## Smith, George

**From:** Pelley, Cindy <PelleyCA@HillsboroughCounty.ORG>
**Sent:** Monday, January 14, 2019 3:53 PM
**To:** SWD_Waste
**Cc:** Morgan, Steve; Ruiz, Larry; Cope, Ronald; Byer, Kimberly; Madden, Melissa; 'Curtis, Bob'; O'Neill, Joseph; KGuilbeault@scsengineers.com; Wiesman, Ronald
**Subject:** WACS ID 41193 - Qtr 4 2018 Water Balance & Waste Tire Report for Southeast County
**Attachments:** 4Q2018 Water Balance Report.pdf; 4Q2018 Waste Tire rpt.pdf; 2018 Annual Waste Tire Report.pdf

Mr. Morgan:

The Quarterly Water Balance and Waste Tire Reports for the Southeast County Landfill are attached (WACS ID 41193). Also attached is the Annual Waste Tire Report and the annual fire inspection is scheduled for tomorrow January 15, 2019. We will forward the final fire inspection to you once it has been completed.

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

**Cindy A. Pelley**
**Manager**
Solid Waste Management Division
Transportation & Utilities Services

M: (813) 455-2193
P: (813) 671-7707
E: pelleyca@HCFLGov.net
W: HCFLGov.net

**Hillsborough County**
601 E. Kennedy Blvd., Tampa, FL 33602

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January 14, 2019

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 Annual Report- Permit No. 126787-005-WT/02

Dear Mr. Morgan:

This correspondence provides the annual report submitted for Hillsborough County's Waste Tire Processing Facility for 2018, Permit No. 126787-005-WT/02. Provided is the amount of tire tonnage received at the County's Waste Tire Processing Facility (WTPF) and the amount of tires shredded.

The 2018 year at the County's WTPF began with an existing stored balance of 699.33 tons of whole tires. A total of 1,567.47 tons of tires were received in 2018, bringing the total tonnage to 2,266.80. Of the 2,266.80 tons of tires; 770.18 tons of tires were removed from the site by contractor; 908.18 tons of tires were transferred to the South County Transfer Station, mixed with MSW and transferred to the County's Resource Recovery Facility to be utilized as a fuel source; 54.18 tons of tire scraps and debris were disposed of at the landfill; and 534.26 tons of whole tires remain onsite waiting to be processed.

The 2018 year also began with an existing balance of 931.37 tons of stored shredded tires. All shredded tires were removed from the site this year and used for alternate daily cover.

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

Sincerely,

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Division
Public Works Department

LER/rw
Attachments
xc: Ron Cope, EPC
Kimberly Byer, SWMD

**HILLSBOROUGH COUNTY**
**SOLID WASTE MANAGEMENT DIVISION**
**WASTE TIRE PROCESSING FACILITY**

| | | YEARLY TONNAGE REPORT 2018 | | | Beginning Tonnage Jan. 1, 2018 Whole 818.34 | | Beginning Tonnage Jan. 1, 2018 Shredded 931.37 |
|---|---|---|---|---|---|---|---|
| Month | Tires Received | Tires Removed by Contractor | Whole Tires to SCTS | Tons Adjusted | Shredded Removed | | Remarks |
| January | 113.78 | 25.91 | 27.01 | 10.92 | | | |
| February | 84.90 | 68.38 | 115.25 | 4.44 | | | |
| March | 104.06 | 84.82 | 73.95 | 11.77 | | | |
| April | 120.14 | 0.00 | 8.12 | 1.80 | | | |
| May | 91.94 | 0.00 | 74.68 | 0.00 | | | |
| June | 142.36 | 179.03 | 115.84 | 9.33 | | | |
| July | 85.70 | 81.87 | 89.95 | 0.00 | | | |
| August | 115.23 | 77.68 | 30.79 | 6.78 | | | |
| September | 154.29 | 0.00 | 107.08 | 0.00 | | | |
| October | 218.71 | 68.84 | 152.14 | 5.35 | 187.56 | | |
| November | 154.53 | 74.78 | 53.13 | 0.00 | 743.81 | | |
| December | 181.83 | 108.87 | 60.24 | 3.79 | | | |
| Sub-Total | 1,567.47 | 770.18 | 908.18 | 54.18 | 931.37 | | |
| Beginning Tonnage | 699.33 | | | | 931.37 | | |
| TOTAL | 2,266.80 | -770.18 | -908.18 | -54.18 | | 0.00 | |
| | | | **Shredded Ending Tonnage** | | | 0.00 | |
| | | | Whole Ending Tonnage | | | 534.26 | |

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John Lyons

January 14, 2019

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 October 1, 2018 through December 31, 2018.

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

# WASTE TIRE FACILITY
# QUARTERLY TONNAGE REPORT
# FOURTH QUARTER 2018

| | | FOURTH QUARTER | Beginning Tonnage (Oct. 1, 2018) | 506.33 |
|---|---|---|---|---|
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Oct. 2018 | 218.71 | 68.84 | 152.14 | 5.35 |
| | | | | |
| | | | | |
| Beginning Tons | 506.33 | | | |
| | 725.04 | -68.84 | -152.14 | -5.35 |
| | | | Ending Tonnage | 498.71 |
| | | | | |
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Nov. 2018 | 154.53 | 74.78 | 53.13 | |
| | | | | |
| | | | | |
| Beginning Tons | 498.71 | | | |
| | 653.24 | -74.78 | -53.13 | 0.00 |
| | | | Ending Tonnage | 525.33 |
| | | | | |
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Dec. 2018 | 181.83 | 108.87 | 60.24 | 3.79 |
| | | | | |
| | | | | |
| Beginning Tons | 525.33 | | | |
| | 707.16 | -108.87 | -60.24 | -3.79 |
| | | | Ending Tonnage | 534.26 |
| | | | | |
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Oct. 2018 | 218.71 | 68.84 | 152.14 | 5.35 |
| Nov. 2018 | 154.53 | 74.78 | 53.13 | 0.00 |
| Dec. 2018 | 181.83 | 108.87 | 60.24 | 3.79 |
| Sub-Total | 555.07 | 252.49 | 265.51 | 9.14 |
| Beginning Tons | 506.33 | | | |
| TOTAL | 1,061.40 | -252.49 | -265.51 | -9.1 |
| | | | Ending Tonnage | 534.26 |

# Department of Environmental Protection

DEP Form # 62-701.900(21)
Form Title Waste Tire Processing Facility Quarterly Report
Effective Date 3/22/00
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 10/01/18 thru 12/31/18 (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 | 506.33 | 555.07 | | | -518.00 | | |
| Other whole Tires | | | | | | | |
| Processed tires | | | | | | | |
| Processing Waste | | | | | | -9.14 | |
| Other | | | | | | | |
| Total | 506.33 | 555.07 | | | -518.00 | -9.14 | 573.19 |

a. Explain all inventory adjustments. -9.14 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

1/14/19 — 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

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

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John Lyons

January 14, 2019

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 December 30, 2018.

The data is being submitted as separate monthly reports for October, November, and December 2018. 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: Ken Guilbeault, SCS
Ron Cope, EPC

Hillsborough County Florida

**TRANSPORTATION & UTILITIES SERVICES ADMINISTRATOR**
**John Lyons**
PO Box 1110 Tampa, FL 33601-1110
(813) 307-4754

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# MEMORANDUM

**DATE:** November 9, 2018

**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 October 2018
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 2018 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 0.79 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 there was no effluent stored in Pond A.

**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 there was no leachate or effluent stored in Pond B.

**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. The average recorded depth of leachate in the PS-B sump was 16.3 inches.

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

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 123,516 gallons. A total of 3,828,993 gallons of leachate was pumped this month.

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

Column IX presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 2,378 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 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 288,568 gallons was removed.

**Leachate Pumped to LTRF from the MLPS (Column IX)**

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 4,117,561 gallons of leachate was pumped to the LTRF.

**Leachate Pumped to LTRF from Section 9 (Column X)**

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 162,014 gallons of leachate was pumped this month.

**Leachate Pumped from Section 9 LDS (Column XI)**

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

**Leachate Pumped from Compost Area Sump (Column XII)**

Column XIV presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 100 gallons of leachate was removed from the compost area and pumped to the LTRF.

**Leachate in 575,000-Gallon Tank (Column XIII)**

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 331,000 gallons of leachate was stored in the tank.

**Effluent in 575,000-Gallon Tank (Column XIV)**

Column XVI typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. The SWMD began storing leachate in this tank in June. 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 308,000 gallons of leachate was stored in the tank.

**Leachate Treated at LTRF (Column XV)**

Column XIIV presents the daily amount of leachate, in gallons, treated at the LTRF. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections. This month leachate was not treated at the plant.

**Total Leachate Hauled (Column XVI)**

Column XVIII presents the daily amount of leachate, in gallons, hauled off site. This month a total of 4,069,395 gallons of leachate was hauled off site.

**Leachate Dust Control Sprayed (Column XVII)**

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 1,539 gallons of leachate was used for dust control.

**Pond A Storage (Column XVIII)**

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 effluent was not stored in Pond A.

**Pond B Storage (Column XIX)**

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 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 XX)**

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 XXI)**

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 I-VI is measured from the flow meter at the irrigation pump station. This month effluent was not used for spray irrigation.

**Effluent Dust Control Sprayed (Column XXII)**

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 XXIII)**

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 effluent was not hauled off site.

**Total Evaporation (Column XXIV)**

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 1,200 gallons.

**TABLE 2**

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

**TABLE 3**

**Leachate Balance Summary**

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 4,280,295 gallons. Total outflow quantity from the LTRF was 4,070,934 gallons. The change in storage for the month increased by 209,361 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**
**OCTOBER 2018**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | 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 | 0.0 | 0.0 | 12.8 | 131,186 | 160 | 23,154 | 154,340 | 12,768 | 0 | 0 | 384,000 | 389,000 | 0 | 174,462 | 1,539 | 0 | 0 | 0 | 0 | 0 | 0 | 1,200 |
| 2 | 0.01 | 0.0 | 0.0 | 14.0 | 130,024 | 69 | 11,542 | 141,566 | 5,651 | 0 | 100 | 369,000 | 386,000 | 0 | 173,459 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0.00 | 0.0 | 0.0 | 10.1 | 131,726 | 140 | 11,304 | 143,030 | 5,838 | 0 | 0 | 360,000 | 362,000 | 0 | 161,314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0.00 | 0.0 | 0.0 | 8.8 | 137,097 | 65 | 9,388 | 146,485 | 6,473 | 0 | 0 | 396,000 | 295,000 | 0 | 176,041 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0.00 | 0.0 | 0.0 | 15.5 | 131,471 | 104 | 11,312 | 142,783 | 6,176 | 0 | 0 | 379,000 | 274,000 | 0 | 177,584 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0.28 | 0.0 | 0.0 | 16.8 | 131,932 | 95 | 11,136 | 143,068 | 5,397 | 0 | 0 | 295,000 | 341,000 | 0 | 122,438 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0.10 | *0.0* | *0.0* | *15.6* | *131,738* | *109* | *10,113* | *141,851* | *6,067* | 0 | 0 | *380,000* | *323,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0.00 | 0.0 | 0.0 | 14.3 | 131,337 | 109 | 10,113 | 141,450 | 6,067 | 0 | 0 | 466,000 | 305,000 | 0 | 162,470 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0.02 | 0.0 | 0.0 | 19.1 | 132,086 | 119 | 10,478 | 142,564 | 5,319 | 0 | 0 | 403,000 | 345,000 | 0 | 160,949 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0.10 | 0.0 | 0.0 | 16.2 | 139,686 | 43 | 11,610 | 151,296 | 5,356 | 0 | 0 | 386,000 | 345,000 | 0 | 173,655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0.37 | 0.0 | 0.0 | 18.3 | 137,947 | 133 | 8,454 | 146,401 | 5,760 | 0 | 0 | 331,000 | 355,000 | 0 | 165,543 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0.00 | 0.0 | 0.0 | 19.2 | 133,256 | 121 | 10,844 | 144,100 | 4,999 | 0 | 0 | 283,000 | 345,000 | 0 | 173,688 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0.00 | 0.0 | 0.0 | 18.8 | 130,390 | 50 | 9,376 | 139,766 | 4,997 | 0 | 0 | 314,000 | 312,000 | 0 | 174,034 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0.00 | *0.0* | *0.0* | *18.5* | *123,908* | *81* | *8,507* | *132,415* | *4,615* | 0 | 0 | *371,000* | *300,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0.00 | 0.0 | 0.0 | 18.2 | 122,148 | 81 | 8,507 | 130,655 | 4,615 | 0 | 0 | 427,000 | 288,000 | 0 | 167,612 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0.00 | 0.0 | 0.0 | 14.0 | 96,772 | 56 | 0 | 96,772 | 5,037 | 0 | 0 | 381,000 | 276,000 | 0 | 145,064 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0.00 | 0.0 | 0.0 | 18.4 | 120,233 | 63 | 12,802 | 133,035 | 5,049 | 0 | 0 | 322,000 | 309,000 | 0 | 158,762 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0.00 | 0.0 | 0.0 | 11.9 | 122,483 | 91 | 10,072 | 132,555 | 4,189 | 0 | 0 | 278,000 | 302,000 | 0 | 175,515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0.00 | 0.0 | 0.0 | 19.4 | 122,834 | 55 | 8,120 | 130,954 | 4,831 | 0 | 0 | 283,000 | 269,000 | 0 | 176,626 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0.00 | 0.0 | 0.0 | 13.4 | 123,262 | 98 | 7,862 | 131,124 | 5,853 | 0 | 0 | 278,000 | 194,000 | 0 | 94,494 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.00 | *0.0* | *0.0* | *15.9* | *123,500* | *81* | *7,820* | *131,320* | *5,553* | 0 | 0 | *280,000* | *270,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.00 | 0.0 | 0.0 | 18.3 | 120,364 | 81 | 7,820 | 128,184 | 5,553 | 0 | 0 | 281,000 | 345,000 | 0 | 133,240 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0.00 | 0.0 | 0.0 | 12.2 | 117,011 | 37 | 8,246 | 125,257 | 3,032 | 0 | 0 | 281,000 | 293,000 | 0 | 161,570 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0.00 | 0.0 | 0.0 | 17.4 | 121,815 | 85 | 7,900 | 129,715 | 3,900 | 0 | 0 | 309,000 | 257,000 | 0 | 189,973 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0.00 | 0.0 | 0.0 | 19.5 | 121,520 | 40 | 8,012 | 129,532 | 5,063 | 0 | 0 | 281,000 | 247,000 | 0 | 146,535 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0.00 | 0.0 | 0.0 | 17.0 | 126,543 | ***38*** | ***7,697*** | 134,240 | 3,509 | 0 | 0 | 238,000 | 276,000 | 0 | 130,771 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0.00 | 0.0 | 0.0 | 22.0 | 130,778 | ***38*** | ***7,697*** | 138,475 | 4,636 | 0 | 0 | 211,000 | 290,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0.00 | *0.0* | *0.0* | *18.2* | *119,362* | *43* | *7,301* | *126,663* | *4,454* | 0 | 0 | *309,000* | *282,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0.00 | 0.0 | 0.0 | 14.4 | 94,497 | 43 | 7,301 | 101,798 | 4,454 | 0 | 0 | 408,000 | 274,000 | 0 | 144,523 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0.00 | 0.0 | 0.0 | 20.4 | 94,971 | 38 | 5,806 | 100,777 | 3,259 | 0 | 0 | 329,000 | 324,000 | 0 | 135,291 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0.00 | 0.0 | 0.0 | 17.4 | 97,117 | 15 | 8,274 | 105,391 | 3,547 | 0 | 0 | 247,000 | 374,000 | 0 | 113,782 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 0.88 | | | | 3,828,993 | 2,378 | 288,568 | 4,117,561 | 162,014 | 0 | 100 | | | 0 | 4,069,395 | 1,539 | | | 0 | 0 | 0 | 0 | 1,200 |
| Daily Average | | 0.0 | 0.0 | 16.3 | 123,516 | 77 | 9,309 | 132,825 | 5,226 | 0 | 0 | 331,000 | 308,000 | | | | 0 | 0 | | | | | |
| Mo. Average | | | | | | | | | | | | | | | | 0 | | | | 0 | 0 | 0 | 40 |

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Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Columns 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 VI-XIV, XVII-XIX, and XXII-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.

**TABLE 2. FIELD DATA ENTRY FORM**
**OCTOBER 2018**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Pond B | | Effluent | Depth in | Depth in | Leachate | Leachate Hauled | | Leachate | Effluent Hauled | | Effluent |
| 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.) | Compost Leachate (gal.) | Sections 7-8 Pump (gal.) | Sections 7-8 LDS (gal.) | Pond B Depth (ft.) | Effluent Sprayed (gal) | Pond A Depth (ft.) | Spray Irrigation (gal.) | 575K Tank Leachate (ft.) | 575K Tank Effluent (ft.) | Treated at LTRF (gal.) | Contractor (gal.) | County (gal.) | Dust Control (Sprayed) (gal.) | Contractor (gal.) | County (gal.) | Dust Control (Sprayed) (gal) |
| 1 | 0.00 | 1,463,551 | 12.8 | 1,178,181 | 1,157,674 | 5,851,047 | 1,647,217 | 8,393,114 | 81,422 | 0.0 | 0.0 | 0.0 | 0 | 13.33 | 13.50 | 0 | 132,400 | 42,062 | 1,539 | 0 | 0 | 0 |
| 2 | 0.01 | 1,564,100 | 14.0 | 1,180,965 | 1,160,541 | 5,851,047 | 1,647,317 | 8,404,656 | 81,491 | 0.0 | 0.0 | 0.0 | 0 | 12.83 | 13.42 | 0 | 131,841 | 41,618 | 0 | 0 | 0 | 0 |
| 3 | 0.00 | 1,667,000 | 10.1 | 1,183,900 | 1,163,444 | 5,851,047 | 1,647,317 | 8,415,960 | 81,631 | 0.0 | 0.0 | 0.0 | 0 | 12.50 | 12.58 | 0 | 126,159 | 35,155 | 0 | 0 | 0 | 0 |
| 4 | 0.00 | 1,774,517 | 8.8 | 1,187,061 | 1,166,756 | 5,851,047 | 1,647,317 | 8,425,348 | 81,696 | 0.0 | 0.0 | 0.0 | 0 | 13.75 | 10.25 | 0 | 133,413 | 42,628 | 0 | 0 | 0 | 0 |
| 5 | 0.00 | 1,876,887 | 15.5 | 1,190,090 | 1,169,903 | 5,851,047 | 1,647,317 | 8,436,660 | 81,800 | 0.0 | 0.0 | 0.0 | 0 | 13.17 | 9.50 | 0 | 134,784 | 42,800 | 0 | 0 | 0 | 0 |
| 6 | 0.28 | 1,979,887 | 16.80 | 1,192,764 | 1,172,626 | 5,851,047 | 1,647,317 | 8,447,796 | 81,895 | 0 | 0 | 0.00 | 0 | 10.25 | 11.83 | 0 | 79,719 | 42,719 | 0 | 0 | 0 | 0 |
| 7 | 0.10 | *2,082,694* | *15.6* | *1,195,766* | *1,175,691* | *5,851,047* | *1,647,317* | *8,457,909* | *82,004* | 0 | 0 | 0 | 0 | *13.21* | *11.21* | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0.00 | 2,185,500 | 14.3 | 1,198,767 | 1,178,756 | 5,851,047 | 1,647,317 | 8,468,022 | 82,112 | 0.0 | 0.0 | 0.0 | 0 | 16.17 | 10.58 | 0 | 134,056 | 28,414 | 0 | 0 | 0 | 0 |
| 9 | 0.02 | 2,289,066 | 19.1 | 1,201,415 | 1,181,427 | 5,851,047 | 1,647,317 | 8,478,500 | 82,231 | 0.0 | 0.0 | 0.0 | 0 | 14.00 | 12.00 | 0 | 118,337 | 42,612 | 0 | 0 | 0 | 0 |
| 10 | 0.10 | 2,394,800 | 16.2 | 1,204,083 | 1,184,115 | 5,851,047 | 1,647,317 | 8,490,110 | 82,274 | 0.0 | 0 | 0.0 | 0 | 13.42 | 12.00 | 0 | 131,159 | 42,496 | 0 | 0 | 0 | 0 |
| 11 | 0.37 | 2,500,225 | 18.3 | 1,206,933 | 1,187,025 | 5,851,047 | 1,647,317 | 8,498,564 | 82,407 | 0.0 | 0.0 | 0.0 | 0 | 11.50 | 12.33 | 0 | 130,057 | 35,486 | 0 | 0 | 0 | 0 |
| 12 | 0.00 | 2,601,655 | 19.2 | 1,209,429 | 1,189,528 | 5,851,047 | 1,647,317 | 8,509,408 | 82,528 | 0.0 | 0.0 | 0.0 | 0 | 9.83 | 12.00 | 0 | 130,348 | 43,340 | 0 | 0 | 0 | 0 |
| 13 | 0.00 | 2,702,755 | 18.80 | 1,211,925 | 1,192,029 | 5,851,047 | 1,647,317 | 8,518,784 | 82,578 | 0.00 | 0 | 0 | 0 | 10.92 | 10.83 | 0 | 130,756 | 43,278 | 0 | 0 | 0 | 0 |
| 14 | 0.00 | *2,797,373* | *18.5* | *1,214,259* | *1,194,311* | *5,851,047* | *1,647,317* | *8,527,291* | *82,659* | 0 | 0 | 0 | 0 | *12.88* | *10.42* | 0 | 0 | 0 | 0 | 0 | 0 | |
| 15 | 0.00 | 2,891,991 | 18.2 | 1,216,592 | 1,196,592 | 5,851,047 | 1,647,317 | 8,535,798 | 82,739 | 0.0 | 0.0 | 0.0 | 0 | 14.83 | 10.00 | 0 | 132,066 | 35,546 | 0 | 0 | 0 | 0 |
| 16 | 0.00 | 2,983,400 | 14.0 | 1,219,006 | 1,199,215 | 5,851,047 | 1,647,317 | 8,535,798 | 82,795 | 0.0 | 0.0 | 0.0 | 0 | 13.25 | 9.58 | 0 | 131,574 | 13,490 | 0 | 0 | 0 | 0 |
| 17 | 0.00 | 3,080,426 | 18.4 | 1,221,550 | 1,201,720 | 5,851,047 | 1,647,317 | 8,548,600 | 82,858 | 0.0 | 0.0 | 0.0 | 0 | 11.17 | 10.75 | 0 | 130,362 | 28,400 | 0 | 0 | 0 | 0 |
| 18 | 0.00 | 3,174,700 | 11.9 | 1,223,600 | 1,203,859 | 5,851,047 | 1,647,317 | 8,558,672 | 82,949 | 0.0 | 0.0 | 0.0 | 0 | 9.67 | 10.50 | 0 | 132,957 | 42,558 | 0 | 0 | 0 | 0 |
| 19 | 0.00 | 3,270,312 | 19.4 | 1,226,011 | 1,206,279 | 5,851,047 | 1,647,317 | 8,566,792 | 83,004 | 0.0 | 0.0 | 0.0 | 0 | 9.83 | 9.33 | 0 | 133,195 | 43,431 | 0 | 0 | 0 | 0 |
| 20 | 0.00 | 3,366,739 | 13.4 | 1,228,911 | 1,209,232 | 5,851,047 | 1,647,317 | 8,574,654 | 83,102 | 0.0 | 0.0 | 0.0 | 0 | 9.67 | 6.75 | 0 | 87,402 | 7,092 | 0 | 0 | 0 | 0 |
| 21 | 0.00 | *3,463,404* | *15.9* | *1,231,934* | *1,211,762* | *5,851,047* | *1,647,317* | *8,582,474* | *83,183* | 0.0 | 0.0 | 0.0 | 0 | *9.71* | *9.38* | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.00 | 3,560,069 | 18.3 | 1,234,956 | 1,214,292 | 5,851,047 | 1,647,317 | 8,590,294 | 83,264 | 0.0 | 0.0 | 0.0 | 0 | 9.75 | 12.00 | 0 | 133,240 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0.00 | 3,653,700 | 12.2 | 1,237,933 | 1,214,347 | 5,851,047 | 1,647,317 | 8,598,540 | 83,301 | 0.0 | 0.0 | 0.0 | 0 | 9.75 | 10.17 | 0 | 126,085 | 35,485 | 0 | 0 | 0 | 0 |
| 24 | 0.00 | 3,749,255 | 17.4 | 1,239,852 | 1,216,328 | 5,851,047 | 1,647,317 | 8,606,440 | 83,386 | 0.0 | 0.0 | 0.0 | 0 | 10.75 | 8.92 | 0 | 154,492 | 35,481 | 0 | 0 | 0 | 0 |
| 25 | 0.00 | 3,845,084 | 19.5 | 1,242,371 | 1,218,872 | 5,851,047 | 1,647,317 | 8,614,452 | 83,426 | 0.0 | 0.0 | 0.0 | 0 | 9.75 | 8.58 | 0 | 111,054 | 35,481 | 0 | 0 | 0 | 0 |
| 26 | 0.00 | 3,944,856 | 17.0 | 1,244,107 | 1,220,645 | 5,851,047 | 1,647,317 | NA | NA | 0.0 | 0.0 | 0.0 | 0 | 8.25 | 9.58 | 0 | 87,450 | 43,321 | 0 | 0 | 0 | 0 |
| 27 | 0.00 | 4,049,374 | 22.0 | 1,246,400 | 1,222,988 | 5,851,047 | 1,646,317 | 8,629,846 | 83,502 | 0.0 | 0.0 | 0.0 | 0 | 7.33 | 10.08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0.00 | *4,142,476* | *18.2* | *1,248,614* | *1,225,228* | *5,851,047* | *1,646,818* | *8,637,147* | *83,545* | 0 | 0 | 0 | 0 | *10.75* | *9.79* | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0.00 | 4,235,577 | 14.4 | 1,250,828 | 1,227,467 | 5,851,047 | 1,647,318 | 8,644,448 | 83,587 | 0.0 | 0.0 | 0.0 | 0 | 14.17 | 9.50 | 0 | 108,557 | 35,966 | 0 | 0 | 0 | 0 |
| 30 | 0.00 | 4,329,242 | 20.4 | 1,252,454 | 1,229,100 | 5,851,047 | 1,647,318 | 8,650,254 | 83,625 | 0.0 | 0.0 | 0.0 | 0 | 11.42 | 11.25 | 0 | 106,868 | 28,423 | 0 | 0 | 0 | 0 |
| 31 | 0.00 | 4,424,935 | 17.4 | 1,254,211 | 1,230,890 | 5,851,047 | 1,647,318 | 8,658,528 | 83,640 | 0.0 | 0.0 | 0.0 | 0 | 8.58 | 13.00 | 0 | 78,272 | 35,510 | 0 | 0 | 0 | 0 |
| Totals | 0.88 | | | | | | | | | | 0 | | 0 | | | | 3,166,603 | 902,792 | 0 | 0 | 0 | 0 |

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Notes:

1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values
3. Columns 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 |

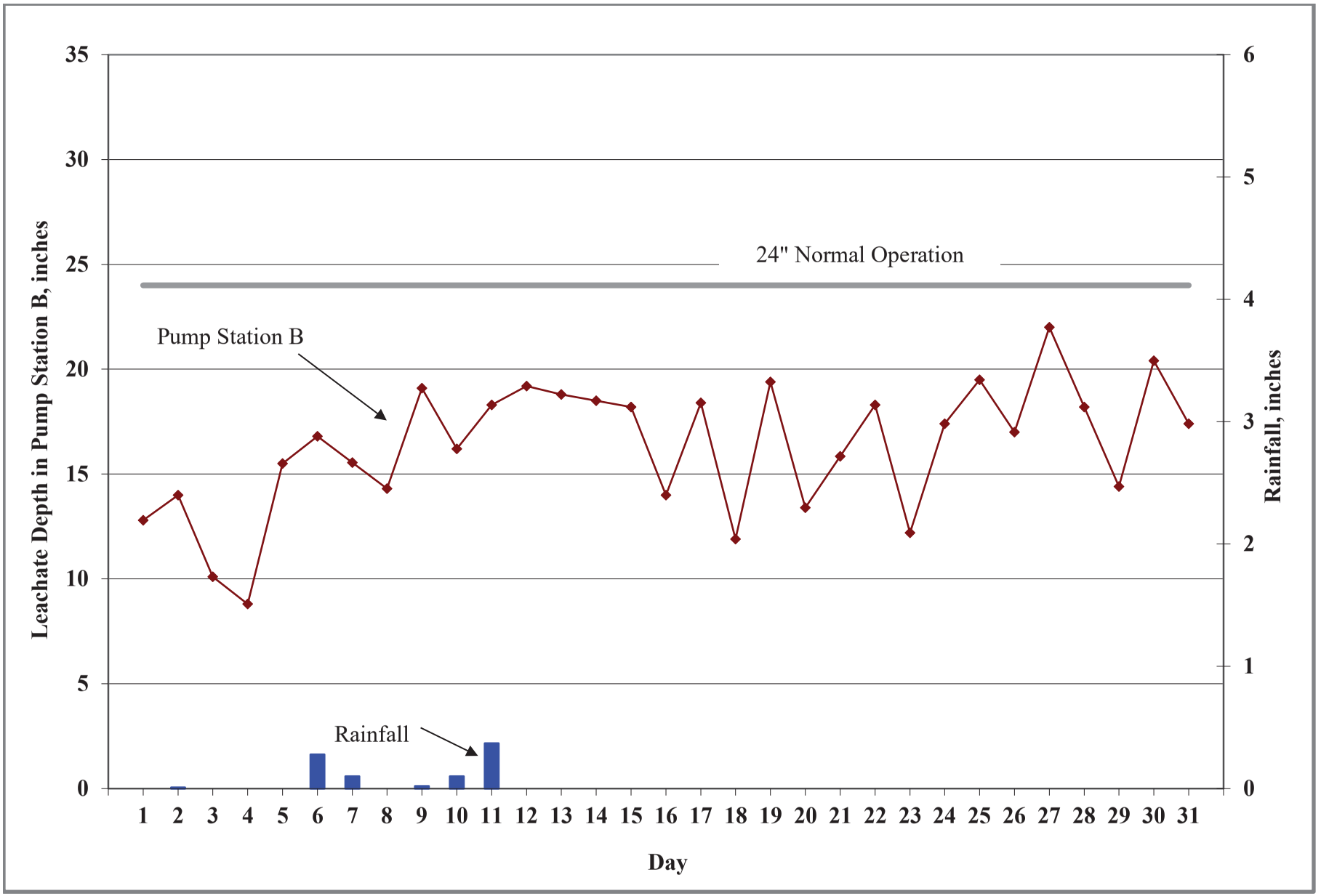


**Figure 1. Leachate Levels in Pump Station B and Rainfall for October 2018.**

Hillsborough County Florida

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

**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

**MEMORANDUM**

**DATE:** December 13, 2018

**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 November 2018
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 2018 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

**TABLE 1**

**Day (Column I)**

Column I presents the calendar days for the month.

**Rainfall (Column II)**

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 1.79 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 there was no effluent stored in Pond A.

**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 in Pond B was 0.1.

**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. The average recorded depth of leachate in the PS-B sump was 16.6 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 94,579 gallons. A total of 2,837,363 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 1,051 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 210,208 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 3,047,571 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 114,122 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 exceeded 4,651 gallons per day on November 14, 15, and 20th due to a pump level test. On November 14, 15, and 20th the LDS pump was operated manually until the 6-inch level was reached in lieu of the design level of 12-inches. This month 30,730 gallons of leachate was removed from the leak detection system. Currently, the County is evaluating the sump design levels.

**Leachate Pumped from Compost Area Sump (Column XII)**

Column XII presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month leachate was not removed from the compost area and pumped to the LTRF.

**Leachate in 575,000-Gallon Tank (Column XIII)**

Column XIII 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 89,500 gallons of leachate was stored in the tank.

**Effluent in 575,000-Gallon Tank (Column XIV)**

Column XIV typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. The SWMD began storing leachate in this tank in June. 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 352,300 gallons of leachate was stored in the tank.

**Leachate Treated at LTRF (Column XV)**

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections. This month leachate was not treated at the plant.

**Total Leachate Hauled (Column XVI)**

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 3,044,521 gallons of leachate was hauled off site.

**Leachate Dust Control Sprayed (Column XVII)**

Column XVII 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 XVIII)**

Column XVIII 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 effluent was not stored in Pond A.

**Pond B Storage (Column XIX)**

Column XIX 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 2,600 gallons per day of leachate was stored in Pond B.

**Effluent Sprayed at Pond B (Column XX)**

Column XX 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 XXI)**

Column XXI 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 effluent was not used for spray irrigation.

**Effluent Dust Control Sprayed (Column XXII)**

Column XXII 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 XXIII)**

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month effluent was not hauled off site.

**Total Evaporation (Column XXIV)**

Column XXIV 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 zero 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 3,195,368 gallons. Total outflow quantity from the LTRF was 3,044,521 gallons. The change in storage for the month increased by 150,847 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**
**NOVEMBER 2018**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | 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 | 0.0 | 0.0 | 10.6 | 100,419 | 58 | 560 | 100,979 | 4,093 | 0 | 0 | 204,000 | 410,000 | 0 | 165,521 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0.60 | 0.0 | 0.0 | 20.8 | 107,380 | 82 | 13,048 | 120,428 | 4,347 | 0 | 0 | 130,000 | 417,000 | 0 | 174,810 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0.00 | 0.0 | 0.0 | 21.0 | 101,523 | 0 | 6,254 | 107,777 | 4,802 | 0 | 0 | 130,000 | 360,000 | 0 | 142,026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0.00 | *0.0* | *0.0* | *18.3* | *98,932* | *27* | *7,058* | *103,990* | *1,739* | 0 | 0 | *130,000* | *393,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0.19 | 0.0 | 0.0 | 15.5 | 98,949 | 27 | 7,058 | 106,007 | 1,739 | 0 | 0 | 130,000 | 427,000 | 0 | 131,988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0.00 | 0.0 | 0.0 | 13.9 | 101,915 | 0 | 7,650 | 109,565 | 8,217 | 0 | 0 | 130,000 | 386,000 | 0 | 162,146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0.04 | 0.0 | 0.0 | 12.2 | 100,262 | 27 | 5,582 | 105,844 | 3,162 | 0 | 0 | 130,000 | 341,000 | 0 | 125,380 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0.12 | 0.0 | 0.0 | 20.3 | 99,723 | 37 | 7,406 | 107,129 | 2,916 | 0 | 0 | 130,000 | 312,000 | 0 | 117,541 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0.00 | 0.0 | 0.0 | 22.0 | 98,592 | 36 | 5,546 | 104,138 | 4,554 | 0 | 0 | 130,000 | 295,000 | 0 | 89,202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0.00 | 0.0 | 0.0 | 18.0 | 98,012 | 66 | 7,556 | 105,568 | 3,501 | 0 | 0 | 130,000 | 312,000 | 0 | 131,311 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0.00 | *0.0* | *0.0* | *18.7* | *93,992* | *31* | *6,381* | *100,373* | *3,700* | 0 | 0 | *130,000* | *344,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0.00 | 0.0 | 0.0 | 19.3 | 93,899 | 31 | 6,381 | 100,280 | 3,700 | 0 | 0 | 130,000 | 377,000 | 0 | 133,057 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0.00 | 0.0 | 0.0 | 12.5 | 96,634 | 33 | 5,462 | 102,096 | 4,874 | 129 | 0 | 115,000 | 338,000 | 0 | 154,681 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0.50 | 0.0 | 0.0 | 19.8 | 95,169 | 33 | 9,930 | 105,099 | 5,396 | 17,793 | 0 | 113,000 | 317,000 | 0 | 146,096 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0.01 | 0.0 | 0.0 | 15.1 | 100,372 | 33 | 6,190 | 106,562 | 5,519 | 8,749 | 0 | 96,000 | 288,000 | 0 | 125,447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0.00 | 0.0 | 0.0 | 12.1 | 93,563 | 64 | 5,746 | 99,309 | 5,556 | 0 | 0 | 96,000 | 254,000 | 0 | 124,955 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0.01 | 0.0 | 0.0 | 14.0 | 88,141 | 27 | 15,382 | 103,523 | 1,813 | 0 | 0 | 77,000 | 240,000 | 0 | 43,806 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0.00 | *0.0* | *0.0* | *16.5* | *91,904* | *32* | *11,626* | *103,530* | *3,275* | 0 | 0 | *77,000* | *308,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0.00 | 0.0 | 0.0 | 18.9 | 90,621 | 32 | 11,626 | 102,247 | 3,275 | 0 | 0 | 77,000 | 377,000 | 0 | 89,668 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0.00 | 0.0 | 0.0 | 19.5 | 91,863 | 32 | 196 | 92,059 | 3,429 | 3,929 | 0 | 62,000 | 377,000 | 0 | 133,796 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.00 | 0.0 | 0.0 | 15.2 | 90,358 | 30 | 4,078 | 94,436 | 2,948 | 130 | 0 | 38,000 | 326,000 | 0 | 134,078 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.00 | *0.0* | *0.0* | *12.7* | *90,604* | *29* | *6,479* | *97,083* | *3,359* | 0 | 0 | *37,000* | *353,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0.00 | 0.0 | 0.0 | 10.1 | 90,646 | 29 | 6,479 | 97,125 | 3,359 | 0 | 0 | 36,000 | 379,000 | 0 | 132,688 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0.00 | 0.0 | 0.0 | 17.5 | 96,434 | 36 | 7,988 | 104,422 | 3,283 | 0 | 0 | 36,000 | 353,000 | 0 | 87,977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0.00 | *0.0* | *0.0* | *18.9* | *95,762* | *36* | *6,019* | *101,781* | *4,097* | 0 | 0 | *36,000* | *407,000* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0.32 | 0.0 | 0.0 | 20.2 | 95,426 | 36 | 6,019 | 101,445 | 4,097 | 0 | 0 | 36,000 | 461,000 | 0 | 88,343 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0.00 | 0.0 | 0.0 | 20.2 | 87,965 | 63 | 8,658 | 96,623 | 3,673 | 0 | 0 | 31,000 | 381,000 | 0 | 124,882 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0.00 | 0.0 | 1.4 | 11.6 | 85,950 | 27 | 3,544 | 89,494 | 3,221 | 0 | 0 | 29,000 | 345,000 | 0 | 124,129 | 0 | 0 | 38,000 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0.00 | 0.0 | 1.2 | 14.8 | 80,360 | 29 | 6,558 | 86,918 | 3,000 | 0 | 0 | 29,000 | 331,000 | 0 | 80,335 | 0 | 0 | 28,000 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0.00 | 0.0 | 0.8 | 19.4 | 81,996 | 31 | 7,748 | 89,744 | 3,479 | 0 | 0 | 29,000 | 360,000 | 0 | 80,658 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 1.79 | | | | 2,837,363 | 1,051 | 210,208 | 3,047,571 | 114,122 | 30,730 | 0 | | | 0 | 3,044,521 | 0 | | | 0 | 0 | 0 | 0 | 0 |
| Daily Average | | 0.0 | 0.1 | 16.6 | 94,579 | 35 | 7,007 | 101,586 | 3,804 | 1,024 | 0 | 89,500 | 352,300 | | | | 0 | 2,600 | | | | | |
| Mo. Average | | | | | | | | | | | | | | | | 0 | | | | 0 | 0 | 0 | 0 |

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Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. 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 & VIII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XIII and XIV, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XII, XVI, and XX-XXIV, quantities from flow meters.
10. Column XXIV includes 80% of the daily values from Columns XVII, XXI - XXII, plus 5% of the daily values from column XX.

**TABLE 2. FIELD DATA ENTRY FORM**
**NOVEMBER 2018**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | 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) (gal.) | Effluent Hauled | | Effluent Dust Control (Sprayed) (gal) |
| | | | | | | | | | | | | | | | | | Contractor (gal.) | County (gal.) | | Contractor (gal.) | County (gal.) | |
| 1 | 0.00 | 4,522,900 | 10.6 | 1,256,255 | 1,232,939 | 5,851,047 | 1,647,318 | 8,659,088 | 83,698 | 0.0 | 0.0 | 0.0 | 0 | 7.08 | 14.25 | | 130,266 | 35,255 | | | | |
| 2 | 0.60 | 4,627,958 | 20.8 | 1,258,419 | 1,235,122 | 5,851,047 | 1,647,318 | 8,672,136 | 83,780 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 14.50 | | 146,044 | 28,766 | | | | |
| 3 | 0.00 | 4,727,233 | 21.0 | 1,260,805 | 1,237,538 | 5,851,047 | 1,647,318 | 8,678,390 | 83,780 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 12.50 | | 98,786 | 43,240 | | | | |
| 4 | 0.00 | *4,823,917* | *18.3* | *1,261,688* | *1,238,394* | *5,851,048* | *1,647,318* | *8,685,448* | *83,807* | *0.0* | | *0.0* | | *4.50* | *13.67* | | | | | | | |
| 5 | 0.19 | 4,920,600 | 15.5 | 1,262,570 | 1,239,250 | 5,851,048 | 1,647,318 | 8,692,506 | 83,833 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 14.83 | | 103,626 | 28,362 | | | | |
| 6 | 0.00 | 5,020,300 | 13.9 | 1,266,638 | 1,243,399 | 5,851,185 | 1,647,318 | 8,700,156 | 83,833 | 0 | 0 | 0 | 0 | 4.50 | 13.42 | | 126,743 | 35,403 | | | | |
| 7 | 0.04 | 5,118,300 | 12.2 | 1,268,220 | 1,244,979 | 5,851,177 | 1,647,318 | 8,705,738 | 83,860 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 11.83 | | 96,742 | 28,638 | | | | |
| 8 | 0.12 | 5,215,700 | 20.3 | 1,269,676 | 1,246,439 | 5,851,166 | 1,647,318 | 8,713,144 | 83,897 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 10.83 | | 82,041 | 35,500 | | | | |
| 9 | 0.00 | 5,312,009 | 22.0 | 1,271,956 | 1,248,713 | 5,851,153 | 1,647,318 | 8,718,690 | 83,933 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 10.25 | | 82,097 | 7,105 | | | | |
| 10 | 0.00 | 5,407,373 | 18.0 | 1,273,702 | 1,250,468 | 5,851,143 | 1,647,318 | 8,726,246 | 83,999 | 0.0 | 0 | 0.0 | 0 | 4.50 | 10.83 | | 87,421 | 43,890 | | | | |
| 11 | 0.00 | *5,499,087* | *18.7* | *1,275,561* | *1,252,309* | *5,851,133* | *1,647,318* | *8,732,627* | *84,030* | *0.0* | | *0.0* | | *4.50* | *11.96* | | | | | | | |
| 12 | 0.00 | 5,590,800 | 19.3 | 1,277,420 | 1,254,150 | 5,851,123 | 1,647,318 | 8,739,008 | 84,061 | 0.0 | 0.0 | 0.0 | 0 | 4.50 | 13.08 | | 133,057 | 0 | | | | |
| 13 | 0.00 | 5,685,400 | 12.5 | 1,279,829 | 1,256,615 | 5,851,252 | 1,647,318 | 8,744,470 | 84,094 | 0 | 0 | 0 | 0 | 4.00 | 11.75 | | 118,782 | 35,899 | | | | |
| 14 | 0.50 | 5,778,437 | 19.8 | 1,282,528 | 1,259,312 | 5,869,045 | 1,647,318 | 8,754,400 | 84,127 | 0.0 | 0.0 | 0.0 | 0 | 3.92 | 11.00 | | 110,572 | 35,524 | | | | |
| 15 | 0.01 | 5,876,832 | 15.1 | 1,285,278 | 1,262,081 | 5,877,794 | 1,647,318 | 8,760,590 | 84,160 | 0.0 | 0.0 | 0.0 | 0 | 3.33 | 10.00 | | 125,447 | 0 | | | | |
| 16 | 0.00 | 5,969,960 | 12.1 | 1,288,579 | 1,264,336 | 5,877,783 | 1,647,318 | 8,766,336 | 84,224 | 0.0 | 0.0 | 0.0 | 0 | 3.33 | 8.83 | | 103,588 | 21,367 | | | | |
| 17 | 0.01 | 6,056,359 | 14.0 | 1,289,480 | 1,265,248 | 5,877,785 | 1,647,318 | 8,781,718 | 84,251 | 0.0 | 0.0 | 0.0 | 0 | 2.67 | 8.33 | | 0 | 43,806 | | | | |
| 18 | 0.00 | *6,146,521* | *16.5* | *1,291,117* | *1,266,887* | *5,877,745* | *1,647,318* | *8,793,344* | *84,283* | *0.0* | | *0.0* | | *2.67* | *10.71* | | | | | | | |
| 19 | 0.00 | 6,236,683 | 18.9 | 1,292,753 | 1,268,525 | 5,877,705 | 1,647,318 | 8,804,970 | 84,314 | 0.0 | 0.0 | 0.0 | 0 | 2.67 | 13.08 | | 89,668 | 0 | | | | |
| 20 | 0.00 | 6,328,546 | 19.5 | 1,294,464 | 1,270,243 | 5,881,634 | 1,647,318 | 8,805,166 | 84,346 | 0.0 | 0.0 | 0.0 | 0 | 2.17 | 13.08 | | 133,796 | 0 | | | | |
| 21 | 0.00 | 6,417,200 | 15.2 | 1,295,934 | 1,271,721 | 5,881,764 | 1,647,318 | 8,809,244 | 84,376 | 0.0 | 0.0 | 0.0 | 0 | 1.33 | 11.33 | | 134,078 | 0 | | | | |
| 22 | 0.00 | *6,506,100* | *12.7* | *1,297,614* | *1,273,400* | *5,881,762* | *1,647,318* | *8,815,723* | *84,405* | *0.0* | | *0.0* | | *1.29* | *12.25* | | | | | | | |
| 23 | 0.00 | 6,595,000 | 10.1 | 1,299,294 | 1,275,079 | 5,881,760 | 1,647,318 | 8,822,202 | 84,434 | 0.0 | 0.0 | 0.0 | 0 | 1.25 | 13.17 | | 89,657 | 43,031 | | | | |
| 24 | 0.00 | 6,689,950 | 17.5 | 1,300,932 | 1,276,724 | 5,881,760 | 1,647,318 | 8,830,190 | 84,470 | 0.0 | 0.0 | 0.0 | 0 | 1.25 | 12.25 | | 44,596 | 43,381 | | | | |
| 25 | 0.00 | *6,784,228* | *18.9* | *1,302,991* | *1,278,762* | *5,881,760* | *1,647,318* | *8,836,209* | *84,506* | *0.0* | | *0.0* | | *1.25* | *14.13* | | | | | | | |
| 26 | 0.32 | 6,878,506 | 20.2 | 1,305,050 | 1,280,800 | 5,881,759 | 1,647,318 | 8,842,228 | 84,541 | 0.0 | 0.0 | 0.0 | 0 | 1.25 | 16.00 | | 67,365 | 20,978 | | | | |
| 27 | 0.00 | 6,965,510 | 20.2 | 1,306,864 | 1,282,659 | 5,881,757 | 1,647,318 | 8,850,886 | 84,604 | 0.0 | 0.0 | 0.0 | 0 | 1.08 | 13.25 | | 89,418 | 35,464 | | | | |
| 28 | 0.00 | 7,050,195 | 11.6 | 1,308,474 | 1,284,270 | 5,881,753 | 1,647,318 | 8,854,430 | 84,631 | 1.4 | 0.0 | 0.0 | 0 | 1.00 | 12.00 | | 81,702 | 42,427 | | | | |
| 29 | 0.00 | 7,128,607 | 14.8 | 1,309,975 | 1,285,769 | 5,881,750 | 1,647,318 | 8,860,988 | 84,660 | 1.2 | 0.0 | 0.0 | 0 | 1.00 | 11.50 | | 44,731 | 35,604 | | | | |
| 30 | 0.00 | 7,209,224 | 19.4 | 1,311,706 | 1,287,517 | 5,881,750 | 1,647,318 | 8,868,736 | 84,691 | 0.8 | 0.0 | 0.0 | 0 | 1.00 | 12.50 | | 44,661 | 35,997 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Totals | 1.79 | | | | | | | | | | 0 | | 0 | | | 0 | 2,364,884 | 679,637 | 0 | 0 | 0 | 0 |

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Notes:

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

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

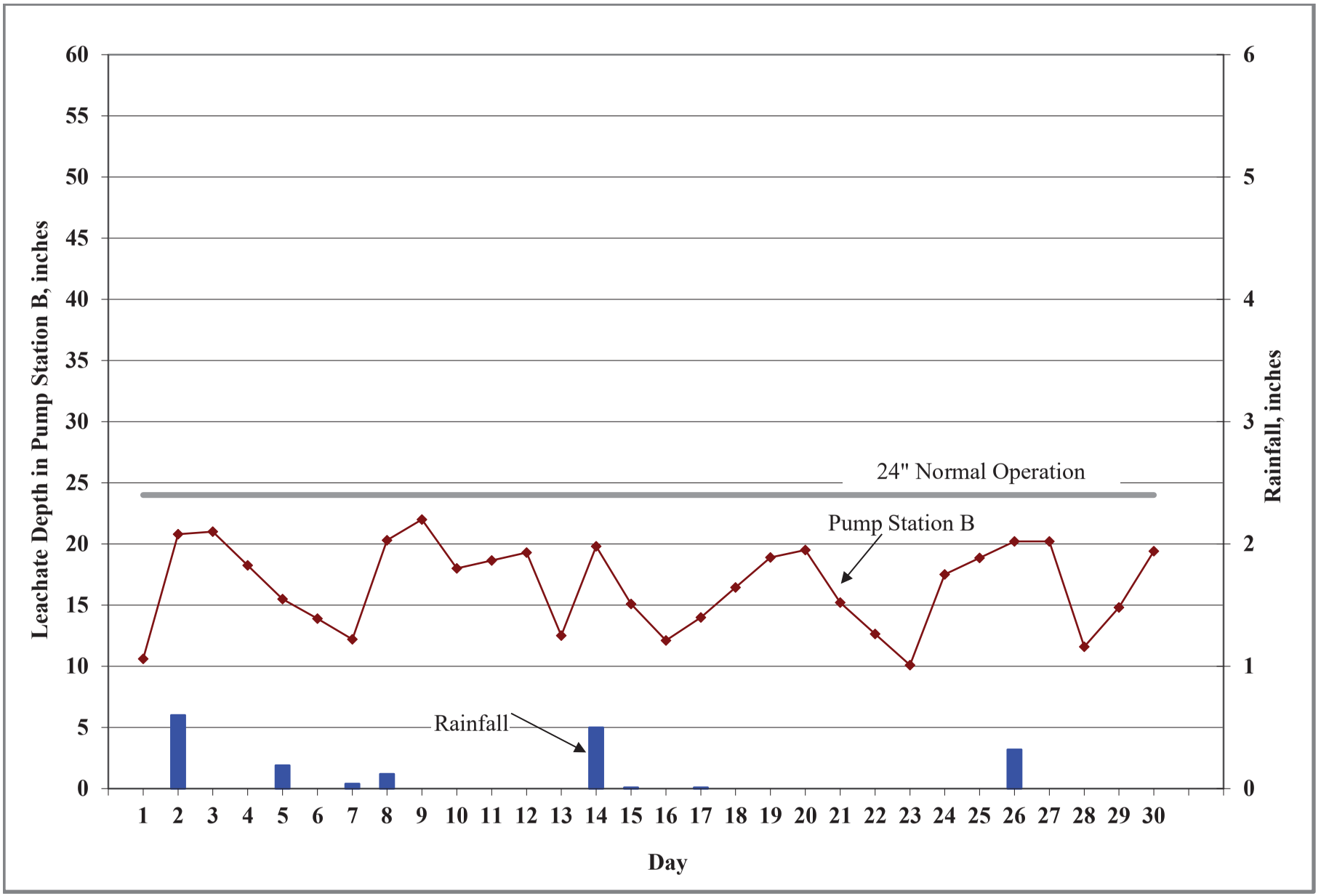


**Figure 1. Leachate Levels in Pump Station B and Rainfall for November 2018.**

Hillsborough County Florida

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

**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

**MEMORANDUM**

**DATE:** January 14, 2019

**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 December 2018
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 2018 Summary (Table 3). Also, attached find Figure 1 showing leachate levels in Pump Station B sump of Phases I-VI and rainfall for the month.

**TABLE 1**

**Day (Column I)**

Column I presents the calendar days for the month.

**Rainfall (Column II)**

Column II presents the average rainfall, in inches, as measured in the field from rainfall stations at the site. This month there was 8.79 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 there was no effluent stored in Pond A, however small amounts of rain water collected in the pond.

**Depth in Pond B (Column IV)**

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 2.1.

**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 on December 25th and 26th due TECO power outage. The average recorded depth of leachate in the PS-B sump was 16.9 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 98,086 gallons. A total of 3,040,655 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 1,688 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 353,120 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 3,393,775 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 225,690 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 58 gallons of leachate was removed from the leak detection system.

**Leachate Pumped from Compost Area Sump (Column XII)**

Column XII presents the total quantity of leachate pumped to the LTRF and Pond B from the Compost Project Area Sump. This month 478,663 gallons of leachate was removed from the compost area and pumped to the LTRF.

**Leachate in 575,000-Gallon Tank (Column XIII)**

Column XIII 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 leachate was not stored in the tank.

**Effluent in 575,000-Gallon Tank (Column XIV)**

Column XIV typically presents the daily amount of effluent, in gallons, stored in the 575,000-gallon effluent holding tank T6 at the LTRF. The SWMD began storing leachate in this tank in June 2018. 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 405,500 gallons of leachate was stored in the tank.

**Leachate Treated at LTRF (Column XV)**

Column XV presents the daily amount of leachate, in gallons, treated at the LTRF. On August 16, 2016, plant staff began shutting down operations for upcoming permit required tank inspections. This month leachate was not treated at the plant.

**Total Leachate Hauled (Column XVI)**

Column XVI presents the daily amount of leachate, in gallons, hauled off site. This month a total of 3,905,432 gallons of leachate was hauled off site.

**Leachate Dust Control Sprayed (Column XVII)**

Column XVII 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 XVIII)**

Column XVIII 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 effluent was not stored in Pond A however rainwater collected in Pond A after a couple large storm events.

**Pond B Storage (Column XIX)**

Column XIX 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 101,500 gallons per day of leachate was stored in Pond B.

**Effluent Sprayed at Pond B (Column XX)**

Column XX 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 XXI)**

Column XXI 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 effluent was not used for spray irrigation.

**Effluent Dust Control Sprayed (Column XXII)**

Column XXII 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 XXIII)**

Column XXIII presents the daily amount of effluent, in gallons, hauled off site, as measured from the flow meter at the bypass-loading arm. This month effluent was not hauled off site.

**Total Evaporation (Column XXIV)**

Column XXIV 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 zero 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 4,120,283 gallons. Total outflow quantity from the LTRF was 3,905,432 gallons. The change in storage for the month increased by 214,851 gallons.

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

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**
**DECEMBER 2018**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 MLPS (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 | 0.0 | 0.8 | 20.6 | 93,184 | 30 | 8,342 | 101,526 | 3,992 | 0 | 0 | 0 | 372,000 | 0 | 88,351 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0.00 | 0.0 | 0.8 | 20.4 | 95,158 | 34 | 8,142 | 103,300 | 2,864 | 1 | 0 | 0 | 415,000 | 0 | 0 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0.01 | 0.0 | 0.8 | 20.2 | 94,610 | 34 | 8,142 | 102,752 | 2,864 | 1 | 0 | 0 | 458,000 | 0 | 133,950 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0.04 | 0.0 | 0.8 | 10.5 | 93,188 | 36 | 7,396 | 100,584 | 3,482 | 0 | 0 | 0 | 417,000 | 0 | 126,032 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0.00 | 0.0 | 0.8 | 15.7 | 89,323 | 33 | 7,208 | 96,531 | 5,197 | 1 | 0 | 0 | 374,000 | 0 | 125,307 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0.00 | 0.0 | 0.8 | 2.8 | 95,042 | 50 | 7,086 | 102,128 | 1,889 | 0 | 0 | 0 | 345,000 | 0 | 89,080 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0.00 | 0.0 | 0.8 | 13.6 | 100,176 | 40 | 9,928 | 110,104 | 4,510 | 0 | 0 | 0 | 341,000 | 0 | 139,914 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0.00 | 0.0 | 0.8 | 20.6 | 107,435 | 32 | 8,482 | 115,917 | 9,032 | 0 | 0 | 0 | 302,000 | 0 | 50,480 | 0 | 0 | 12,000 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0.20 | 0.4 | 0.9 | 15.5 | 111,915 | 31 | 8,683 | 120,598 | 2,354 | 0 | 0 | 0 | 379,000 | 0 | 0 | 0 | 4,000 | 15,000 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0.00 | 0.8 | 1.0 | 10.3 | 104,283 | 31 | 8,683 | 112,966 | 2,354 | 0 | 0 | 0 | 456,000 | 0 | 125,585 | 0 | 17,000 | 19,000 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0.00 | 0.8 | 1.6 | 17.2 | 92,994 | 33 | 672 | 93,666 | 2,295 | 0 | 58,860 | 0 | 413,000 | 0 | 117,938 | 0 | 17,000 | 51,000 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0.00 | 0.8 | 1.6 | 16.9 | 88,672 | 31 | 14,670 | 103,342 | 3,373 | 0 | 0 | 0 | 386,000 | 0 | 132,136 | 0 | 17,000 | 51,000 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0.00 | 0.8 | 1.3 | 21.6 | 90,695 | 34 | 186 | 90,881 | 2,687 | 0 | 0 | 0 | 374,000 | 0 | 117,627 | 0 | 17,000 | 33,000 | 0 | 0 | 0 | 0 | 0 |
| 14 | 1.47 | 0.0 | 1.3 | 20.5 | 95,663 | 29 | 4,342 | 100,005 | 4,150 | 56 | 0 | 0 | 345,000 | 0 | 132,879 | 0 | 0 | 33,000 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0.18 | 0.0 | 1.3 | 11.7 | 94,882 | 31 | 6,652 | 101,534 | 3,350 | 0 | 0 | 0 | 360,000 | 0 | 88,272 | 0 | 0 | 33,000 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0.01 | 0.0 | 1.8 | 15.1 | 86,614 | 63 | 7,398 | 94,012 | 3,464 | 0 | 60,111 | 0 | 374,000 | 0 | 0 | 0 | 0 | 64,000 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0.00 | 0.0 | 1.8 | 11.4 | 85,722 | 28 | 7,634 | 93,356 | 3,324 | 0 | 0 | 0 | 446,000 | 0 | 125,481 | 0 | 0 | 64,000 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0.00 | 0.0 | 1.8 | 16.8 | 82,156 | 30 | 6,320 | 88,476 | 3,380 | 0 | 0 | 0 | 403,000 | 0 | 125,415 | 0 | 0 | 64,000 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1.38 | 0.0 | 1.8 | 13.7 | 85,983 | 32 | 8,718 | 94,701 | 2,274 | 0 | 0 | 0 | 350,000 | 0 | 132,280 | 0 | 0 | 64,000 | 0 | 0 | 0 | 0 | 0 |
| 20 | 5.23 | 1.0 | 2.4 | 17.2 | 90,494 | 30 | 7,938 | 98,432 | 4,338 | 0 | 0 | 0 | 338,000 | 0 | 103,094 | 0 | 24,000 | 115,000 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.27 | 1.6 | 4.4 | 19.3 | 122,611 | 31 | 294 | 122,905 | 27,412 | 0 | 188,291 | 0 | 482,000 | 0 | 163,122 | 0 | 44,000 | 267,000 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.00 | 1.6 | 4.2 | 14.1 | 108,285 | 28 | 2,736 | 111,021 | 21,445 | 0 | 26,599 | 0 | 461,000 | 0 | 165,551 | 0 | 44,000 | 267,000 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0.00 | 1.6 | 4.2 | 12.4 | 103,037 | 58 | 52,008 | 155,045 | 16,868 | 0 | 46,888 | 0 | 473,000 | 0 | 195,568 | 0 | 44,000 | 267,000 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0.00 | 1.6 | 3.9 | 12.1 | 108,912 | 53 | 27,300 | 136,212 | 16,353 | 0 | 14,391 | 0 | 449,000 | 0 | 202,702 | 0 | 44,000 | 267,000 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0.00 | 1.6 | 3.7 | 28.2 | 72,782 | 58 | 15,085 | 87,867 | 10,149 | 0 | *0* | 0 | 483,000 | 0 | 0 | 0 | 44,000 | 245,000 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0.00 | 1.6 | 3.5 | 44.2 | 76,630 | 58 | 15,085 | 91,715 | 10,149 | 0 | *0* | 0 | 518,000 | 0 | 236,386 | 0 | 44,000 | 223,000 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0.00 | 1.6 | 4.1 | 13.0 | 148,434 | 64 | 27,204 | 175,638 | 13,548 | 0 | 83,519 | 0 | 461,000 | 0 | 199,934 | 0 | 44,000 | 267,000 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0.00 | 1.0 | 3.5 | 13.5 | 115,553 | 101 | 7,950 | 123,503 | 12,311 | 0 | 0 | 0 | 468,000 | 0 | 208,535 | 0 | 24,000 | 223,000 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0.00 | 0.0 | 3.0 | 16.1 | 106,816 | 163 | 27,868 | 134,684 | 8,488 | 0 | 0 | 0 | 415,000 | 0 | 234,838 | 0 | 0 | 172,000 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0.00 | 0.0 | 2.5 | 17.1 | 104,358 | 172 | 2,598 | 106,956 | 8,953 | 0 | 0 | 0 | 394,000 | 0 | 171,738 | 0 | 0 | 124,000 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0.00 | 0.0 | 2.5 | 20.4 | 95,050 | 213 | 28,370 | 123,420 | 8,843 | 0 | 4 | 0 | 317,000 | 0 | 173,237 | 0 | 0 | 124,000 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 8.79 | | | | 3,040,655 | 1,688 | 353,120 | 3,393,775 | 225,690 | 58 | 478,663 | | | 0 | 3,905,432 | 0 | | | 0 | 0 | 0 | 0 | 0 |
| Daily Average | | 0.5 | 2.1 | 16.9 | 98,086 | 54 | 11,391 | 109,477 | 7,280 | 2 | 15,441 | 0 | 405,500 | | | | 13,800 | 101,500 | | | | | |
| Mo. Average | | | | | | | | | | | | | | | | 0 | | | | 0 | 0 | 0 | 0 |

balance\2018\12-18bal.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 & VIII, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
8. Column XIII and XIV, calculated from depth in 575,000 gal. tanks.
9. Columns VI-XII, XVI, and XX-XXIV, quantities from flow meters.
10. Column XXIV includes 80% of the daily values from Columns XVII, XXI - XXII, plus 5% of the daily values from column XX.

**TABLE 2. FIELD DATA ENTRY FORM**
**DECEMBER 2018**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | 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) (gal.) | Effluent Hauled | | Effluent Dust Control (Sprayed) (gal) |
| | | | | | | | | | | | | | | | | | Contractor (gal.) | County (gal.) | | Contractor (gal.) | County (gal.) | |
| 1 | 0.00 | 7,294,567 | 20.6 | 1,313,695 | 1,289,520 | 5,881,750 | 1,647,318 | 8,877,078 | 84,721 | 0.8 | 0.0 | 0.0 | 0 | 0.00 | 12.92 | | 45,082 | 43,269 | | | | |
| 2 | 0.00 | *7,381,885* | *20.4* | *1,315,123* | *1,290,956* | *5,881,751* | *1,647,318* | *8,885,220* | *84,755* | *0.8* | *0.0* | *0.0* | *0.0* | *0.0* | *14.4* | | 0 | 0 | | | | |
| 3 | 0.01 | 7,469,202 | 20.2 | 1,316,551 | 1,292,392 | 5,881,751 | 1,647,318 | 8,893,362 | 84,788 | 0.8 | 0.0 | 0.0 | 0 | 0.00 | 15.92 | | 133,950 | 0 | | | | |
| 4 | 0.04 | 7,555,500 | 10.5 | 1,318,284 | 1,294,141 | 5,881,751 | 1,647,318 | 8,900,758 | 84,824 | 0.8 | 0.0 | 0.0 | 0 | 0.00 | 14.50 | | 89,695 | 36,337 | | | | |
| 5 | 0.00 | 7,639,111 | 15.7 | 1,320,876 | 1,296,746 | 5,881,752 | 1,647,318 | 8,907,966 | 84,857 | 0.8 | 0.0 | 0.0 | 0 | 0.00 | 13.00 | | 89,777 | 35,530 | | | | |
| 6 | 0.00 | 7,709,725 | 2.8 | 1,321,818 | 1,297,693 | 5,881,752 | 1,647,318 | 8,915,052 | 84,907 | 0.8 | 0 | 0 | 0 | 0.00 | 12.00 | | 74,858 | 14,222 | | | | |
| 7 | 0.00 | 7,785,587 | 13.6 | 1,324,072 | 1,299,949 | 5,881,749 | 1,647,318 | 8,924,980 | 84,947 | 0.8 | 0.0 | 0.0 | 0 | 0.00 | 11.83 | | 111,263 | 28,651 | | | | |
| 8 | 0.00 | 7,865,438 | 20.6 | 1,331,699 | 1,301,354 | 5,881,747 | 1,647,318 | 8,933,462 | 84,979 | 0.8 | 0.0 | 0.0 | 0 | 0.00 | 10.50 | | 0 | 50,480 | | | | |
| 9 | 0.20 | *7,949,769* | *15.5* | *1,333,450* | *1,301,957* | *5,881,747* | *1,647,318* | *8,942,145* | *85,010* | *0.9* | *0.0* | *0.4* | *0.0* | *0.0* | *13.2* | | 0 | 0 | | | | |
| 10 | 0.00 | 8,034,100 | 10.3 | 1,335,200 | 1,302,560 | 5,881,747 | 1,647,318 | 8,950,828 | 85,040 | 1.0 | 0 | 0.8 | 0 | 0.00 | 15.83 | | 89,567 | 36,018 | | | | |
| 11 | 0.00 | 8,111,130 | 17.2 | 1,336,340 | 1,303,715 | 5,881,744 | 1,706,178 | 8,951,500 | 85,073 | 1.6 | 0.0 | 0.8 | 0 | 0.00 | 14.33 | | 82,354 | 35,584 | | | | |
| 12 | 0.00 | 8,185,482 | 16.9 | 1,337,993 | 1,305,435 | 5,881,744 | 1,706,178 | 8,966,170 | 85,104 | 1.6 | 0.0 | 0.8 | 0 | 0.00 | 13.42 | | 89,654 | 42,482 | | | | |
| 13 | 0.00 | 8,262,042 | 21.6 | 1,338,277 | 1,307,838 | 5,881,742 | 1,706,178 | 8,966,356 | 85,138 | 1.3 | 0 | 0.8 | 0 | 0.00 | 13.00 | | 89,491 | 28,136 | | | | |
| 14 | 1.47 | 8,345,843 | 20.5 | 1,341,336 | 1,308,929 | 5,881,798 | 1,706,178 | 8,970,698 | 85,167 | 1.3 | 0.0 | 0.0 | 0 | 0.00 | 12.00 | | 89,696 | 43,183 | | | | |
| 15 | 0.18 | 8,429,970 | 11.7 | 1,342,994 | 1,310,621 | 5,881,792 | 1,706,178 | 8,977,350 | 85,198 | 1.3 | 0.0 | 0.0 | 0 | 0.00 | 12.50 | | 45,180 | 43,092 | | | | |
| 16 | 0.01 | 8,507,804 | 15.1 | 1,344,712 | 1,312,367 | 5,881,788 | 1,766,289 | 8,984,748 | 85,261 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 13.0 | | 0 | 0 | | | | |
| 17 | 0.00 | 8,585,800 | 11.4 | 1,346,362 | 1,314,041 | 5,881,783 | 1,766,289 | 8,992,382 | 85,289 | 1.8 | 0.0 | 0.0 | 0 | 0.00 | 15.50 | | 89,801 | 35,680 | | | | |
| 18 | 0.00 | 8,662,704 | 16.8 | 1,348,040 | 1,315,743 | 5,881,778 | 1,766,289 | 8,998,702 | 85,319 | 1.8 | 0.0 | 0.0 | 0 | 0.00 | 14.00 | | 89,847 | 35,568 | | | | |
| 19 | 1.38 | 8,742,438 | 13.7 | 1,350,104 | 1,315,953 | 5,881,778 | 1,766,289 | 9,007,420 | 85,351 | 1.8 | 0.0 | 0.0 | 0 | 0.00 | 12.17 | | 89,572 | 42,708 | | | | |
| 20 | 5.23 | 8,825,800 | 17.2 | 1,352,258 | 1,318,137 | 5,881,778 | 1,766,289 | 9,015,358 | 85,381 | 2.4 | 0.0 | 1.0 | 0 | 0.00 | 11.75 | | 74,702 | 28,392 | | | | |
| 21 | 0.27 | 8,945,490 | 19.3 | 1,365,840 | 1,331,967 | 5,881,764 | 1,954,580 | 9,015,652 | 85,412 | 4.4 | 0.0 | 1.6 | 0 | 0.00 | 16.75 | | 112,252 | 50,870 | | | | |
| 22 | 0.00 | 9,048,650 | 14.1 | 1,376,436 | 1,342,816 | 5,881,741 | 1,981,179 | 9,018,388 | 85,440 | 4.2 | 0.0 | 1.6 | 0 | 0.00 | 16.00 | | 165,551 | 0 | | | | |
| 23 | 0.00 | 9,148,370 | 12.4 | 1,384,753 | 1,351,367 | 5,881,735 | 2,028,067 | 9,070,396 | 85,498 | 4.2 | 0.0 | 1.6 | 0 | 0.00 | 16.42 | | 195,568 | 0 | | | | |
| 24 | 0.00 | 9,245,900 | 12.1 | 1,392,865 | 1,359,608 | 5,881,726 | 2,042,458 | 9,097,696 | 85,551 | 3.9 | 0.0 | 1.6 | 0 | 0.00 | 15.58 | | 180,894 | 21,808 | | | | |
| 25 | 0.00 | *9,307,300* | *28.2* | *1,397,888* | *1,364,734* | *5,881,718* | *2,042,456* | *9,112,781* | *85,609* | *3.7* | *0.0* | *1.6* | *0.0* | *0.0* | *16.8* | | 0 | 0 | | | | |
| 26 | 0.00 | 9,368,700 | 44.2 | 1,402,910 | 1,369,860 | 5,881,710 | 2,042,454 | 9,127,866 | 85,666 | 3.5 | 0.0 | 1.6 | 0 | 0.00 | 18.00 | | 165,156 | 71,230 | | | | |
| 27 | 0.00 | 9,502,700 | 13.0 | 1,409,599 | 1,376,719 | 5,881,702 | 2,125,973 | 9,155,070 | 85,730 | 4.1 | 0.0 | 1.6 | 0 | 0.00 | 16.00 | | 135,226 | 64,708 | | | | |
| 28 | 0.00 | 9,605,300 | 13.5 | 1,415,677 | 1,382,952 | 5,881,688 | 2,125,973 | 9,163,020 | 85,831 | 3.5 | 0.0 | 1.0 | 0 | 0.00 | 16.25 | | 135,103 | 73,432 | | | | |
| 29 | 0.00 | 9,701,700 | 16.1 | 1,419,864 | 1,387,253 | 5,881,666 | 2,125,973 | 9,190,888 | 85,994 | 3.0 | 0.0 | 0.0 | 0 | 0.00 | 14.42 | | 163,682 | 71,156 | | | | |
| 30 | 0.00 | 9,793,916 | 17.1 | 1,424,290 | 1,391,780 | 5,881,653 | 2,125,973 | 9,193,486 | 86,166 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | | 171,738 | 0 | | | | |
| 31 | 0.00 | 9,886,500 | 20.4 | 1,428,671 | 1,396,242 | 5,881,642 | 2,125,977 | 9,221,856 | 86,379 | 2.5 | 0.0 | 0.0 | 0 | 0.00 | 11.00 | | 173,237 | 0 | | | | |
| Totals | 8.79 | | | | | | | | | | 0 | | 0 | | | 0 | 2,972,896 | 932,536 | 0 | 0 | 0 | 0 |

balance\2018\12-18bal.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 9 acres |
|---|---|---|
| Open | 5 | 0 |
| Intermediate | 134.4 | 15 |
| Final | 23 | 0 |
| Not Opened | 0 | 0 |

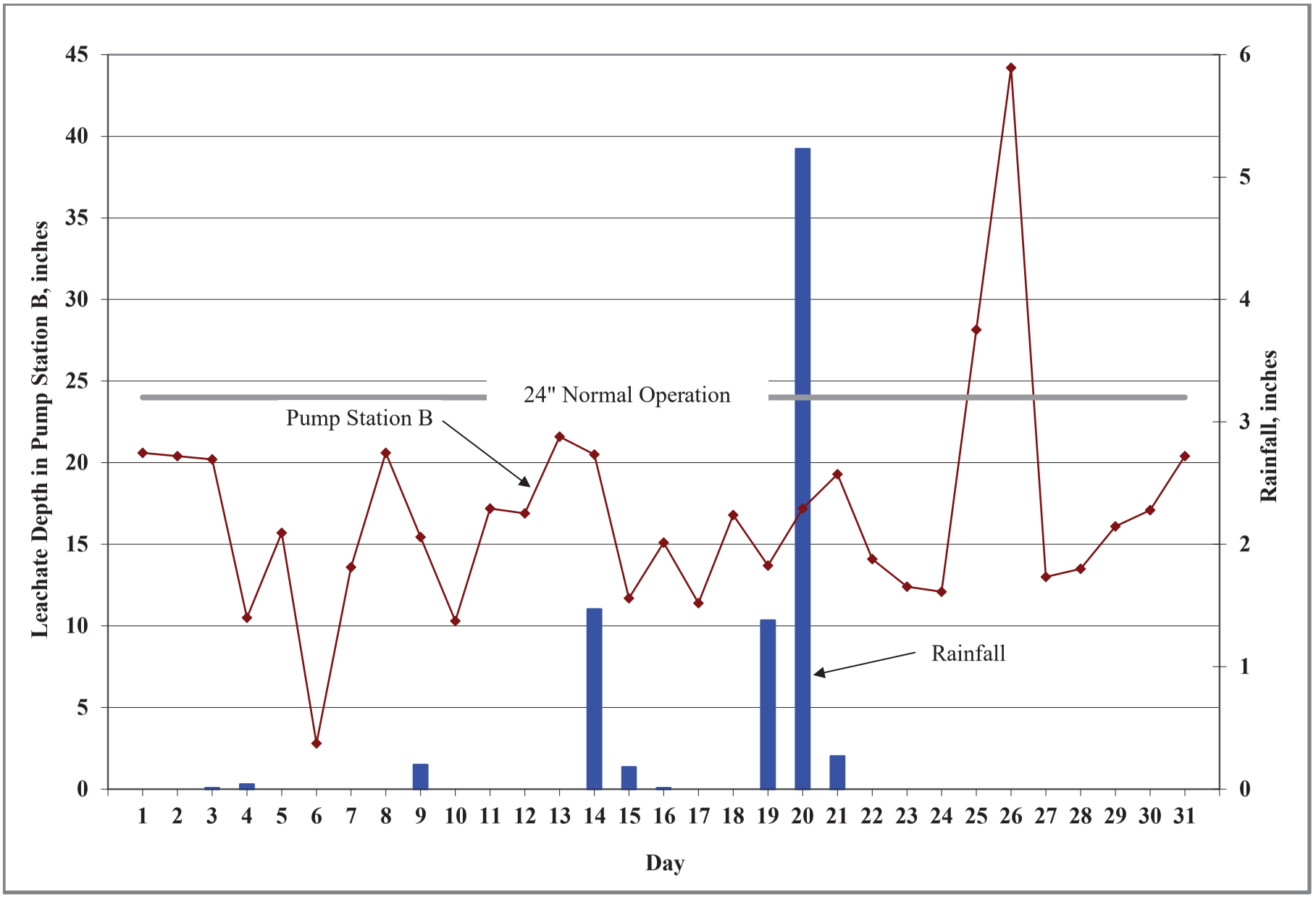


**Figure 1. Leachate Levels in Pump Station B and Rainfall for December 2018.**

**TABLE 3. LEACHATE BALANCE SUMMARY**
**SOUTHEAST COUNTY LANDFILL**
**HILLSBOROUGH COUNTY, FLORIDA**
**YEAR-2018**

| | | Leachate Arriving at LTRF | | | | | Leachate Leaving LTRF | | | Effluent Disposal | | | Inflow / Outflow For LTRF | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | Rainfall (in.) | 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 | 3.63 | 986 | 136,192 | 132,787 | 2,699,895 | 0 | 2,278,282 | 9,334 | 728,100 | 249,302 | 0 | 410,330 | 2,969,860 | 3,015,716 | -45,856 |
| February | 0.82 | 1,707 | 102,640 | 20,127 | 2,194,846 | 62,685 | 1,716,430 | 1,584 | 518,000 | 136,771 | 0 | 357,793 | 2,382,005 | 2,236,014 | 145,991 |
| March | 1.06 | 4,700 | 73,738 | 74,047 | 2,123,174 | 23,840 | 1,495,682 | 9,695 | 814,870 | 311,813 | 0 | 336,300 | 2,299,499 | 2,320,247 | -20,748 |
| April | 2.70 | 4,147 | 75,436 | 237,863 | 2,064,425 | 3,295 | 1,683,678 | 3,216 | 567,800 | 155,769 | 0 | 340,297 | 2,385,166 | 2,254,694 | 130,472 |
| May | 13.66 | 7,387 | 154,146 | 242,640 | 2,213,290 | 398,577 | 3,496,465 | 0 | 316,811 | 165,637 | 0 | 149,558 | 3,016,040 | 3,813,276 | -797,236 |
| June | 9.85 | 7,268 | 247,237 | 344,735 | 2,618,410 | 235,469 | 3,133,577 | 0 | 589,200 | 0 | 0 | 10,310 | 3,453,119 | 3,722,777 | -269,659 |
| July | 11.14 | 38,562 | 377,170 | 644,684 | 3,465,128 | 345,327 | 4,873,090 | 0 | 671,506 | 0 | 0 | 0 | 4,870,871 | 5,544,596 | -673,725 |
| August | 10.75 | 89,486 | 442,037 | 664,397 | 4,225,908 | 423,745 | 6,331,834 | 0 | 305,100 | 0 | 0 | 0 | 5,845,573 | 6,636,934 | -791,361 |
| September | 5.05 | 30,919 | 334,516 | 555,721 | 4,432,570 | 169,431 | 5,450,760 | 1,610 | 0 | 0 | 0 | 0 | 5,523,157 | 5,452,370 | 70,787 |
| October | 0.88 | 620 | 162,014 | 288,568 | 3,828,993 | 100 | 4,069,395 | 1,539 | 0 | 0 | 0 | 0 | 4,280,295 | 4,070,934 | 209,361 |
| November | 1.79 | 2,945 | 144,852 | 210,208 | 2,837,363 | 0 | 3,044,521 | 0 | 0 | 0 | 0 | 0 | 3,195,368 | 3,044,521 | 150,847 |
| December | 8.79 | 22,097 | 225,748 | 353,120 | 3,040,655 | 478,663 | 3,905,432 | 0 | 0 | 0 | 0 | 0 | 4,120,283 | 3,905,432 | 214,851 |
| | | | | | | | | | | | | | | | |
| YTD Total | 70.12 | 210,824 | 2,475,726 | 3,768,897 | 35,744,655 | 2,141,132 | 41,479,146 | 26,978 | 4,511,387 | 1,019,292 | 0 | 1,604,588 | 44,341,234 | 46,017,511 | -1,676,277 |

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.