000	222,000	36,701	0	0	36,000	0	0	43,873	0	0	35,100
29	0.00	2.6	0.0	15.5	61,626	0	3,519	65,145	2,893	22	278,000	144,000	36,700	39,354	0	88,000	0	0	46,243	0	0	37,000
30	0.00	1.7	0.0	18.4	61,973	0	3,523	65,496	0	30	266,000	182,000	36,842	76,932	0	48,000	0	0	0	0	0	0
Total	5.93				1,908,443	47	129,957	2,038,400	76,055	788			1,575,161	565,723	31,878			0	863,573	0	656,231	716,400
Daily Average		2.1	0.0	17.4	63,615	2	4,332	67,947	2,535	26	239,000	237,200				66,100	0					
Mo. Average															1,100				28,800	0	21,900	23,880

balance 2020/6-20bal.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
JUNE 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	8,100,575	16.7	2,912,078	2,533,003	5,887,608	596,711	94,880	0.0	0.0	2.0	39,375	9.42	8.92	36,789	51,637	35,574	0	0	0	0
2	0.00	8,151,299	15.2	2,915,649	2,533,003	5,887,640	600,258	94,889	0.0	0.0	1.5	22,773	7.00	10.00	49,599	19,880	7,144	0	12,987	0	0
3	1.28	8,201,049	17.5	2,917,390	2,533,003	5,887,662	603,747	94,889	0.0	0.0	0.8	12,007	6.42	11.33	75,421	0	0	0	45,882	0	0
4	1.18	8,261,575	15.4	2,919,118	2,533,003	5,887,663	607,354	94,889	0.0	0	2.1	12,546	6.67	8.17	77,350	0	0	0	58,679	0	0
5	0.70	8,296,128	28.2	2,922,279	2,533,003	5,887,663	611,258	94,889	0.0	0.0	2.9	32,334	6.33	7.75	63,711	0	0	0	58,929	0	0
6	1.42	8,362,857	15.7	2,923,811	2,533,003	5,887,748	615,807	94,889	0.0	0	2.4	0	7.67	7.42	45,470	0	0	0	0	0	0
7	0.00	8,423,928	20.9	2,927,088	2,533,003	5,887,748	620,834	94,889	0.0	0	2.5	0	8.58	9.25	45,471	0	0	0	0	0	0
8	0.57	8,473,486	14.6	2,928,720	2,533,003	5,887,785	623,304	94,889	0.0	0.0	2.5	0	9.50	10.67	45,470	0	35,758	0	39,964	0	0
9	0.17	8,539,848	20.0	2,932,300	2,533,003	5,887,820	633,196	94,889	0.0	0.0	2.5	32,039	9.25	11.17	57,026	0	43,060	0	52,865	0	0
10	0.00	8,591,286	14.2	2,936,280	2,533,005	5,887,882	643,310	94,889	0.0	0	2.0	32,326	8.58	11.25	68,422	6,500	35,745	0	32,354	7,143	0
11	0.00	8,645,780	15.1	2,940,000	2,533,006	5,887,882	643,625	94,889	0.0	0.0	2.7	40,839	7.00	9.00	44,344	6,505	14,299	2,506	40,315	28,621	0
12	0.00	8,694,696	18.5	2,940,958	2,533,157	5,887,917	645,375	94,893	0.0	0.0	2.2	44,761	7.58	7.75	51,015	0	0	0	33,192	0	0
13	0.07	8,747,618	16.7	2,940,959	2,534,369	5,887,998	648,935	94,893	0.0	0	1.5	27,359	8.17	8.75	55,856	0	0	0	0	0	0
14	0.10	8,796,328	14.3	2,940,959	2,535,771	5,887,998	654,031	94,893	0.0	0.0	2.3	45,568	8.50	8.00	55,856	0	0	0	0	0	0
15	0.00	8,847,296	19.4	2,940,963	2,538,794	5,887,998	657,497	94,893	0.0	0.0	1.3	0	8.75	9.58	55,856	0	0	0	46,133	0	0
16	0.01	8,895,444	18.9	2,940,965	2,541,375	5,887,987	660,960	94,893	0.0	0.0	1.3	31,061	9.25	9.75	52,612	0	0	3,106	33,138	0	0
17	0.00	8,945,978	16.1	2,941,137	2,543,069	5,887,985	664,528	94,893	0.0	0.0	2.4	50,457	9.42	7.67	52,106	0	0	2,100	33,162	0	0
18	0.00	8,998,930	15.9	2,942,558	2,544,373	5,888,000	669,989	94,893	0.0	0.0	1.4	29,263	10.00	7.50	59,948	38,909	0	0	6,792	0	0
19	0.00	9,046,699	16.2	2,944,338	2,544,614	5,888,069	673,947	94,893	0.0	0.0	2.8	37,157	8.75	6.08	50,485	38,864	0	8,052	0	0	0
20	0.00	9,092,818	18.2	2,947,606	2,544,614	5,888,102	678,073	94,893	0.0	0.0	3.2	51,486	8.00	6.00	60,545	0	0	0	0	0	0
21	0.00	9,148,306	12.7	2,949,299	2,544,614	5,888,106	682,520	94,893	0.0	0.0	2.6	41,410	8.25	7.00	60,456	0	0	0	0	0	0
22	0.00	9,187,424	15.7	2,952,545	2,544,614	5,888,106	687,360	94,893	0.0	0.0	1.9	56,180	8.33	8.75	60,545	13,118	0	4,042	26,843	0	0
23	0.00	9,235,028	19.6	2,954,150	2,544,614	5,888,163	692,292	94,893	0.0	0.0	2.3	34,951	8.58	6.75	58,398	45,426	0	8,036	6,830	0	0
24	0.00	9,285,004	22.2	2,957,508	2,544,614	5,888,165	702,829	94,895	0.0	0.0	1.6	0	7.33	8.50	50,959	6,732	0	4,036	39,523	0	0
25	0.43	9,332,352	22.0	2,959,304	2,544,813	5,888,258	706,074	94,895	0.0	0.0	1.5	38,942	7.50	8.67	53,925	6,568	0	0	33,043	0	0
26	0.00	9,376,902	16.7	2,962,457	2,544,814	5,888,338	707,819	94,895	0.0	0.0	2.3	0	8.25	5.92	40,583	43,718	0	0	19,836	0	0
27	0.00	9,425,654	15.8	2,966,679	2,544,816	5,888,363	711,293	94,903	0.0	0.0	2.4	60,623	8.00	6.50	36,700	0	0	0	0	0	0
28	0.00	9,469,282	14.5	2,969,786	2,544,820	5,888,350	716,466	94,903	0.0	0.0	1.3	43,873	9.00	7.70	36,701	0	0	0	0	0	0
29	0.00	9,518,148	15.5	2,972,553	2,544,946	5,888,372	719,985	94,903	0.0	0.0	2.6	46,243	9.67	5.00	36,700	39,354	0	0	0	0	0
30	0.00	9,565,612	18.4	2,972,553	2,544,946	5,888,402	723,508	94,903	0.0	0.0	1.7	0	9.25	6.33	36,842	76,932	0	0	0	0	0
Totals	5.93									0		863,573			1,575,161	394,143	171,580	31,878	620,467	35,764	0

balance\2020\6-20bal.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

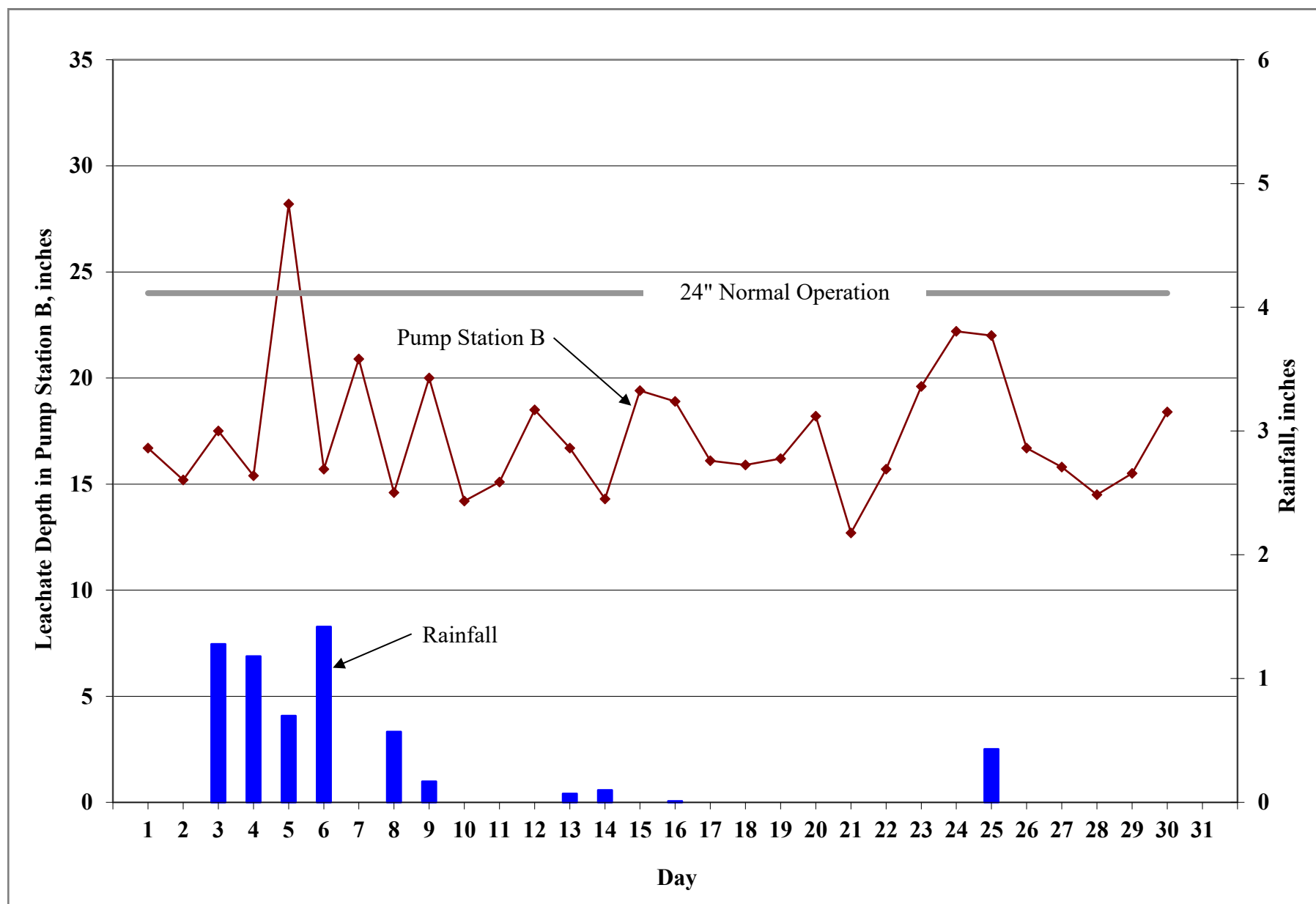


Figure 1. Leachate Levels in Pump Station B and Rainfall for June 2020.

**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														
August														
September														
October														
November														
December														
YTD Total	14.95	4,478	554,619	906,369	13,960,293	7,675,850	45,546	6,630,457	2,622,096	0	3,440,199	15,425,759	14,351,853	1,073,906

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.