

Smith, George

From: Pelley, Cindy <PelleyCA@HillsboroughCounty.ORG>
Sent: Monday, October 16, 2017 12:59 PM
To: SWD_Waste
Cc: Morgan, Steve; Ruiz, Larry; Cope, Ronald; Byer, Kimberly; 'Melissa.Madden@dep.state.fl.us'; 'Curtis, Bob'; 'Clark, Bruce'
Subject: WACS ID 41193 - Qtr 3 2017 Water Balance & Waste Tire Report for Southeast County
Attachments: 3Q2017 Water Balance Report.pdf; 3Q2017 Waste Tire Report.pdf

Mr. Morgan:

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

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

Thank you,

Cindy A. Pelley

General Manager II

Solid Waste Management Division

Public Works Department

M: (813) 455-2193

P: (813) 671-7707

E: pelleyca@HCFLGov.net

W: HCFLGov.net

Hillsborough County

601 E. Kennedy Blvd., Tampa, FL 33602

[Facebook](#) | [Twitter](#) | [YouTube](#) | [LinkedIn](#)

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



Hillsborough County Florida

PUBLIC WORKS

PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

October 16, 2017

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

RE: Waste Tire Facility Quarterly Report - Permit No. 126787-005-WT/02

Dear Mr. Morgan:

In accordance with Rule 62-711, F.A.C. and Permit No 126787-005-WT/02, the Solid Waste Management Division (SWMD) is submitting the Quarterly Report for the Waste Tire Facility for the period July 1, 2017 through September 30, 2017.

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
Public Works Department

LER/cp

Attachments

xc: Ron Cope, EPC
Kimberly Byer, SWMD

BOARD OF COUNTY COMMISSIONERS

Victor D. Crist

Ken Hagan

Al Higginbotham

Pat Kemp

Lesley "Les" Miller, Jr.

Sandra L. Murman

Stacy R. White

COUNTY ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Chip Fletcher

INTERNAL AUDITOR

Peggy Caskey

CHIEF DEV. & INFRA. SERVICES ADMINISTRATOR

Lucia E. Garsys



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 07/01/17 thru 09/30/17 (First quarter begins on January 1 of any given year)

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

	Beginning Inventory	Received	Processed	Consumed	Removed	Adjustments	Ending inventory
Used Tires	771.84	275.44			-396.14		
Other whole Tires							
Processed tires							
Processing Waste						-14.02	
Other							
Total	771.84	275.44			-396.14	-14.02	637.12

- a. Explain all inventory adjustments. -14.02 tons of unprocessed truck tires
- b. List any period in which one or more category of inventory exceeded the permitted maximum for that category. How was that condition relieved?

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

9. Certification:

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

Larry E. Ruiz

Print Name of Authorized Agent

Larry E. Ruiz

Signature of Authorized Agent

10/16/17

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

**WASTE TIRE FACILITY
QUARTERLY TONNAGE REPORT
THIRD QUARTER 2017**

		THIRD QUARTER	Beginning Tonnage (Jul. 1, 2017)	
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & R	Tons Adjusted
Jul. 2017	85.98		217.0	
Beginning Tons	771.84			
	857.82	0.00	-216.99	0.00
			Ending Tonnage	640.83
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & R	Tons Adjusted
Aug. 2017	101.64	61.05	95.27	0.00
Beginning Tons	640.83			
	742.47	-61.05	-95.27	0.00
			Ending Tonnage	586.15
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & R	Tons Adjusted
Sep. 2017	87.82	0.00	22.83	14.02
Beginning Tons	586.15			
	673.97	0.00	-22.83	-14.02
			Ending Tonnage	637.12
Month	Tires Received	Tires Removed by Contractor	Tires to SCTS & R	Tons Adjusted
Jul. 2017	85.98	0.00	216.99	0.00
Aug. 2017	101.64	61.05	95.27	0.00
Sep. 2017	87.82	0.00	22.83	14.02
Sub-Total	275.44	61.05	335.09	14.02
Beginning Tons	771.84			
TOTAL	1,047.28	-61.05	-335.09	-14.02
			Ending Tonnage	637.12



Hillsborough County Florida

PUBLIC WORKS

PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

October 16, 2017

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

RE: Southeast County Landfill – Leachate Data Quarterly Report

Dear Mr. Morgan:

In accordance with Specific Condition No. C.12.d of Permit No. 35435-023-SO/01, the Solid Waste Management Division (SWMD) is submitting the Quarterly Leachate Water Balance summary for the Southeast County Landfill for the quarter ending September 30, 2017.

The data is being submitted as separate monthly reports for July, August, and September 2017. 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/cp
Attachment
xc: Bruce Clark, SCS
Ron Cope, EPC

BOARD OF COUNTY COMMISSIONERS

Victor D. Crist
Ken Hagan

Al Higginbotham

Pat Kemp

Lesley "Les" Miller, Jr.

Sandra L. Murman

Stacy R. White

COUNTY ADMINISTRATOR

Michael S. Merrill

COUNTY ATTORNEY

Chip Fletcher

INTERNAL AUDITOR

Peggy Caskey

CHIEF DEV. & INFRA. SERVICES ADMINISTRATOR

Lucia E. Garsys



Hillsborough County Florida

PUBLIC WORKS

PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: August 14, 2017

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

FROM: Cindy A. Pelley, Landfill Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for July 2017
Southeast County Landfill, Hillsborough County, Florida

BOARD OF COUNTY COMMISSIONERS
Victor D. Crist
Ken Hagan
Al Higginbotham
Pat Kemp
Lesley "Les" Miller, Jr.
Sandra L. Murman
Stacy R. White

COUNTY ADMINISTRATOR
Michael S. Merrill

COUNTY ATTORNEY
Chip Fletcher

INTERNAL AUDITOR
Peggy Caskey

CHIEF DEV. & INFRA. SERVICES ADMINISTRATOR
Lucia E. Garsys

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 2017 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 12.59 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 depth of effluent stored in Pond A was 2.9 feet.

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 stored in Pond B was 2.7 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. This month PS-B was below the normal operation level except for July 3rd due to power failure and July 16-17 due to high level in the leachate storage tank. The average recorded depth of leachate in the PS-B sump was 16.7 inches.

Leachate Pumped to Pump Station A Sump from Phases I-VI Condensate Line (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from the Phases I-VI condensate line and pumped to Pump Station A (PS-A). The average daily amount of leachate pumped from the Phases I-VI condensate line was 777 gallons. A total of 24,094 gallons of leachate was pumped this month.

Leachate Pumped to MLPS from Phase II Temporary Pump Station 2 – TPS-2 (Column VII)

Column VII presents the daily amount of leachate, in gallons, collected from the Phase II Temporary Pump Station 2 (TPS-2), and includes total gallons collected from the recently installed dewatering wells. The leachate removed from TPS-2 is pumped to the MLPS. The average daily amount of leachate pumped from TPS-2 was 7,372 gallons. A total of 228,538 gallons of leachate was pumped this month.

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. The average daily amount of leachate pumped from PS-A was 76,515 gallons. A total of 2,371,971 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 a total of 2,155 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 IX). This month a total of 374,905 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, Sections 7-8, and TPS-2. This month a total of 2,746,876 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 219,281 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 2,651 gallons per day. This month a total 7 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XIV)

Column XIV presents the total quantity of leachate pumped to the LTRF from the Compost Project Area Sump. This month a total of 203,100 gallons of leachate from the compost area was pumped to the LTRF.

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

Column XV 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 373,300 gallons of leachate was stored in the tank.

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

Column XVI 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 stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 348,200 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XVII)

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 1,230,100 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 2,430,780 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 1,555 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 103,300 gallons of effluent was stored in Pond A.

Pond B Storage (Column XXI)

Column XXI 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 effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month a daily average of 144,100 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXII)

Column XXII 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 XXVI. This month 301,068 gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXIII)

Column XXIII 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 IV-VI is measured from the flow meter at the irrigation pump station. This month a total of 180,558 gallons of effluent was used for spray irrigation.

Effluent Dust Control Sprayed (Column XXIV)

Column XXIV 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 XXV)

Column XXV presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month 1,083,579 gallons of effluent was hauled off site.

Total Evaporation (Column XXVI)

Column XXVI 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 160,800 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 3,401,701 gallons. Total outflow quantity from the LTRF was 3,662,435 gallons. The change in storage for the month decreased by 260,734 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
JULY 2017
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	XXVI	
	Day	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Phases I - VI Condensate Meter (gal.)	Phase II TPS-2 (gal.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Section 7-8 LDS (gal.)	Leachate Pumped to MLPS from Section 7-8 (gal.)	Leachate Pumped in LTRF from MPLS (gal.)	Leachate Pumped to LTRF from Section 9 (gal.)	Leachate Pumped from Section 9 LDS (gal.)	Compost Leachate (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	3.4	2.6		8.9	226	3,877	55,447	0	7,080	62,527	4,228	0	15,600	394,000	408,000	33,700	80,858	0	129,000	133,000	0	0	0	0	0	
2	0.00	3.4	2.7	19.9		267	4,187	43,496	31	4,956	46,451	6,157	N/A	0	384,000	422,000	33,700	0	0	129,000	143,000	0	0	0	0	0	
3	0.43	3.4	2.8		30.9	267	4,187	43,496	31	4,956	48,451	6,157	N/A	0	374,000	437,000	33,700	87,213	0	129,000	152,000	86,432	42,815	0	0	38,600	
4	0.00	3.3	2.9	24.8		462	9,528	74,400	22	12,856	87,256	4,213	N/A	0	403,000	449,000	36,700	0	0	123,000	153,000	0	0	0	0	0	
5	0.15	3.2	2.9	17.0		462	9,528	74,400	22	12,856	87,256	4,213	N/A	0	432,000	461,000	34,700	86,964	0	118,000	162,000	84,881	26,677	0	0	25,600	
6	0.00	2.9	2.9		13.3	667	7,114	63,077	23	10,004	73,084	3,790	N/A	2,200	396,000	453,000	30,800	58,042	0	123,000	162,000	44,635	38,473	0	47,571	33,000	
7	0.22	2.7	2.9		17.9	678	4,446	62,236	0	7,502	69,738	5,482	N/A	0	381,000	417,000	25,700	93,406	0	93,000	162,000	0	11,299	0	77,893	9,000	
8	0.00	2.5	2.9		9.5	715	5,248	62,872	48	7,519	70,391	2,350	N/A	0	345,000	377,000	32,200	42,708	0	83,000	162,000	0	42,710	0	42,484	34,200	
9	0.67	2.1	2.9	15.1		715	6,551	61,585	0	7,726	69,311	5,473	N/A	50	375,000	384,000	22,200	0	0	65,000	162,000	0	0	0	0	0	
10	0.01	1.7	2.9		20.6	715	6,551	61,585	0	7,726	69,311	5,473	N/A	50	405,000	391,000	32,200	58,432	0	48,000	162,000	85,120	0	0	64,558	4,300	
11	1.32	1.7	2.9		19.1	711	7,174	59,214	41	7,850	67,064	5,132	N/A	1,400	422,000	358,000	36,800	86,797	0	48,000	162,000	0	18,584	0	36,106	14,900	
12	1.38	1.4	3.0		13.7	694	6,553	58,083	44	5,215	63,298	6,200	N/A	3,700	381,000	350,000	30,900	72,035	0	36,000	172,000	0	0	0	71,799	0	
13	0.00	3.4	2.3		14.9	620	6,635	66,155	31	3,876	70,031	2,213	0	69,300	422,000	324,000	49,100	99,220	0	129,000	166,000	0	0	0	50,675	0	
14	1.87	3.4	2.3		9.2	823	6,881	70,537	20	20,057	90,594	16,424	0	100	408,000	302,000	35,300	99,647	0	129,000	166,000	0	0	0	71,397	0	
15	0.00	3.4	2.6		14.3	568	11,375	94,452	27	2,694	97,146	7,557	0	66,800	453,000	278,000	46,500	71,615	0	129,000	133,000	0	0	0	14,249	0	
16	0.00	3.4	2.8	27.8		1,839	10,662	61,634	8	22,136	83,769	16,182	0	100	476,000	317,000	46,500	0	0	129,000	133,000	0	0	0	0	0	
17	1.18	3.3	2.6		41.3	1,030	10,662	61,634	8	22,136	83,769	16,182	0	100	499,000	343,000	46,500	136,649	0	123,000	133,000	0	0	0	50,068	0	
18	0.00	3.2	2.7	18.7		828	6,014	121,569	75	12,408	133,977	15,738	2	15,300	477,000	344,000	47,200	170,678	0	118,000	153,000	0	0	0	36,193	0	
19	0.50	3.6	2.7	7.7		828	6,014	121,569	75	12,408	133,977	15,738	2	15,300	456,000	345,000	42,000	164,853	0	108,000	143,000	0	0	0	22,251	0	
20	0.04	3.0	2.7	10.0		1,057	8,895	99,300	0	27,794	127,094	10,522	0	0	405,000	345,000	37,100	85,974	0	108,000	143,000	0	0	0	80,592	0	
21	0.00	3.0	2.7	13.7		1,101	9,432	94,483	86	18,354	112,837	11,356	0	0	405,000	314,000	49,200	163,649	1,555	108,000	143,000	0	0	0	24,103	1,200	
22	0.00	2.9	2.7	11.6		1,112	2,148	91,985	214	15,577	107,562	8,869	3	0	302,000	326,000	42,000	141,697	0	103,000	143,000	0	0	0	24,430	0	
23	0.18	2.9	2.8	12.7		1,852	1,867	86,767	66	15,797	108,564	7,739	0	0	318,000	348,000	42,000	0	0	103,000	143,000	0	0	0	0	0	
24	0.00	2.8	2.8		15.8	1,052	1,047	86,767	66	13,797	100,564	7,220	0	0	336,000	309,000	42,000	63,965	0	98,000	152,000	0	0	0	87,190	0	
25	0.09	2.8	2.8		20.7	809	1,061	82,809	270	13,816	96,705	6,655	0	0	329,000	329,000	44,000	85,299	0	98,000	152,000	0	0	0	79,860	0	
26	0.02	2.8	2.8		17.3	878	22,864	83,205	331	15,902	99,107	8,274	0	0	329,000	286,000	42,800	78,191	0	98,000	152,000	0	0	0	87,668	0	
27	0.40	2.7	2.7		16.1	922	11,650	86,712	54	13,468	100,180	4,199	0	0	312,000	247,000	46,200	129,157	0	93,000	143,000	0	0	0	43,020	0	
28	0.00	3.4	2.5		16.6	922	4,252	86,200	297	12,764	98,964	7,092	0	12,500	261,000	238,000	38,400	86,514	0	129,000	124,000	0	0	0	42,743	0	
29	0.00	3.1	2.5		14.5	918	11,660	84,454	0	12,997	97,451	5,783	0	0	261,000	240,000	47,100	91,076	0	113,000	124,000	0	0	0	0	0	
30	0.75	2.7	2.8	15.8		944	10,649	85,886	134	12,339	98,227	4,895	0	300	231,000	279,000	47,100	46,248	0	93,000	133,000	0	0	0	0	0	
31	3.27	2.2	2.7	17.3		944	10,649	85,886	134	12,339	98,227	4,895	0	300	202,000	319,000	47,100	51,663	0	70,000	143,000	0	0	0	28,781	0	
Total	12.59					24,094	228,538	2,371,971	2,155	374,905	2,746,876	219,281	7	203,300			1,230,100	2,430,780	1,555			301,068	180,558	0	1,083,579	160,800	
Daily Average		2.9	2.7		16.7	777	7,372	76,515	70	12,094	88,609	7,074	0	6,552	373,300	348,200				103,300	144,100		5,800		0	35,000	5,190
Mo. Average																			100								

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Tracer is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Columns IX & X, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Columns XV and XVI, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XIV, XVII-XXII, and XXIII-XXV, quantities from flow meters.
10. Column XXVI includes 80% of the daily values from Column XIX, XXIII, and XXIV plus 5% of the daily values from column XXII.
projects/balance/2009/01-09/uh.xls (Ds: 8/5/17)

TABLE 2. FIELD DATA ENTRY FORM
JULY 2017
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
	Rainfall (in.)	Phases I - VI Condensate Meter (gal.)	Phase II TPS-2 (gal.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (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)	Effluent Hauled		Effluent Dust Control (Sprayed)
Day																			Contractor (gal.)	County (gal.)	Contractor (gal.)	County (gal.)		
1	0.00	194,637	682,762	1,635,109	8.9	3,587,942	1,957,159	5,846,185	214,300	3,164,179	14,102	2.6	0	3.4	0	13.67	14.17	33,684	0	80,858	0	0	0	0
2	0.00	194,904	686,949	1,678,605	19.9	3,588,410	1,962,848	0	214,300	3,174,090	14,164	2.8	86,432	3.4	42,815	13.00	15.17	33,683	0	87,213	0	0	0	0
3	0.43	195,171	691,135	1,722,100	30.9	3,588,877	1,968,537	NA	214,300	3,174,090	14,164	2.8	86,432	3.4	42,815	13.00	15.17	33,683	0	87,213	0	0	0	0
4	0.00	195,633	700,663	1,796,500	24.0	3,589,084	1,972,543	0	214,300	3,186,946	14,186	2.9	0	3.3	0	14.00	15.59	34,686	0	0	0	0	0	0
5	0.15	196,095	710,191	1,870,900	17.0	3,589,291	1,976,549	NA	214,300	3,199,801	14,207	2.9	84,881	3.2	26,677	15.00	16.00	34,685	0	86,964	0	0	0	0
6	0.00	196,762	717,305	1,933,977	11.3	3,590,006	1,979,624	NA	216,500	3,209,808	14,230	2.9	44,635	3.3	38,473	13.75	15.75	30,789	0	58,042	0	26,141	21,430	0
7	0.22	197,440	721,751	1,996,213	17.9	3,590,914	1,984,198	NA	216,500	3,217,310	14,230	2.9	0	2.7	11,299	13.25	14.50	25,739	0	93,406	0	77,893	0	0
8	0.00	198,155	726,999	2,059,085	9.5	3,591,043	1,986,419	NA	216,500	3,224,829	14,278	2.9	0	2.5	42,710	12.00	13.08	32,239	0	42,708	0	42,484	0	0
9	0.87	198,870	733,550	2,120,670	15.1	3,591,699	1,991,236	0	216,550	3,232,555	14,278	2.9	0	2.1	0	13.04	13.33	32,239	0	0	0	0	0	0
10	0.01	199,584	740,101	2,182,254	20.6	3,592,354	1,996,053	NA	216,600	3,240,281	14,278	2.9	85,120	1.7	0	14.08	13.58	32,240	14,242	44,190	0	64,558	0	0
11	1.32	200,295	747,275	2,241,468	19.1	3,592,357	2,001,182	NA	218,000	3,248,131	14,319	2.9	0	1.7	18,584	14.67	12.42	36,805	42,764	44,033	0	36,106	0	0
12	1.38	200,989	753,828	2,299,551	13.7	3,592,974	2,001,185	5,846,185	221,700	3,253,346	14,363	3.0	0	1.4	0	13.25	12.17	30,898	0	72,035	0	71,799	0	0
13	0.00	201,609	760,463	2,365,706	14.9	3,593,157	2,003,215	5,846,185	291,000	3,257,222	14,394	2.3	0	3.4	0	14.67	11.25	49,149	28,517	70,703	0	50,675	0	0
14	1.87	202,432	767,344	2,436,243	9.2	3,593,779	2,019,017	5,846,185	291,100	3,277,279	14,414	2.3	0	3.4	0	14.17	10.50	35,265	7,125	92,522	0	71,397	0	0
15	0.00	203,000	778,719	2,530,695	14.3	3,594,515	2,025,838	5,846,185	357,900	3,279,973	14,441	2.6	0	3.4	0	15.75	9.67	46,488	28,601	43,014	0	14,249	0	0
16	0.00	204,030	789,381	2,592,329	27.8	3,594,752	2,035,783	5,846,185	358,000	3,302,109	14,449	2.6	0	3.4	0	16.54	10.80	46,488	0	0	0	0	0	0
17	1.18	205,059	800,042	2,653,962	41.3	3,594,989	2,045,728	5,846,185	358,100	3,324,244	14,456	2.6	0	3.3	0	17.33	11.92	46,488	35,915	100,734	0	50,068	0	0
18	0.00	205,887	806,056	2,775,531	10.7	3,595,426	2,061,021	5,846,187	373,400	3,336,652	14,531	2.7	0	3.2	0	16.58	11.96	47,241	85,101	85,777	0	36,193	0	0
19	0.50	206,715	812,069	2,897,100	7.7	3,595,863	2,076,313	5,846,189	388,700	3,349,060	14,606	2.7	0	3.0	0	15.83	12.00	42,138	72,145	92,708	0	22,251	0	0
20	0.04	207,772	820,964	2,996,400	10.0	3,596,939	2,085,759	5,846,189	388,700	3,376,854	14,606	2.7	0	3.0	0	14.00	12.00	37,078	43,196	42,778	0	80,592	0	0
21	0.00	208,873	830,396	3,090,883	13.7	3,597,668	2,096,386	5,846,189	388,700	3,395,208	14,692	2.7	0	3.0	0	14.08	10.92	49,161	113,811	49,838	1,555	24,103	0	0
22	0.00	209,985	832,544	3,182,868	11.6	3,598,516	2,104,407	5,846,192	388,700	3,410,785	14,906	2.7	0	2.9	0	10.50	11.33	41,968	99,101	42,596	0	24,430	0	0
23	0.18	211,037	833,591	3,269,635	13.7	3,598,833	2,111,810	5,846,192	388,700	3,424,582	14,972	2.8	0	2.9	0	11.09	12.00	41,968	0	0	0	0	0	0
24	0.00	212,089	834,638	3,356,401	15.8	3,599,150	2,119,212	5,846,192	388,700	3,438,379	15,037	2.8	0	2.8	0	11.67	12.83	41,968	0	63,965	0	87,198	0	0
25	0.00	212,978	835,699	3,439,290	20.7	3,599,611	2,125,406	5,846,192	388,700	3,452,195	15,307	2.8	0	2.8	0	11.42	11.42	44,562	0	85,289	0	79,860	0	0
26	0.02	213,856	838,563	3,522,495	17.3	3,600,395	2,132,896	5,846,192	388,700	3,468,097	15,638	2.8	0	2.8	0	11.42	9.92	42,769	0	78,191	0	87,608	0	0
27	0.40	214,778	870,213	3,609,207	16.1	3,600,840	2,136,650	5,846,192	388,700	3,481,565	15,692	2.7	0	2.7	0	10.83	8.58	46,207	43,898	85,259	0	43,020	0	0
28	0.00	215,700	874,465	3,695,407	16.6	3,602,216	2,142,366	5,846,192	401,200	3,494,329	15,989	2.5	0	3.4	0	9.08	8.25	38,394	43,929	42,585	0	42,743	0	0
29	0.00	216,618	886,125	3,779,861	14.5	3,602,470	2,147,895	5,846,192	401,200	3,507,326	15,989	2.5	0	3.1	0	9.08	8.33	47,083	43,367	47,709	0	0	0	0
30	0.75	217,562	896,774	3,865,747	15.8	3,602,721	2,152,539	5,846,192	401,500	3,519,665	16,123	2.6	0	2.7	0	8.04	9.71	47,083	44,288	0	0	0	0	0
31	3.27	218,505	907,423	3,951,633	17.1	3,602,971	2,157,183	5,846,192	401,800	3,532,004	16,257	2.7	0	2.2	0	7.00	11.08	47,083	44,587	7,076	1,555	28,781	21,430	0
Totals	12.59												301,068		180,558			1,229,952	790,587	1,640,193	1,555	1,062,149	21,430	0

projects\balance\2009\01-09\bal.xls (Ds 8/3/17)

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 I and L include quantities from leak detection system.
- Column B, trace is less than 0.01 inches.
- Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
- Columns M and O measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Sections 7-8 acres	Section 9 acres
Open	0	0	5
Intermediate	139.4	19.3	10
Final	23	0	0
Not Opened	0	0	0

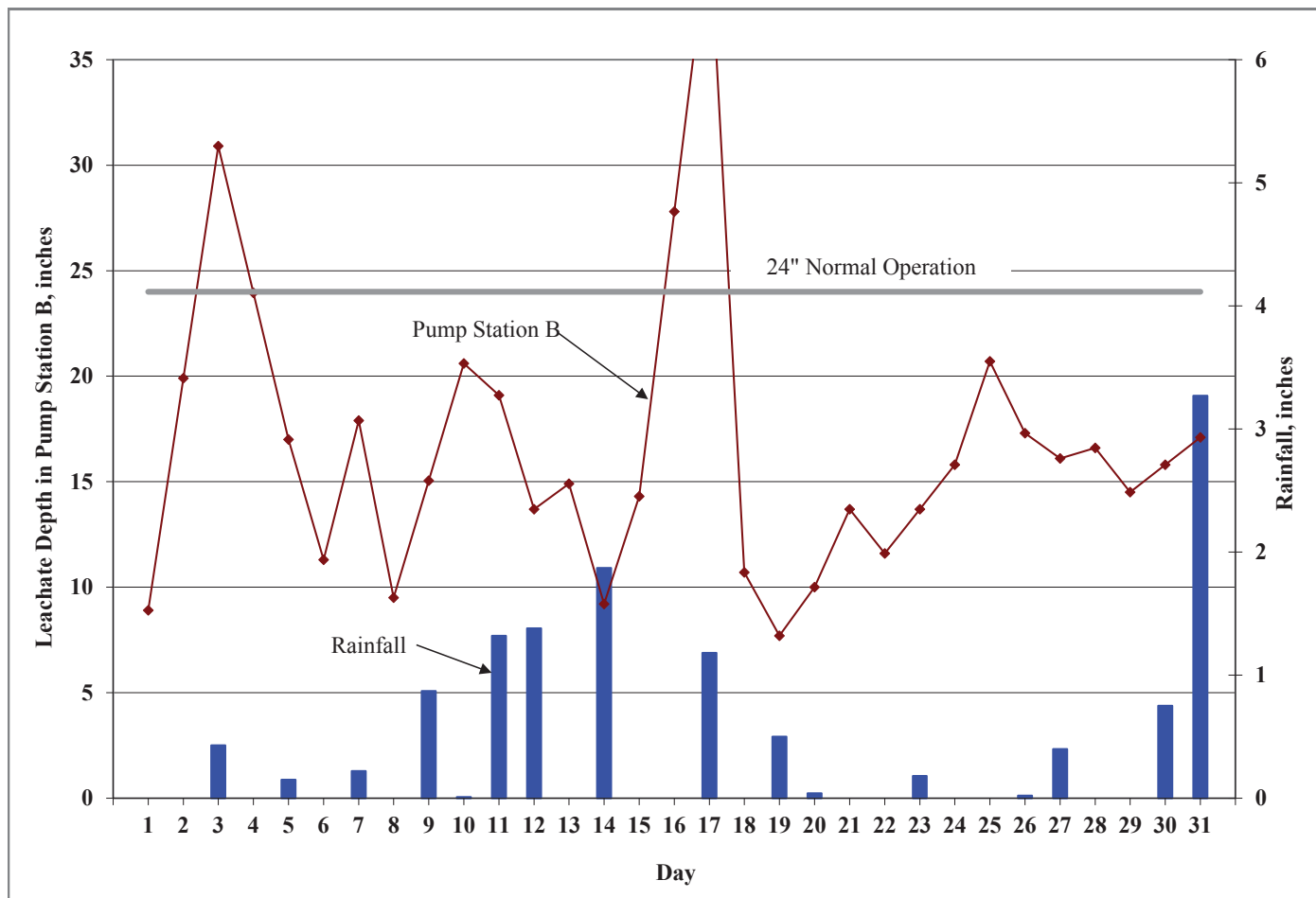


Figure 1. Leachate Levels in Pump Station B and Rainfall for July 2017.

TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR 2017

Month	Rainfall (in.)	Leachate Arriving at LTRF						Leachate Leaving LTRF			Effluent Disposal			Inflow / Outflow For LTRF		
		Condensate from LFG System (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.)	Phase II TPS-2 (gal.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	1.26	15,559	63,901	107,208	2,220,588	0	0	1,465,900	0	928,400	7,108	0	612,840	2,407,256	2,394,300	12,956
February	1.96	12,809	56,814	96,390	1,796,165	0	0	1,253,632	0	700,600	78,895	0	526,386	1,962,178	1,954,232	7,946
March	0.67	11,418	49,816	83,733	2,101,893	232,499	0	1,473,627	0	907,200	168,009	0	707,976	2,479,359	2,380,827	98,532
April	2.58	21,470	49,032	81,696	1,849,005	175,666	0	1,165,386	0	951,500	7,425	0	829,485	2,176,868	2,116,886	59,982
May	1.97	5,365	46,880	84,635	1,672,229	142,264	0	1,158,105	1,618	841,400	135,383	0	819,657	1,951,373	2,001,123	-49,750
June	12.31	8,499	88,631	147,375	1,624,622	120,889	191,200	1,508,449	0	715,000	71,078	0	235,093	2,181,216	2,223,449	-42,233
July	12.59	3,899	219,288	374,905	2,371,971	228,538	203,100	2,430,780	1,555	1,230,100	1,083,579	0	180,558	3,401,701	3,662,435	-260,734
August																
September																
October																
November																
December																
YTD Total	33.34	79,019	574,362	975,942	13,636,473	899,856	394,300	10,455,879	3,173	6,274,200	1,551,477	0	3,911,995	16,559,951	16,733,252	-173,301

Note:

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



Hillsborough County Florida

PUBLIC WORKS

PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: September 28, 2017

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

FROM: Cindy A. Pelley, Landfill Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for August 2017
Southeast County Landfill, Hillsborough County, Florida

BOARD OF COUNTY COMMISSIONERS
Victor D. Crist
Ken Hagan
Al Higginbotham
Pat Kemp
Lesley "Les" Miller, Jr.
Sandra L. Murman
Stacy R. White

COUNTY ADMINISTRATOR
Michael S. Merrill

COUNTY ATTORNEY
Chip Fletcher

INTERNAL AUDITOR
Peggy Caskey

CHIEF DEV. & INFRA. SERVICES ADMINISTRATOR
Lucia E. Garsys

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 2017 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 11.97 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 depth of effluent stored in Pond A was 2.9 feet.

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 stored in Pond B was 2.3 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. This month PS-B was below the normal operation level except for August 29 – 31 due to excessive rain events within a short period of time and a high level in the leachate storage tank. The average recorded depth of leachate in the PS-B sump was 15.9 inches.

Leachate Pumped to Pump Station A Sump from Phases I-VI Condensate Line (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from the Phases I-VI condensate line and pumped to Pump Station A (PS-A). The average daily amount of leachate pumped from the Phases I-VI condensate line was 2,451 gallons. A total of 75,972 gallons of leachate was pumped this month.

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

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 temporary pump stations TPS-2B and PS-2. The average daily amount of leachate pumped from PS-A was 141,791 gallons. A total of 4,395,522 gallons of leachate was pumped this month.

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

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 a total of 7,347 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

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 IX). This month a total of 355,006 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column X)

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 4,750,528 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

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 270,988 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

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 2,651 gallons per day. This month a total 3 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XIII)

Column XIV presents the total quantity of leachate pumped to the LTRF from the Compost Project Area Sump. This month a total of 916,050 gallons of leachate from the compost area was pumped to the LTRF.

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

Column XV 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 360,800 gallons of leachate was stored in the tank.

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

Column XVI 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 stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 387,800 gallons of effluent was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 1,272,284 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 3,868,019 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

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 6,349 gallons of leachate was used for dust control.

Pond A Storage (Column XIX)

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 105,600 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XXI 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 effluent in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated. This month a daily average of 119,900 gallons of effluent was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XXII 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 XXVI. This month 42,639 gallons of effluent was sprayed in Pond B.

Effluent Irrigation (Column XXII)

Column XXIII 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 IV-VI is measured from the flow meter at the irrigation pump station. This month a total of 234,699 gallons of effluent was used for spray irrigation.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIV 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 XXIV)

Column XXV presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month 1,058,677 gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXVI 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 194,800 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 5,930,719 gallons. Total outflow quantity from the LTRF was 5,146,652 gallons. The change in storage for the month increased by 784,067 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
AUGUST 2017
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV	
	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Phases I - VI Condensate Meter (gal.)	Leachate Pumped to MLPS from Phases I-VI (gal.)	Leachate Pumped from Section 7-8 LDS (gal.)	Leachate Pumped to MLPS from Section 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.)	Compost Leachate (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	0.01	2.5	2.9	8.9	3,561	123,317	142	17,101	140,418	21,373	0	101,700	413,000	331,000	39,960	147,101	0	83,000	162,000	0	0	0	7,168	0	
2	0.82	2.7	3.1	17.6	1,625	151,319	183	26,208	177,527	23,155	0	63,100	456,000	377,000	53,621	196,122	0	93,000	182,000	0	0	0	0	0	
3	0.07	2.7	3.2	10.7	1,367	171,567	20	31,814	203,381	29,254	0	9,300	446,000	422,000	52,417	220,621	0	93,000	192,000	0	0	0	18,322	0	
4	0.00	2.7	3.3	9.8	1,481	160,434	71	29,621	190,055	22,457	0	65,200	446,000	439,000	38,471	226,994	0	93,000	202,000	0	0	0	24,416	0	
5	0.03	2.7	3.3	10.1	2,093	154,030	105	29,971	184,001	14,783	0	19,600	430,000	425,000	38,674	122,129	0	93,000	202,000	0	0	0	48,847	0	
6	0.00	2.7	3.3	11.2	2,989	142,765	230	10,570	153,335	12,396	0	1,050	422,000	466,000	38,675	178,413	0	88,000	192,000	0	0	0	36,777	0	
7	0.17	2.6	3.2	12.2	2,980	144,362	230	10,570	154,932	12,396	0	1,050	422,000	466,000	38,675	178,413	0	88,000	192,000	0	0	0	36,777	0	
8	0.10	2.6	3.2	8.6	3,252	136,892	734	38,998	175,890	9,668	0	2,100	403,000	463,000	35,850	171,436	0	88,000	192,000	11,615	0	0	28,597	9,300	
9	0.00	3.3	2.7	13.7	3,398	140,435	93	22,543	162,978	9,075	0	0	353,000	453,000	38,807	158,292	0	123,000	143,000	0	10,684	0	85,271	8,500	
10	0.00	3.2	2.7	16.4	3,267	134,772	127	17,394	152,166	8,695	0	0	302,000	415,000	41,141	158,668	3,070	118,000	143,000	42,639	0	0	72,756	4,600	
11	0.09	3.4	2.5	13.4	3,189	164,386	175	16,592	180,978	7,851	0	0	259,000	377,000	37,797	122,818	1,608	129,000	124,000	0	0	0	79,048	1,300	
12	0.65	3.4	2.5	20.0	3,252	132,572	457	9,956	142,528	8,680	0	0	274,000	341,000	45,529	49,689	0	129,000	124,000	0	0	0	0	0	
13	0.02	3.4	2.5	14.6	3,071	126,595	683	20,099	146,694	7,474	0	42,900	345,000	378,000	45,529	0	129,000	124,000	0	0	0	0	0	0	
14	0.20	3.3	2.5	9.2	3,071	127,285	683	20,099	147,384	7,474	0	0	417,000	415,000	45,528	109,221	0	123,000	124,000	0	0	0	63,875	0	
15	0.04	3.2	2.5	10.0	3,105	121,999	4	13,839	135,838	3,289	0	0	403,000	403,000	45,665	99,442	0	118,000	124,000	0	37,278	0	38,659	29,800	
16	0.10	2.7	2.6	8.6	2,897	111,092	0	10,862	121,954	2,527	3	0	389,000	386,000	32,854	129,619	1,671	93,000	133,000	0	0	0	72,655	1,300	
17	0.12	2.7	2.6	13.0	2,853	144,318	888	14,742	159,060	1,349	0	0	341,000	345,000	44,577	108,496	0	93,000	133,000	0	32,760	0	72,793	26,200	
18	0.11	2.1	2.8	13.4	2,744	118,957	369	2,553	121,510	28	0	300	336,000	314,000	41,500	91,723	0	65,000	152,000	0	28,295	0	36,689	22,600	
19	0.00	2.8	2.0	19.1	2,780	108,658	116	0	108,658	11	0	400	317,000	329,000	54,343	85,965	0	98,000	80,000	0	57,432	0	45,900	0	
20	0.03	2.4	2.0	15.0	2,239	105,530	106	5,028	110,564	49	0	0	317,000	378,000	34,343	43,713	0	79,000	80,000	0	0	0	0	0	
21	0.00	1.9	2.0	10.8	2,239	140,857	106	5,028	145,885	49	0	0	317,000	427,000	54,344	128,977	0	57,000	80,000	0	0	0	36,650	0	
22	0.00	3.3	1.0	17.9	1,885	117,134	490	778	117,912	1,134	0	0	286,000	427,000	40,580	114,122	0	123,000	19,000	0	46,397	0	36,600	37,100	
23	0.27	2.4	1.0	21.1	1,969	112,454	41	125	112,579	28,548	0	0	274,000	403,000	35,225	106,507	0	79,000	19,000	0	10,238	0	79,239	8,200	
24	0.00	3.2	0.0	8.2	1,379	128,709	231	77	128,786	6,029	0	17,550	245,000	369,000	36,554	128,359	0	118,000	0	0	0	0	79,761	0	
25	0.78	3.3	0.0	9.6	2,530	128,737	174	51	128,788	9	0	0	216,000	324,000	33,834	83,189	0	123,000	0	0	0	0	43,580	0	
26	4.48	3.3	0.0	8.8	1,913	118,497	0	48	118,545	11	0	50,700	216,000	331,000	35,948	42,440	0	123,000	0	0	0	0	0	0	
27	1.27	3.4	1.0	13.9	2,018	148,060	217	45	148,105	13	0	291,200	299,000	354,000	35,948	43,619	0	129,000	19,000	0	0	0	0	0	
28	2.27	3.4	2.0	18.9	2,018	161,639	217	45	161,684	13	0	82,550	381,000	377,000	35,947	121,826	0	129,000	80,000	0	0	0	36,480	0	
29	0.30	3.4	2.2	40.2	1,742	187,493	189	28	187,521	23,043	0	147,550	451,000	365,000	33,513	184,704	0	129,000	97,000	0	0	0	36,294	0	
30	0.04	3.4	3.3	44.4	1,352	212,692	50	70	212,762	2,798	0	19,800	504,000	355,000	33,513	173,230	0	129,000	202,000	0	0	0	6,044	0	
31	0.00	3.1	3.3	44.8	1,725	218,053	213	151	218,204	8,000	0	0	502,000	389,000	33,514	198,999	0	113,000	202,000	0	0	0	18,156	0	
Total	11.97				75,972	4,395,522	7,347	355,006	4,750,528	270,988	3	916,050			1,272,284	3,868,019	6,349			42,639	234,699	0	1,058,677	194,800	
Daily Average		2.9	2.3	15.9	2,451	141,791	237	11,452	153,243	8,742	0	29,550	360,800	387,800				105,600	119,900					6,280	
Mo. Average																	200				7,600			34,200	6,280

- 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 IX & X, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
 8. Column XV and XVI, calculated from depth in 575,000 gal. tanks.
 9. Columns XVIII, XXII-XXIV, and XXV-XXV, quantities from flow meters.
 10. Column XXVI includes 80% of the daily values from Columns XIX, XXIII, and XXIV plus 5% of the daily values from column XXII.

project/balance/2009/01-09/01-11 (ds 9/07/17)

TABLE 2. FIELD DATA ENTRY FORM
AUGUST 2017
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	W	X
Day	Rainfall (in.)	Phases I - VI Condensate Meter (gal.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled Contractor (gal.)	County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.01	222,066	4,062,172	8.9	3,602,974	2,178,553	5,846,192	503,500	3,549,105	16,399	2.9	0.0	2.5	0	14.33	11.50	0	102,993	44,108	0	7,168	0	0
2	0.82	223,691	4,191,253	17.6	3,603,035	2,201,647	5,846,192	566,600	3,575,313	16,582	3.1	0.0	2.7	0	15.83	13.08	0	123,563	72,559	0	0	0	0
3	0.07	225,058	4,342,800	10.7	3,603,036	2,230,900	5,846,192	575,900	3,607,127	16,602	3.2	0.0	2.7	0	15.50	14.67	0	126,833	93,788	0	18,322	0	0
4	0.00	226,539	4,483,874	9.8	3,603,155	2,253,238	5,846,192	641,100	3,636,748	16,673	3.3	0.0	2.7	0	15.50	15.25	0	112,819	114,175	0	24,416	0	0
5	0.03	228,632	4,618,117	10.1	3,603,570	2,267,606	5,846,192	660,700	3,666,719	16,778	3.3	0.0	2.7	0	14.92	14.75	0	43,598	78,531	0	48,847	0	0
6	0.00	231,612	4,740,209	11.15	3,604,844	2,278,728	5,846,192	661,750	3,677,289	17,008	3.25	0	2.65	0	14.80	15.46	0	78,896	42,689	0	0	0	0
7	0.17	234,591	4,862,300	12.2	3,606,118	2,289,849	5,846,192	662,800	3,687,859	17,238	3.2	0.0	2.6	0	14.67	16.17	0	128,666	49,747	0	36,777	0	0
8	0.10	237,843	4,975,900	8.6	3,614,615	2,291,020	5,846,192	664,900	3,726,857	17,972	3.2	0.0	2.6	11,615	14.00	16.08	0	93,118	78,318	0	28,597	0	0
9	0.00	241,241	5,089,009	13.7	3,623,687	2,291,023	5,846,192	664,900	3,749,400	18,065	2.7	0.0	3.3	10,684	12.25	15.75	0	72,888	85,404	0	85,271	0	0
10	0.00	244,508	5,196,632	16.4	3,632,301	2,291,104	5,846,192	664,900	3,766,794	18,192	2.7	42,639	3.2	0	10.50	14.42	0	87,592	71,076	0	72,756	0	0
11	0.09	247,697	5,302,340	13.4	3,640,147	2,291,109	5,846,192	664,900	3,783,386	18,367	2.5	0.0	3.4	0	9.00	13.08	0	80,270	42,548	0	79,048	0	0
12	0.65	250,949	5,408,951	20.0	3,648,184	2,291,112	5,846,192	664,900	3,793,342	18,824	2.5	0.0	3.4	0	9.50	11.83	0	0	49,689	0	0	0	0
13	0.02	254,020	5,509,676	14.60	3,654,860	2,291,910	5,846,192	664,900	3,813,441	19,509	2.50	0	3.35	0	12.00	13.13	0	0	0	0	0	0	0
14	0.20	257,091	5,610,400	9.2	3,661,536	2,292,707	5,846,192	664,900	3,833,540	20,194	2.5	0.0	3.3	0	14.50	14.42	0	65,054	44,167	0	63,875	0	0
15	0.04	260,196	5,712,400	10.0	3,664,571	2,292,961	5,846,192	664,900	3,847,379	20,198	2.5	0.0	3.2	37,278	14.00	14.00	0	70,079	29,363	0	38,659	0	0
16	0.10	263,093	5,811,400	8.6	3,665,087	2,294,972	5,846,195	664,900	3,858,241	20,198	2.6	0.0	2.7	0	13.50	13.42	0	50,264	79,355	0	72,655	0	0
17	0.12	265,946	5,910,700	13.0	3,665,719	2,295,689	5,846,195	664,900	3,872,983	21,086	2.6	0.0	2.7	32,760	11.83	12.00	0	37,171	71,325	0	72,793	0	0
18	0.11	268,690	6,007,221	13.4	3,665,725	2,295,711	5,846,195	665,200	3,875,536	21,455	2.8	0.0	2.1	28,295	11.67	10.92	0	42,934	48,789	0	36,689	0	0
19	0.00	271,470	6,106,873	19.1	3,665,733	2,295,714	5,846,195	665,600	3,875,536	21,571	2.0	0.0	2.8	57,432	11.00	11.42	0	43,311	42,654	0	0	0	0
20	0.03	273,709	6,203,945	15.0	3,665,780	2,295,716	5,846,195	665,600	3,880,564	21,677	2.0	0.0	2.4	0	11.00	13.13	0	43,713	0	0	0	0	0
21	0.00	275,947	6,301,016	10.8	3,665,826	2,295,718	5,846,195	665,600	3,885,592	21,782	2.0	0.0	1.9	0	11.00	14.83	0	86,400	42,577	0	36,650	0	0
22	0.00	277,832	6,394,520	17.9	3,666,956	2,295,722	5,846,195	665,600	3,886,370	22,272	1.0	0.0	3.3	46,397	9.92	14.83	0	85,739	28,383	0	36,600	0	0
23	0.27	279,801	6,490,505	21.1	3,695,500	2,295,726	5,846,195	665,600	3,886,495	22,313	1.0	0.0	2.4	10,238	9.50	14.00	0	43,123	63,384	0	79,239	0	0
24	0.00	281,180	6,588,500	8.2	3,701,526	2,295,729	5,846,195	665,600	3,886,572	22,544	0.0	0.0	3.2	0	8.50	12.83	0	43,384	84,975	0	79,761	0	0
25	0.78	283,710	6,685,214	9.6	3,701,529	2,295,735	5,846,195	665,600	3,886,623	22,718	0.0	0.0	3.3	0	7.50	11.25	0	35,692	47,497	0	43,580	0	0
26	4.48	285,623	6,779,617	8.8	3,701,533	2,295,742	5,846,195	665,700	3,886,671	22,718	0.0	0.0	3.3	0	7.50	11.50	0	0	42,440	0	0	0	0
27	1.27	287,641	6,903,478	13.9	3,701,541	2,295,747	5,846,195	672,200	3,886,716	22,935	1.0	0.0	3.4	0	10.38	12.29	0	43,619	0	0	0	0	0
28	2.27	289,658	7,027,339	18.9	3,701,549	2,295,752	5,846,195	678,700	3,886,761	23,152	2.0	0.0	3.4	0	13.25	13.08	0	79,146	42,680	0	36,480	0	0
29	0.30	291,400	7,179,300	40.2	3,701,745	2,318,599	5,846,195	680,200	3,886,789	23,341	2.2	0.0	3.4	0	15.67	12.67	0	92,215	92,489	0	36,294	0	0
30	0.04	292,752	7,356,300	44.4	3,703,892	2,319,250	5,846,195	681,000	3,886,859	23,391	3.3	0.0	3.4	0	17.50	12.33	0	109,009	64,221	0	6,044	0	0
31	0.00	294,477	7,536,300	44.8	NA	NA	5,846,195	681,000	3,887,010	23,604	3.3	0.0	3.1	0	17.42	13.50	0	98,566	100,433	0	18,156	0	0
Totals	11.97											42,639		234,699			0	2,120,655	1,747,364		1,058,677	0	0

projects\balance\2009\01-09\bal.xls (ds 9/07/17)

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 I and L include quantities from leak detection system.
4. Column B, trace is less than 0.01 inches.
5. Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
6. Columns M and O measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 9 acres
Open	5	0
Intermediate	134.4	15
Final	23	0
Not Opened	0	0

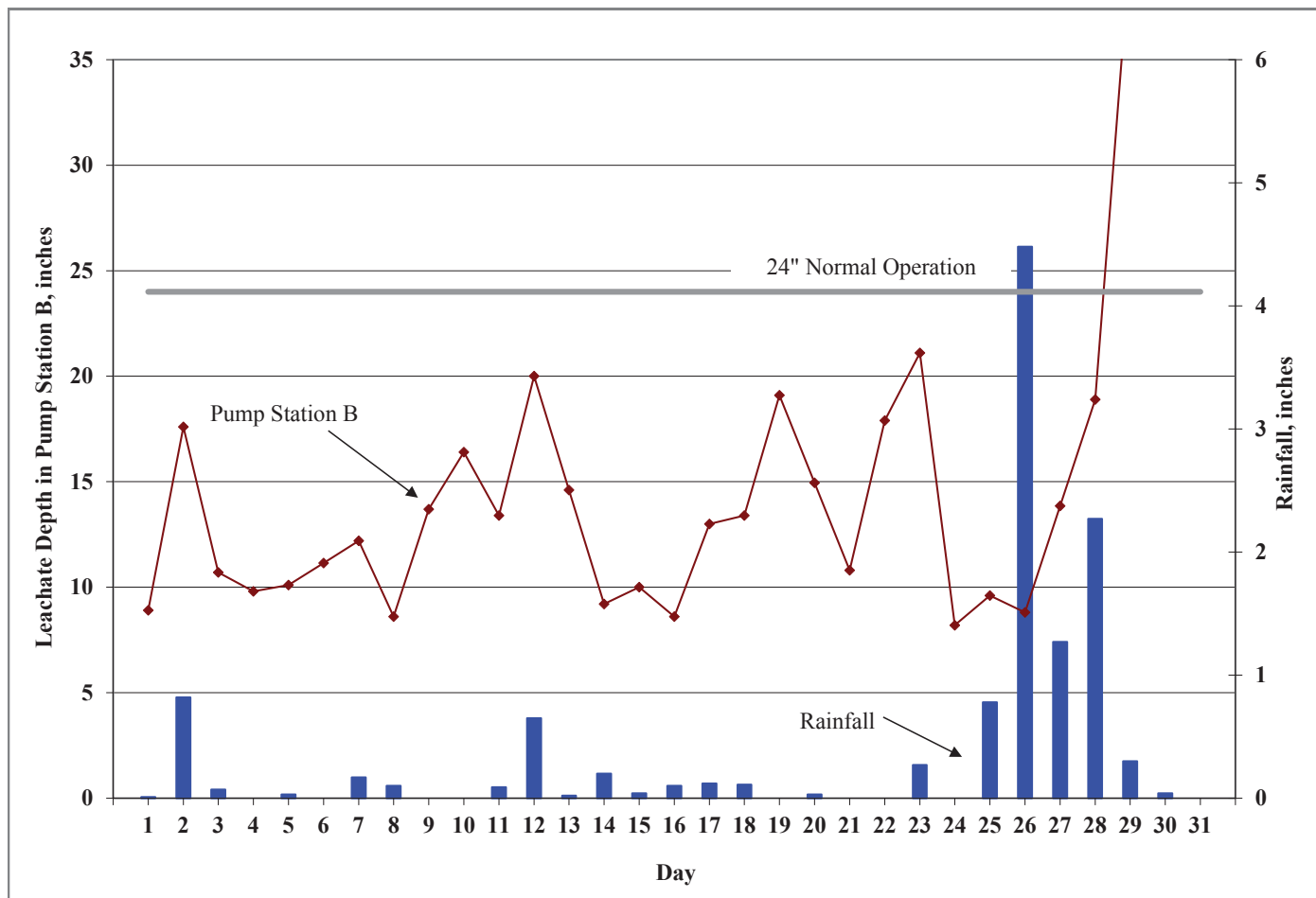


Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2017.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2017**

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.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	1.26	15,559	63,901	107,208	2,220,588	0	1,465,900	0	928,400	7,108	0	612,840	2,407,256	2,394,300	12,956
February	1.96	12,809	56,814	96,390	1,796,165	0	1,253,632	0	700,600	78,895	0	526,386	1,962,178	1,954,232	7,946
March	0.67	11,418	49,816	83,733	2,101,893	0	1,473,627	0	907,200	168,009	0	707,976	2,479,359	2,380,827	98,532
April	2.58	21,470	49,032	81,696	1,849,005	0	1,165,386	0	951,500	7,425	0	829,485	2,176,868	2,116,886	59,982
May	1.97	5,365	46,880	84,635	1,672,229	0	1,158,105	1,618	841,400	135,383	0	819,657	1,951,373	2,001,123	-49,750
June	12.31	8,499	88,631	147,375	1,624,622	191,200	1,508,449	0	715,000	71,078	0	235,093	2,181,216	2,223,449	-42,233
July	12.59	3,899	219,288	374,905	2,371,971	203,100	2,430,780	1,555	1,230,100	1,083,579	0	180,558	3,401,701	3,662,435	-260,734
August	11.97	1,150	270,991	355,006	4,395,522	916,050	3,868,019	6,349	1,272,284	1,058,677	0	234,699	5,938,719	5,146,652	792,067
September															
October															
November															
December															
YTD Total	45.31	80,169	845,353	1,330,948	18,031,995	1,310,350	14,323,898	9,522	7,546,484	2,610,154	0	4,146,694	22,498,670	21,879,904	618,766

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



Hillsborough County Florida

PUBLIC WORKS

PO Box 1110 Tampa, FL 33601-1110
(813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: October 13, 2017

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

FROM: Cindy A. Pelley, Landfill Supervisor, Solid Waste Management Division

SUBJECT: Leachate Water Balance Report Forms for September 2017
Southeast County Landfill, Hillsborough County, Florida

BOARD OF COUNTY COMMISSIONERS
Victor D. Crist
Ken Hagan
Al Higginbotham
Pat Kemp
Lesley "Les" Miller, Jr.
Sandra L. Murman
Stacy R. White

COUNTY ADMINISTRATOR
Michael S. Merrill

COUNTY ATTORNEY
Chip Fletcher

INTERNAL AUDITOR
Peggy Caskey

CHIEF DEV. & INFRA. SERVICES ADMINISTRATOR
Lucia E. Garsys

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 2017 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

TABLE 1

Day (Column I)

Column I presents the calendar days for the month.

Rainfall (Column II)

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 10.12 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 depth of effluent stored in Pond A was 2.4 feet.

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 stored in Pond B was 3.6 feet.

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

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. This month PS-B was above the normal operation level due to excessive rain events and Hurricane IRMA, and a continuous high level in the leachate storage tank. The average recorded depth of leachate in the PS-B sump was 44.0 inches.

Leachate Pumped to Pump Station A Sump from Phases I-VI Condensate Line (Column VI)

Column VI presents the daily amount of leachate, in gallons, collected from the Phases I-VI condensate line and pumped to Pump Station A (PS-A). The average daily amount of leachate pumped from the Phases I-VI condensate line was 2,494 gallons. A total of 74,805 gallons of leachate was pumped this month.

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

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 temporary pump stations TPS-2B and PS-2. The average daily amount of leachate pumped from PS-A was 154,317 gallons. A total of 4,629,523 gallons of leachate was pumped this month.

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

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 a total of 14,948 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

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 IX). This month a total of 840,695 gallons was removed.

Leachate Pumped to LTRF from the MLPS (Column X)

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 5,470,218 gallons of leachate was pumped to the LTRF.

Leachate Pumped to LTRF from Section 9 (Column XI)

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 303,270 gallons of leachate was pumped this month.

Leachate Pumped from Section 9 LDS (Column XII)

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 2,651 gallons per day. This month a total 19 gallons of leachate was removed from the leak detection system.

Leachate Pumped from Compost Area Sump (Column XIII)

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month a total of 465,810 gallons of leachate from the compost area was pumped to the LTRF.

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

Column XV 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 441,000 gallons of leachate was stored in the tank.

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

Column XVI typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. On September 14th, SWMD staff began diverting *leachate* to the T6 storage tank to contain excess leachate volumes caused by Hurricane IRMA. The amount of leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 375,300 gallons of *leachate* was stored in the tank.

Leachate Treated at LTRF (Column XVI)

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. This month a total of 502,200 gallons of leachate was treated at the plant.

Total Leachate Hauled (Column XVII)

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 6,020,161 gallons of leachate was hauled off site.

Leachate Dust Control Sprayed (Column XVIII)

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 leachate was not used for dust control.

Pond A Storage (Column XIX)

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 77,000 gallons of effluent was stored in Pond A.

Pond B Storage (Column XX)

Column XXI presents the daily amount of *leachate* from the Compost Area, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of *leachate* in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of effluent removed from the pond by the evaporation system, hauled from the pond, used for dust control or evaporated; however during September, the empty storage pond was used to contain *leachate* from the Compost Area following Hurricane IRMA. This month a daily average of 223,400 gallons of *leachate* was stored in Pond B.

Effluent Sprayed at Pond B (Column XXI)

Column XXII 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 XXVI. This month effluent was not sprayed in Pond B.

Effluent Irrigation (Column XXII)

Column XXIII 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 IV-VI is measured from the flow meter at the irrigation pump station. This month a total of 239,497 gallons of effluent was used for spray irrigation.

Effluent Dust Control Sprayed (Column XXIII)

Column XXIV 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 XXIV)

Column XXV presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month 416,211 gallons of effluent was hauled off site.

Total Evaporation (Column XXV)

Column XXVI 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 191,600 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 6,239,956 gallons. Total outflow quantity from the LTRF was 6,522,361 gallons. The change in storage for the month decreased by 282,405 gallons.

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

TABLE 1. LEACHATE WATER BALANCE REPORT FORM
SEPTEMBER 2017
SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA

	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI	XVII	XVIII	XIX	XX	XXI	XXII	XXIII	XXIV	XXV
	Rainfall (in.)	Depth in Pond A (ft.)	Depth in Pond B (ft.)	Estimated Depth at PS-B (in.)	Phases I - VI Condensate Meter (gal.)	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.)	Compost Leachate (gal.)	Leachate in 575K Tank (gal.)	Effluent in 575K Tank (gal.)	Leachate Treated at LTRF (gal.)	Total Leachate Hauled (gal.)	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	0.65	2.8	3.4	23.6	2,957	236,528	0	74	236,602	18,700	0	15,527	497,000	405,000	33,300	214,495	0	98,000	213,000	0	0	0	0	0
2	0.05	2.9	3.4	45.3	2,854	145,862	1	2,105	147,967	18,700	0	15,527	504,000	437,000	33,900	143,690	0	103,000	213,000	0	47,213	0	0	37,800
3	0.09	2.4	3.5	38.9	5,846	224,097	50	28,488	252,578	18,700	0	15,527	485,000	444,000	33,900	135,983	0	79,000	223,000	0	23,607	0	41,648	18,900
4	0.00	2.2	3.6	23.7	2,923	114,501	25	14,244	128,744	18,700	0	15,527	475,000	448,000	33,900	228,821	0	79,000	223,000	0	11,803	0	35,036	9,400
5	0.00	1.9	3.6	16.5	2,923	120,055	25	14,244	134,299	18,700	0	15,527	466,000	451,000	33,900	173,868	0	57,000	234,000	0	0	0	48,819	0
6	0.37	1.8	3.6	38.5	2,545	211,818	1,008	71,411	283,229	18,700	0	15,527	497,000	430,000	29,400	191,940	0	52,000	234,000	0	0	0	48,175	0
7	1.30	1.8	3.6	28.1	4,050	206,054	1,036	28,268	234,322	18,700	0	15,527	489,000	403,000	29,900	235,892	0	52,000	234,000	0	78,145	0	97,368	62,500
8	0.09	1.7	3.7	55.0	5,185	81,345	1,904	34,871	116,216	18,700	0	15,527	389,000	302,000	17,200	219,216	0	48,000	245,000	0	0	0	108,411	0
9	0.00	1.7	3.9	29.0	4,925	198,969	1,718	25,344	224,313	18,700	0	15,527	360,000	238,000	24,500	174,188	0	48,000	267,000	0	0	0	18,004	0
10	7.05	2.1	4.2	29.0	3,375	22,443	0	5,091	27,534	18,700	0	15,527	335,000	245,000	24,500	0	0	65,000	267,000	0	0	0	0	0
11	0.21	2.3	4.3	29.0	1,687	11,221	0	2,546	13,767	18,700	0	15,527	322,000	248,000	0	0	0	74,000	267,000	0	0	0	0	0
12	0.00	2.5	4.4	29.0	1,687	25,632	0	2,546	28,178	18,700	0	15,527	309,000	252,000	0	113,641	0	83,000	267,000	0	0	0	0	0
13	0.00	2.5	4.2	29.0	0	76,642	0	0	76,642	18,700	0	15,527	434,000	252,000	0	269,388	0	83,000	267,000	0	0	0	18,750	0
14	0.02	2.5	4.1	59.6	0	197,677	549	9,897	207,574	18,700	0	15,527	499,000	245,000	24,500	287,954	0	83,000	267,000	0	0	0	0	0
15	0.00	2.5	4.0	59.0	914	138,086	338	27,846	165,932	18,700	5	15,527	494,000	218,000	29,500	293,618	0	83,000	267,000	0	0	0	0	0
16	0.00	2.5	3.7	55.3	0	163,755	0	32,617	196,372	18,700	0	15,527	362,000	360,000	0	296,607	0	83,000	245,000	0	0	0	0	0
17	0.00	2.5	3.5	52.5	0	228,770	0	17	228,787	18,700	3	15,527	314,000	475,000	0	187,968	0	83,000	223,000	0	0	0	0	0
18	0.00	2.5	3.3	50.6	0	238,130	0	2,643	240,773	18,700	3	15,527	410,000	468,000	0	203,192	0	83,000	202,000	0	0	0	0	0
19	0.00	2.5	3.3	53.3	0	176,366	1,353	45,715	222,081	18,700	4	15,527	528,000	389,000	0	242,290	0	83,000	202,000	0	0	0	0	0
20	0.00	2.5	3.3	47.7	2,703	184,017	457	19,672	203,689	18,700	4	15,527	497,000	405,000	0	263,376	0	83,000	202,000	0	0	0	0	0
21	0.00	2.5	3.3	47.2	578	237,389	0	46,261	283,650	18,700	0	15,527	439,000	453,000	0	247,452	0	83,000	202,000	0	0	0	0	0
22	0.00	2.5	3.3	48.5	5,918	204,319	540	52,743	257,062	18,700	0	15,527	502,000	386,000	23,900	271,568	0	83,000	202,000	0	0	0	0	0
23	0.14	2.5	3.2	55.6	10,683	165,167	297	101,985	267,152	18,700	0	15,527	499,000	381,000	23,900	167,530	0	83,000	192,000	0	0	0	0	0
24	0.14	2.5	3.2	59.1	4,413	92,023	0	58,704	150,727	18,700	0	15,527	502,000	389,000	23,900	50,132	0	83,000	192,000	0	0	0	0	0
25	0.00	2.5	3.2	51.3	1,756	191,022	0	12,100	203,122	18,700	0	15,527	497,000	473,000	23,900	221,414	0	83,000	192,000	0	0	0	0	0
26	0.00	2.5	3.2	59.0	1,413	140,923	1,477	25,184	166,107	18,700	0	15,527	504,000	463,000	18,000	187,167	0	83,000	192,000	0	0	0	0	0
27	0.00	2.5	3.2	50.6	1,290	134,439	78	27,176	161,615	18,700	0	15,527	487,000	427,000	19,600	274,815	0	83,000	192,000	0	0	0	0	0
28	0.00	2.5	3.2	59.0	2,145	160,399	2,286	59,781	220,180	3,779	0	15,527	437,000	417,000	19,600	267,590	0	83,000	192,000	0	0	0	0	0
29	0.00	2.5	3.2	57.8	722	126,542	0	37,953	164,495	2,406	0	15,527	336,000	403,000	1,000	252,533	0	83,000	192,000	0	17,697	0	14,200	0
30	0.01	2.2	3.2	49.1	1,311	174,339	1,807	51,171	225,510	8,185	0	15,527	360,000	355,000	0	203,835	0	70,000	192,000	0	61,032	0	48,800	0
Total	10.12				74,805	4,629,523	14,948	840,695	5,470,218	303,270	19	465,810			502,200	6,020,161	0			0	239,497	0	416,211	191,600
Daily Average		2.4	3.6	44.0	2,494	154,317	498	28,023	182,341	10,109	1	15,527	441,000	375,300				77,000	223,400		8,000		13,900	6,390
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, 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 IX & X, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Columns XV and XVI, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XIV, XVII-XIX, and XXII-XXV, quantities from flow meters.
10. Column XXVI includes 80% of the daily values from Columns XIX, XXII, and XXIV plus 5% of the daily values from column XXII.

projects/balance/2009/01-09.html 3b (ep 10/10/17)

**TABLE 2. FIELD DATA ENTRY FORM
SEPTEMBER 2017
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	W	X
Day	Rainfall (in.)	Phases I - VI Condensate Meter (gal.)	Flow Meter Pump Sta. A (gal.)	Reading PS-B (in.)	Section 9 Pump 1 (gal.)	Section 9 Pump 2 (gal.)	Section 9 LDS (gal.)	Compost Leachate (gal.)	Sections 7-8 Pump (gal.)	Sections 7-8 LDS (gal.)	Pond B Depth (ft.)	Pond B Effluent Sprayed (gal.)	Pond A Depth (ft.)	Effluent Spray Irrigation (gal.)	Depth in 575K Tank Leachate (ft.)	Depth in 575K Tank Effluent (ft.)	Leachate Treated at LTRF (gal.)	Leachate Hauled Contractor (gal.)	County (gal.)	Leachate Dust Control (Sprayed) (gal.)	Effluent Hauled Contractor (gal.)	County (gal.)	Effluent Dust Control (Sprayed) (gal.)
1	0.65	297,434	7,747,216	23.6	2,324,105	N/R	5,846,195	681,000	3,887,084	23,604	3.4	0.0	2.8		17.25	14.08	33,314	121,552	92,943				
2	0.05	300,288	7,880,403	45.3	2,331,469	N/R	5,846,195	681,000	3,889,189	23,605	3.4	0.0	2.9	47,213	17.50	15.17	33,866	57,797	85,893				
3	0.09	306,134	8,093,738	30.9	2,348,733	N/R	5,846,195	681,000	3,917,677	23,655	3.5	0.0	2.4	23,607	16.84	15.42	33,866	43,194	92,789		41,648		
4	0.00	309,057	8,200,405	23.7	2,357,365	N/R	5,846,195	681,000	3,931,920	23,679	3.6	0.0	2.2	11,803	16.50	15.55	33,867	128,936	99,885		35,036		
5	0.00	311,980	8,307,072	16.5	2,365,997	N/R	5,846,195	681,000	3,946,164	23,704	3.6	0.0	1.9		16.17	15.67	33,867	116,744	57,124		48,819		
6	0.37	314,525	8,457,300	38.5	2,367,324	N/R	5,846,195	681,000	4,017,575	24,712	3.6	0	1.8		17.25	14.92	29,427	110,978	80,962		48,175		
7	1.30	318,575	8,609,000	28.1	2,378,676	N/R	5,846,195	681,000	4,045,843	25,748	3.6	0.0	1.8	78,145	17.00	14.00	29,903	162,072	73,820		90,230	7,138	
8	0.09	323,760	8,681,830	55.0	2,384,711	N/R	5,846,195	681,000	4,080,714	27,652	3.7	0.0	1.7		13.50	10.50	17,222	159,592	59,624		94,148	14,263	
9	0.00	328,685	8,873,708	29.0	2,384,957	N/R	5,846,195	681,000	4,106,058	29,370	3.9	0.0	1.7		12.50	8.25	24,496	152,884	21,304		18,004		
10	7.05	332,060	8,892,776	29.0	2,385,797	N/R	5,846,195	681,000	4,111,149	29,370	4.2	0	2.1		11.63	8.50	24,496	0	0		0	0	
11	0.21	333,747	8,902,310	29.0	2,386,216	N/R	5,846,195	681,000	4,113,695	29,370	4.3	0.0	2.3		11.19	8.63		0	0		0	0	
12	0.00	335,434	8,911,844	29.0	2,386,636	N/R	5,846,195	681,000	4,116,240	29,370	4.4	0.0	2.5		10.75	8.75		50,501	63,140				
13	0.00	335,434	8,911,844	29.0	2,386,636	N/R	5,846,195	681,000	4,116,240	29,370	4.2	0	2.5		15.08	8.75		190,440	78,948		12,106	6,644	
14	0.02	335,434	9,056,400	59.6	2,390,666	N/R	5,846,195	681,000	4,126,137	29,919	4.1	0.0	2.5		17.33	8.50	24,497	221,937	66,017				
15	0.00	336,348	9,166,152	59.0	2,393,686	N/R	5,846,200	681,000	4,153,983	30,257	4.0	0.0	2.5		17.17	7.58	29,463	204,500	89,118				
16	0.00	336,348	9,306,794	55.3	2,394,373	N/R	5,846,201	681,000	4,186,600	30,257	3.7	0.0	2.5		12.58	12.50		223,847	72,760				
17	0.00	336,348	9,512,040	51.5	2,394,375	N/R	5,846,204	681,000	4,186,617	30,257	3.5	0.0	2.5		10.92	16.42		109,143	78,823				
18	0.00	336,348	9,714,400	50.6	2,394,376	N/R	5,846,207	681,000	4,189,260	30,257	3.3	0.0	2.5		14.25	16.25		151,512	51,680				
19	0.00	336,348	9,890,038	53.3	2,394,378	N/R	5,846,211	681,000	4,234,975	31,610	3.3	0.0	2.5		18.33	13.50		197,710	44,580				
20	0.00	339,051	68,600	47.7	2,394,382	N/R	5,846,215	681,000	4,254,647	32,067	3.3	0.0	2.5		17.25	14.08		176,009	87,367				
21	0.00	339,629	266,879	47.2	2,394,382	N/R	5,846,216	681,000	4,300,908	32,067	3.3	0.0	2.5		15.25	15.75		160,600	86,852				
22	0.00	345,547	431,522	48.5	2,402,639	N/R	5,846,216	681,000	4,353,651	32,607	3.3	0.0	2.5		17.4	13.4	23,922	177,430	94,138				
23	0.14	356,232	544,787	55.6	2,409,213	N/R	5,846,217	681,000	4,455,636	32,904	3.2	0.0	2.5		17.3	13.3	23,922	87,549	79,981				
24	0.14	360,645	606,254	59.1	2,415,787	N/R	5,846,217	681,000	4,514,340	32,904	3.2	0.0	2.5		17.4	13.5	23,922		50,132				
25	0.00	362,401	760,000	51.3	2,429,709	N/R	5,846,217	681,000	4,526,440	32,904	3.2	0.0	2.5		17.3	16.4	23,922	184,993	36,421				
26	0.00	363,814	855,800	59.0	2,439,610	N/R	5,846,217	681,000	4,551,624	34,381	3.2	0.0	2.5		17.5	16.1	18,035	122,572	64,595				
27	0.00	365,104	982,581	50.6	3,000	128	5,846,217	681,000	4,578,800	34,459	3.2	0.0	2.5		16.9	14.8	19,639	202,418	72,397				
28	0.00	367,249	1,124,082	59.0	4,814	2,093	5,846,217	681,000	4,638,581	36,745	3.2	0.0	2.5		15.2	14.5	19,639	195,443	72,147				
29	0.00	367,971	1,203,569	57.8	4,814	4,499	5,846,217	681,000	4,676,534	36,745	3.2	0.0	2.5	17,697	11.7	14.0	978	208,872	43,661				
30	0.01	369,282	1,360,937	49.1	4,815	12,683	5,846,217	681,000	4,727,705	38,552	3.2	0.0	2.2	61,032	12.5	12.3		131,356	72,479				
Totals	10.12											0		239,497			502,263	4,050,581	1,969,580	0	388,166	28,045	0

projects\balance\2009\01-09\bal.xls (cp 10/10/17)

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 I and L include quantities from leak detection system.
- Column B, trace is less than 0.01 inches.
- Columns C, D, E, G, H, I, J, K, L, N, P, S-X and Y are quantities from flow meters.
- Columns M and O measured from staff gages in each pond.

Type of Cover	Phases I-VI acres	Section 9 acres
Open	5	0
Intermediate	134.4	15
Final	23	0
Not Opened	0	0

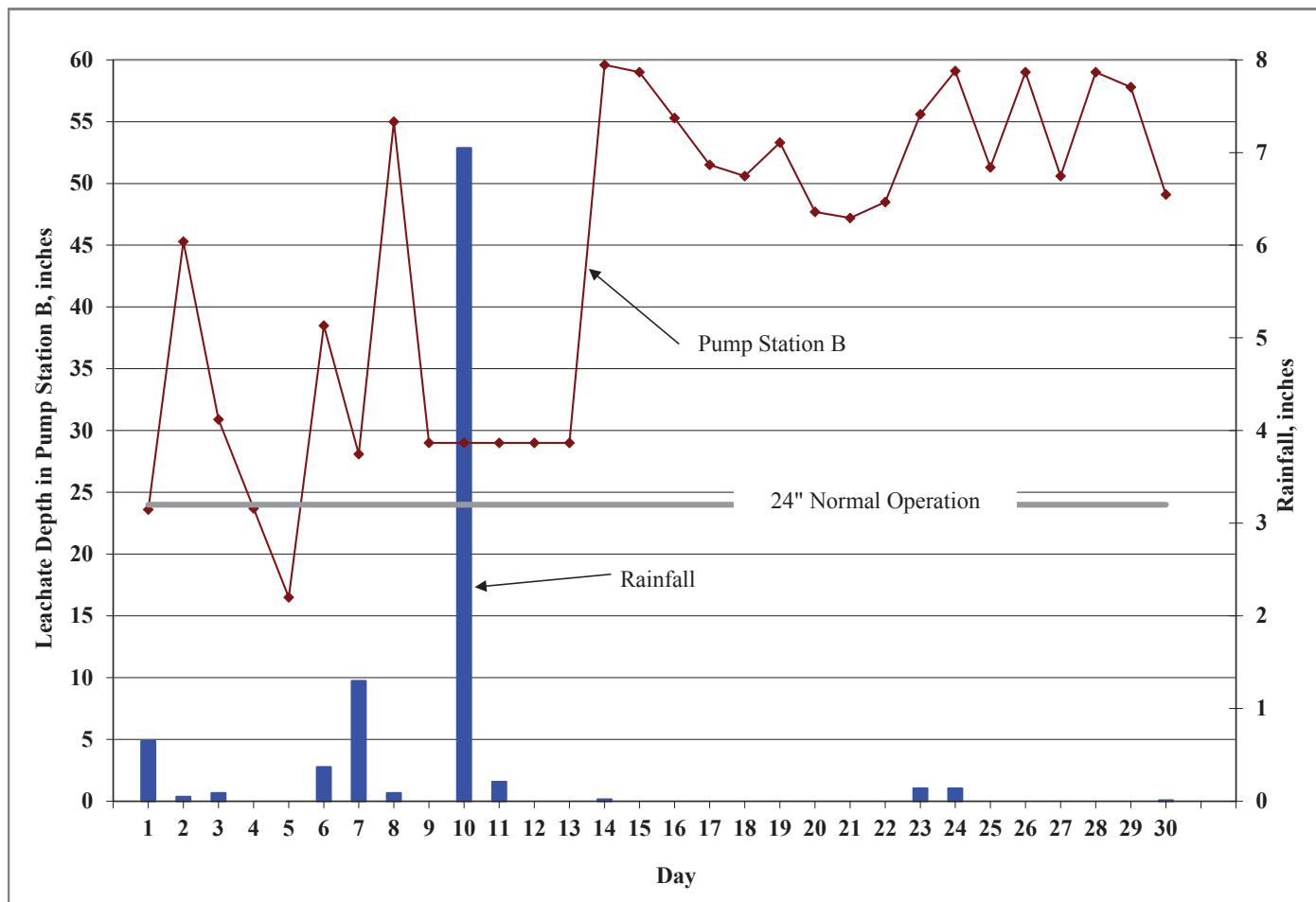


Figure 1. Leachate Levels in Pump Station B and Rainfall for August 2017.

**TABLE 3. LEACHATE BALANCE SUMMARY
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA
YEAR-2017**

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.)	Compost Leachate (gal.)	Total Leachate Hauled from LTRF (gal.)	Leachate Dust Control (Sprayed) (gal.)	Leachate Treated at LTRF (gal.)	Total Effluent Hauled (gal.)	Effluent Dust Control (Sprayed) (gal.)	Effluent Irrigation (gal.)	Total Inflow to LTRF (gal.)	Total Outflow from LTRF (gal.)	Change in Storage ³ (gal.)
January	1.26	15,559	63,901	107,208	2,220,588	0	1,465,900	0	928,400	7,108	0	612,840	2,407,256	2,394,300	12,956
February	1.96	12,809	56,814	96,390	1,796,165	0	1,253,632	0	700,600	78,895	0	526,386	1,962,178	1,954,232	7,946
March	0.67	11,418	49,816	83,733	2,101,893	0	1,473,627	0	907,200	168,009	0	707,976	2,479,359	2,380,827	98,532
April	2.58	21,470	49,032	81,696	1,849,005	0	1,165,386	0	951,500	7,425	0	829,485	2,176,868	2,116,886	59,982
May	1.97	5,365	46,880	84,635	1,672,229	0	1,158,105	1,618	841,400	135,383	0	819,657	1,951,373	2,001,123	-49,750
June	12.31	8,499	88,631	147,375	1,624,622	191,200	1,508,449	0	715,000	71,078	0	235,093	2,181,216	2,223,449	-42,233
July	12.59	3,899	219,288	374,905	2,371,971	203,100	2,430,780	1,555	1,230,100	1,083,579	0	180,558	3,401,701	3,662,435	-260,734
August	11.97	1,150	270,991	355,006	4,395,522	916,050	3,868,019	6,349	1,272,284	1,058,677	0	234,699	5,938,719	5,146,652	792,067
September	10.12	639	303,289	840,695	4,629,523	465,810	6,020,161	0	502,200	416,211	0	239,497	6,239,956	6,522,361	-282,405
October															
November															
December															
YTD Total	55.43	80,808	1,148,642	2,171,643	22,661,518	1,776,160	20,344,059	9,522	8,048,684	3,026,365	0	4,386,191	28,738,626	28,402,265	336,361

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.