## Smith, George

**From:** Wiesman, Ronald <WiesmanR@hillsboroughcounty.org>
**Sent:** Friday, January 14, 2022 3:01 PM
**To:** Morgan, Steve; SWD_Waste
**Cc:** Madden, Melissa; Cope, Ronald; Byer, Kimberly; Ruiz, Larry; O'Neill, Joseph; Spradlin, Kollan; Curtis, Bob
**Subject:** WACS ID 41193 - Qtr. 4 2021 Water Balance & Waste Tire Report for Southeast County
**Attachments:** 4Q2021 Water Balance Report.pdf; 4Q2021 Waste Tire Report.pdf



Mr. Morgan,

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

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

**Ron Wiesman II**
**Manager**
Solid Waste Management Division
Public Utilities Department

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**Hillsborough County**
15960 County Road 672 Lithia, FL 33547

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Hillsborough County Florida

**SOLID WASTE MANAGEMENT**
PO Box 1110, Tampa, FL 33601-1110
813-612-7718



January 14, 2022

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. 126787-007-WT/02

Dear Mr. Morgan:

In accordance with Rule 62-711, F.A.C. and Permit No 126787-007-WT/02, the Solid Waste Management Division (SWMD) is submitting the Quarterly Report for the Waste Tire Facility for the period October 1, 2021 through December 31, 2021. 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 2021**

| | | FOURTH QUARTER | Beginning Tonnage (Oct. 1, 2021) | 841.81 |
|---|---|---|---|---|
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Oct. 2021 | 268.95 | 255.45 | 42.41 | 20.83 |
| | | | | |
| | | | | |
| Beginning Tons | 841.81 | | | |
| | 1,110.76 | -255.45 | -42.41 | -20.83 |
| | | | Ending Tonnage | 792.07 |
| | | | | |
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Nov. 2021 | 257.47 | 42.28 | 0.00 | 0.00 |
| | | | | |
| | | | | |
| Beginning Tons | 792.07 | | | |
| | 1,049.54 | -42.28 | 0.00 | 0.00 |
| | | | Ending Tonnage | 1,007.26 |
| | | | | |
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Dec. 2021 | 151.65 | 308.42 | 27.81 | 12.89 |
| | 0.00 | | | |
| | | | | |
| Beginning Tons | 1,007.26 | | | |
| | 1,158.91 | -308.42 | -27.81 | -12.89 |
| | | | Ending Tonnage | 809.79 |
| | | | | |
| Month | Tires Received | Tires Removed by Contractor | Tires to SCTS & RR | Tons Adjusted |
| Oct. 2021 | 268.95 | 255.45 | 42.41 | 20.83 |
| Nov. 2021 | 257.47 | 42.28 | 0.00 | 0.00 |
| Dec. 2021 | 151.65 | 308.42 | 27.81 | 12.89 |
| Sub-Total | 678.07 | 606.15 | 70.22 | 33.72 |
| Beginning Tons | 841.81 | | | |
| TOTAL | 1,519.88 | -606.15 | -70.22 | -33.7 |
| | | | Ending Tonnage | 809.79 |

# 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 10/1/21 thru 12/31/21 (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: 126787-007-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 | 841.81 | 678.07 | | | 676.37 | 33.72 | 809.79 |
| Other whole Tires | | | | | | | |
| Processed tires | | | | | | | |
| Processing Waste | | | | | | | |
| Other | | | | | | | |
| Total | 841.81 | 678.07 | | | 676.37 | 33.72 | 809.79 |

a. Explain all inventory adjustments. 33.72
33.72 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
1/14/2022 — Date

Mail complete form to
the appropriate district office


Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

Hillsborough County Florida

**SOLID WASTE MANAGEMENT**
PO Box 1110, Tampa, FL 33601-1110
813-612-7718



January 14, 2022

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. 35435-022-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 31, 2021. The data is being submitted as separate monthly reports for October, November and December 2021.

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

Sincerely,

Larry E. Ruiz
Manager Landfill Operations
Solid Waste Management Division

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

Hillsborough County Florida

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



**MEMORANDUM**

**DATE:** November 15, 2021

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

**FROM:** Ron W. Wiesman, Manager, Solid Waste Management Division

**SUBJECT:** Leachate Water Balance Report Forms for October 2021
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 2021 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 3.49 inches of rainfall recorded at the Southeast County Landfill (SCLF).

**Depth in Pond A (Column III)**

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 2.1 feet.

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

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 3.6 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. The depth recorded on the fifth through seventh was due to a high storage tank level, after off-site hauling the level returned to normal range by end of day. The average recorded depth of leachate in the PS-B sump was 25.1 inches.

**Depth in Clean Out 2-1 (CO 2-1) (Column VI)**

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The average recorded depth of leachate in the CO 2-1 was 21.0 inches.

**Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)**

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column the average recorded depth of leachate in the MP 2-2 was 27.2 inches.

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

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 150,221 gallons. A total of 4,656,849 gallons of leachate was pumped this month.

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

Column IX presents the quantity of leachate removed from the leak detection system (LDS) of Sections 7-8. The quantity is measured by a flow meter before being pumped for removal with Sections 7-8 leachate. The removal rate did not exceed 1,930 gallons per day. This month 2,044 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

Column X presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 565,204 gallons was removed.

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

Column XI presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 3,965,931 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 372,012 gallons of leachate was pumped this month.

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

Column XIII presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 7316 gallons of leachate was removed from the leak detection system.

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

Column XIV presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 417,194 gallons of leachate was stored in the tank.

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

Column XV typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 354,516 gallons of leachate was stored in the tank.

**Leachate Treated at LEF (Column XVI)**

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,265,394 gallons of leachate was treated at the evaporator.

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

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 1,148,209 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 3,912,966 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 24,671 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 67,645 gallons of effluent was stored in Pond A.

**Pond B Storage (Column XXI)**

Column XXI presents the daily amount of leachate, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 316,806 gallons of leachate was stored in Pond B.

**Effluent Irrigation (Column XXII)**

Column XXII presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 1,008,574 gallons of effluent was sprayed.

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

Column XXIII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

**Total Effluent Hauled (Column XXIV)**

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

**Total Evaporation (Column XXV)**

Column XXV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 1,965,500 gallons.

**TABLE 2**

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

**TABLE 3**

**Leachate Balance Summary**

The Leachate Balance Summary (see Table 3) presents a review of inflow and outflow quantities for the LTRF, as well as rainfall and effluent disposal quantities at the landfill. Total inflow quantity to the LTRF was 5,627,792 gallons. Total outflow quantity from the LTRF was 6,351,240 gallons. The change in storage for the month decreased by 723,448 gallons. Please advise should you have any questions concerning the information provided.

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**
**OCTOBER 2021**
**SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | XVII | XVIII | XIX | XX | XXI | XXII | XXIII | XXIV | XXV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Rainfall (in.) | Depth in Pond A (ft.) | Depth in Pond B (ft.) | Estimated Depth at PS-B (in) | Depth in CO 2-1 (in) | Depth in MP 2-2 (in.) | Leachate Pumped to MLPS from Phases I-VI (gal.) | Leachate Pumped from Sections 7-8 LDS (gal.) | Leachate Pumped to MLPS from Sections 7-8 (gal.) | Leachate Pumped to LTRF from MPLS (gal.) | Leachate Pumped to LTRF from Section 9 (gal.) | Leachate Pumped from Section 9 LDS (gal.) | Leachate in 575K Tank (gal.) | Effluent in 575K Tank (gal.) | Leachate Treated at LEF (gal.) | Leachate Treated at LTRF (gal.) | Total Leachate Hauled (gal.) | Leachate Dust Control (Sprayed) (gal.) | Pond A Storage (gal.) | Pond B Storage (gal) | Effluent Irrigation (gal.) | Effluent Dust Control (Sprayed) (gal.) | Total Effluent Hauled (gal.) | Total Evaporation (gal.) |
| 1 | 0.00 | 1.2 | 3.8 | 29.4 | 18.3 | 28.7 | 203,423 | 0 | 28,058 | 181,981 | 4,394 | 1 | 477,000 | 492,000 | 47,007 | 43,466 | 162,686 | 0 | 32,000 | 337,000 | 50,130 | 0 | 0 | 82,400 |
| 2 | 0.00 | 1.2 | 3.8 | 28.1 | 18.0 | 27.8 | 151,075 | 0 | 31,662 | 154,481 | 12,440 | 3 | 449,000 | 468,000 | 24,884 | 45,682 | 132,937 | 0 | 32,000 | 337,000 | 34,452 | 0 | 0 | 50,000 |
| 3 | 0.00 | 1.9 | 3.8 | 26.5 | 20.3 | 28.2 | 129,989 | 0 | 860 | 125,956 | 1,075 | 0 | 487,000 | 479,000 | 3,725 | 45,682 | 28,674 | 0 | 57,000 | 337,000 | 0 | 0 | 0 | 3,400 |
| 4 | 0.00 | 2.6 | 3.8 | 24.9 | 22.6 | 28.5 | 146,446 | 0 | 860 | 142,413 | 1,075 | 0 | 525,000 | 489,000 | 3,725 | 45,682 | 138,438 | 24,671 | 88,000 | 337,000 | 27,772 | 0 | 0 | 45,300 |
| 5 | 0.00 | 2.6 | 3.4 | 46.1 | 17.6 | 30.0 | 65,650 | 0 | 37,470 | 87,102 | 22,364 | 5 | 482,000 | 473,000 | 52,877 | 35,000 | 144,678 | 0 | 88,000 | 289,000 | 35,164 | 0 | 0 | 75,700 |
| 6 | 0.00 | 2.6 | 3.8 | 43.2 | 13.0 | 29.7 | 171,582 | 0 | 84,093 | 175,085 | 64,522 | 3 | 525,000 | 480,000 | 44,893 | 35,000 | 167,852 | 0 | 88,000 | 337,000 | 54,056 | 0 | 0 | 83,600 |
| 7 | 0.70 | 1.3 | 3.8 | 43.0 | 29.6 | 26.6 | 181,837 | 0 | 19,961 | 153,212 | 28,048 | 1,566 | 473,000 | 499,000 | 46,333 | 41,936 | 147,192 | 0 | 36,000 | 337,000 | 54,559 | 0 | 0 | 85,300 |
| 8 | 0.07 | 1.9 | 3.9 | 29.9 | 22.6 | 27.5 | 197,471 | 0 | 37,589 | 199,112 | 31,191 | 724 | 497,000 | 494,000 | 50,815 | 39,237 | 149,705 | 0 | 57,000 | 349,000 | 51,815 | 0 | 0 | 87,200 |
| 9 | 0.00 | 1.7 | 3.8 | 21.6 | 23.7 | 28.2 | 163,238 | 15 | 12,764 | 132,620 | 6,048 | 11 | 506,000 | 475,000 | 27,471 | 43,568 | 161,659 | 0 | 48,000 | 337,000 | 60,502 | 0 | 0 | 73,100 |
| 10 | 0.00 | 2.0 | 3.8 | 19.8 | 20.2 | 28.1 | 172,587 | 0 | 3,052 | 121,506 | 1,227 | 46 | 513,000 | 474,000 | 41,716 | 43,568 | 32,086 | 0 | 61,000 | 337,000 | 0 | 0 | 0 | 37,500 |
| 11 | 0.00 | 2.3 | 3.8 | 18.0 | 16.6 | 27.9 | 172,990 | 0 | 3,052 | 131,916 | 1,227 | 46 | 521,000 | 473,000 | 41,716 | 43,568 | 160,713 | 0 | 74,000 | 337,000 | 52,483 | 0 | 0 | 79,500 |
| 12 | 0.00 | 2.1 | 3.8 | 23.4 | 19.0 | 27.5 | 162,523 | 0 | 7,825 | 103,461 | 14,203 | 455 | 473,000 | 468,000 | 48,752 | 42,007 | 165,427 | 0 | 65,000 | 337,000 | 63,109 | 0 | 0 | 94,400 |
| 13 | 0.00 | 1.6 | 3.8 | 23.6 | 27.3 | 27.7 | 161,971 | 199 | 57,020 | 176,250 | 29,920 | 1,990 | 463,000 | 475,000 | 42,043 | 42,007 | 180,225 | 0 | 44,000 | 337,000 | 25,253 | 0 | 0 | 58,000 |
| 14 | 0.00 | 1.8 | 3.8 | 24.0 | 20.9 | 27.4 | 162,657 | 148 | 21,679 | 135,831 | 13,893 | 1 | 439,000 | 441,000 | 46,166 | 42,651 | 200,415 | 0 | 52,000 | 337,000 | 54,778 | 0 | 0 | 85,400 |
| 15 | 0.00 | 1.7 | 3.8 | 21.6 | 21.7 | 27.2 | 153,168 | 148 | 19,758 | 113,165 | 13,942 | 36 | 389,000 | 405,000 | 54,347 | 41,687 | 157,034 | 0 | 48,000 | 337,000 | 15,708 | 0 | 0 | 61,500 |
| 16 | 0.00 | 2.0 | 3.7 | 19.8 | 21.6 | 27.2 | 155,578 | 110 | 14,631 | 129,781 | 13,095 | 2,008 | 365,000 | 391,000 | 58,320 | 41,217 | 128,718 | 0 | 61,000 | 325,000 | 56,786 | 0 | 0 | 97,900 |
| 17 | 0.00 | 2.2 | 3.7 | 18.9 | 19.6 | 27.2 | 149,444 | 125 | 14,373 | 115,169 | 9,628 | 206 | 384,000 | 404,000 | 45,193 | 41,217 | 0 | 0 | 70,000 | 325,000 | 0 | 0 | 0 | 40,700 |
| 18 | 0.00 | 2.3 | 3.7 | 18.0 | 17.5 | 27.7 | 147,902 | 125 | 14,373 | 113,628 | 9,628 | 206 | 403,000 | 417,000 | 45,193 | 41,217 | 161,152 | 0 | 74,000 | 325,000 | 56,522 | 0 | 0 | 85,900 |
| 19 | 0.00 | 1.8 | 3.7 | 21.2 | 19.5 | 27.7 | 144,018 | 135 | 14,648 | 123,692 | 10,845 | 1 | 384,000 | 367,000 | 48,283 | 37,265 | 185,125 | 0 | 52,000 | 325,000 | 45,029 | 0 | 0 | 79,500 |
| 20 | 0.00 | 1.6 | 3.7 | 28.2 | 15.9 | 26.7 | 134,367 | 103 | 12,655 | 113,980 | 6,329 | 0 | 358,000 | 309,000 | 35,036 | 37,041 | 173,232 | 0 | 44,000 | 325,000 | 28,051 | 0 | 0 | 54,000 |
| 21 | 0.00 | 1.5 | 3.4 | 17.4 | 18.5 | 26.3 | 142,842 | 103 | 12,455 | 124,131 | 11,215 | 1 | 345,000 | 266,000 | 41,765 | 30,331 | 160,891 | 0 | 40,000 | 289,000 | 17,473 | 0 | 0 | 51,600 |
| 22 | 0.00 | 1.7 | 3.4 | 25.8 | 23.7 | 26.0 | 145,094 | 106 | 12,905 | 107,532 | 7,264 | 1 | 317,000 | 230,000 | 51,810 | 29,882 | 134,067 | 0 | 48,000 | 289,000 | 42,465 | 0 | 0 | 80,600 |
| 23 | 0.00 | 2.0 | 3.6 | 24.8 | 27.0 | 26.2 | 149,449 | 107 | 14,139 | 106,113 | 6,852 | 1 | 271,000 | 192,000 | 54,302 | 30,601 | 116,972 | 0 | 61,000 | 312,000 | 0 | 0 | 0 | 48,900 |
| 24 | 0.52 | 2.4 | 3.5 | 26.5 | 24.7 | 26.4 | 139,578 | 88 | 11,502 | 116,016 | 5,934 | 1 | 341,000 | 184,000 | 50,339 | 30,601 | 0 | 0 | 79,000 | 300,000 | 0 | 0 | 0 | 45,300 |
| 25 | 0.47 | 2.7 | 3.4 | 28.2 | 22.3 | 26.6 | 138,443 | 88 | 11,502 | 114,881 | 5,934 | 1 | 410,000 | 175,000 | 50,339 | 30,601 | 129,240 | 0 | 93,000 | 289,000 | 0 | 0 | 0 | 45,300 |
| 26 | 0.01 | 3.2 | 3.4 | 19.2 | 17.3 | 26.4 | 133,886 | 70 | 11,531 | 120,274 | 5,942 | 0 | 420,000 | 146,000 | 13,923 | 31,343 | 130,251 | 0 | 118,000 | 289,000 | 49,937 | 0 | 0 | 52,500 |
| 27 | 0.00 | 2.6 | 3.4 | 21.0 | 27.3 | 25.8 | 135,268 | 71 | 11,518 | 105,161 | 3,361 | 2 | 396,000 | 127,000 | 46,532 | 29,947 | 122,415 | 0 | 88,000 | 289,000 | 50,948 | 0 | 0 | 82,600 |
| 28 | 1.40 | 2.3 | 3.4 | 17.4 | 20.7 | 26.4 | 151,333 | 101 | 11,214 | 117,272 | 9,541 | 1 | 329,000 | 178,000 | 49,203 | 31,829 | 149,538 | 0 | 74,000 | 289,000 | 8,090 | 0 | 0 | 50,800 |
| 29 | 0.32 | 3.0 | 3.3 | 20.4 | 20.4 | 25.8 | 162,611 | 69 | 14,746 | 161,374 | 9,023 | 0 | 305,000 | 173,000 | 36,622 | 30,458 | 113,149 | 0 | 108,000 | 277,000 | 0 | 0 | 0 | 33,000 |
| 30 | 0.00 | 3.4 | 3.3 | 25.2 | 22.6 | 25.7 | 99,393 | 67 | 8,788 | 65,648 | 6,236 | 1 | 305,000 | 173,000 | 41,787 | 21,959 | 78,495 | 0 | 129,000 | 277,000 | 43,927 | 0 | 0 | 72,700 |
| 31 | 0.00 | 2.6 | 3.3 | 24.0 | 21.4 | 25.4 | 131,036 | 67 | 8,525 | 97,189 | 5,619 | 0 | 381,000 | 173,000 | 20,279 | 21,959 | 0 | 0 | 88,000 | 277,000 | 29,565 | 0 | 0 | 41,900 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 3.49 | | | | | | 4,656,849 | 2,044 | 565,204 | 3,965,931 | 372,012 | 7,316 | | | 1,265,394 | 1,148,209 | 3,912,966 | 24,671 | | | 1,008,574 | 0 | 0 | 1,965,500 |
| Daily Average | | 2.1 | 3.6 | 25.1 | 21.0 | 27.2 | 150,221 | | | | | | 417,194 | 354,516 | | | | | 67,645 | 316,806 | 32,535 | 0 | 0 | 63,403 |
| Mo. Average | | | | | 0 | 0 | | | | | | | | | | | | 0 | | | 0 | 0 | 0 | 0 |

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

**TABLE 2. FIELD DATA ENTRY FORM**
**OCTOBER 2021**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Rainfall (in.) | Flow Meter Pump Sta. A (gal.) | Reading PS-B (in.) | Section 9 Pumps (gal.) | Section 9 LDS (gal.) | Sections 7-8 Pump (gal.) | Sections 7-8 LDS (gal.) | MLPS to Pond B (gal.) | Pond B to LEF (gal.) | Pond B Depth (ft.) | Pond A Depth (ft.) | Effluent Spray Irrigation (gal.) | Depth in 575K Tank Leachate (ft.) | Depth in 575K Tank Effluent (ft.) | Leachate Treated at LTRF (gal.) | Leachate Hauled (gal.) | Leachate Dust Control (Sprayed) (gal.) | Effluent Hauled (gal.) | Effluent Dust Control (Sprayed) (gal) |
| 1 | 0.00 | 16,715,441 | 29.4 | 1,525,110 | 23,879 | 4,823,940 | 1,252 | 9,732,094 | 2,456,219 | 3.8 | 1.2 | 50,130 | 16.58 | 17.08 | 43,466 | 162,686 | 0 | 0 | |
| 2 | 0.00 | 16,829,530 | 28.1 | 1,537,550 | 23,882 | 4,855,602 | 1,252 | 9,760,350 | 2,481,103 | 3.8 | 1.2 | 34,452 | 15.58 | 16.25 | 45,682 | 132,937 | 0 | 0 | |
| 3 | 0.00 | *16,922,533* | *26.5* | *1,538,625* | *23,882* | *4,856,462* | *1,252* | *9,765,242* | *2,484,828* | *3.8* | *1.9* | *0* | *16.92* | *16.63* | *45,682* | 28,674 | *0* | *0* | |
| 4 | 0.00 | 17,015,536 | 24.9 | 1,539,700 | 23,882 | 4,857,321 | 1,252 | 9,770,134 | 2,488,552 | 3.8 | 2.6 | 27,772 | 18.25 | 17.00 | 45,682 | 138,438 | 24,671 | 0 | |
| 5 | 0.00 | 17,024,596 | 46.1 | *1,562,064* | 23,887 | 4,894,791 | 1,252 | 9,786,152 | 2,541,429 | 3.4 | 2.6 | 35,164 | 16.75 | 16.42 | 35,000 | 144,678 | 0 | 0 | |
| 6 | 0.00 | 17,156,582 | 43.2 | 1,626,586 | 23,890 | 4,978,884 | 1,252 | 9,866,742 | 2,586,322 | 3.8 | 2.6 | 54,056 | 18.25 | 16.67 | 35,000 | 167,852 | 0 | 0 | |
| 7 | 0.70 | 17,290,588 | 43.0 | 1,654,634 | 25,456 | 4,998,845 | 1,252 | 9,915,328 | 2,632,655 | 3.8 | 1.3 | 54,559 | 16.42 | 17.33 | 41,936 | 147,192 | 0 | 0 | |
| 8 | 0.07 | 17,445,890 | 29.9 | 1,685,825 | 26,180 | 5,036,434 | 1,252 | 9,951,276 | 2,683,470 | 3.9 | 1.9 | 51,815 | 17.25 | 17.17 | 39,237 | 149,705 | 0 | 0 | |
| 9 | 0.00 | 17,565,674 | 21.6 | 1,691,873 | 26,191 | 5,049,198 | 1,267 | 9,994,658 | 2,710,941 | 3.8 | 1.7 | 60,502 | 17.58 | 16.50 | 43,568 | 161,659 | 0 | 0 | |
| 10 | 0.00 | 17,694,807 | 19.8 | 1,693,100 | 26,237 | 5,052,250 | 1,267 | 48,791 | 2,752,657 | 3.8 | 2.0 | 0 | 17.83 | 16.46 | 43,568 | 32,086 | 0 | 0 | |
| 11 | 0.00 | 17,823,940 | 18.0 | 1,694,326 | 26,283 | 5,055,301 | 1,267 | 92,917 | 2,794,372 | 3.8 | 2.3 | 52,483 | 18.08 | 16.42 | 43,568 | 160,713 | 0 | 0 | |
| 12 | 0.00 | 17,948,550 | 23.4 | 1,708,529 | 26,738 | 5,063,126 | 1,267 | 159,804 | 2,843,124 | 3.8 | 2.1 | 63,109 | 16.42 | 16.25 | 42,007 | 165,427 | 0 | 0 | |
| 13 | 0.00 | 18,068,842 | 23.6 | 1,738,449 | 28,728 | 5,120,146 | 199 | 202,545 | 2,885,167 | 3.8 | 1.6 | 25,253 | 16.08 | 16.50 | 42,007 | 180,225 | 0 | 0 | |
| 14 | 0.00 | 18,183,098 | 24.0 | 1,752,342 | 28,729 | 5,141,825 | 347 | 251,050 | 2,931,333 | 3.8 | 1.8 | 54,778 | 15.25 | 15.33 | 42,651 | 200,415 | 0 | 0 | |
| 15 | 0.00 | 18,296,586 | 21.6 | 1,766,284 | 28,765 | 5,161,583 | 495 | 310,811 | 2,985,680 | 3.8 | 1.7 | 15,708 | 13.50 | 14.08 | 41,687 | 157,034 | 0 | 0 | |
| 16 | 0.00 | 18,414,222 | 19.8 | 1,779,379 | 30,773 | 5,176,214 | 605 | 351,239 | 3,044,000 | 3.7 | 2.0 | 56,786 | 12.67 | 13.58 | 41,217 | 128,718 | 0 | 0 | |
| 17 | 0.00 | 18,525,724 | 18.9 | 1,789,007 | 30,979 | 5,190,587 | 730 | 399,886 | 3,089,193 | 3.7 | 2.2 | | 13.34 | 14.04 | 41,217 | 0 | 0 | 0 | |
| 18 | 0.00 | 18,637,226 | 18.0 | 1,798,634 | 31,185 | 5,204,959 | 854 | 448,533 | 3,134,386 | 3.7 | 2.3 | 56,522 | 14.00 | 14.50 | 41,217 | 161,152 | 0 | 0 | |
| 19 | 0.00 | 18,745,620 | 21.2 | 1,809,479 | 31,186 | 5,219,607 | 989 | 483,507 | 3,182,669 | 3.7 | 1.8 | 45,029 | 13.33 | 12.75 | 37,265 | 185,125 | 0 | 0 | |
| 20 | 0.00 | 18,845,222 | 28.2 | 1,815,808 | 31,186 | 5,232,262 | 1,092 | 516,549 | 3,217,705 | 3.7 | 1.6 | 28,051 | 12.42 | 10.75 | 37,041 | 173,232 | 0 | 0 | |
| 21 | 0.00 | 18,949,350 | 17.4 | 1,827,023 | 31,187 | 5,244,717 | 1,195 | 547,715 | 3,259,470 | 3.4 | 1.5 | 17,473 | 12.00 | 9.25 | 30,331 | 160,891 | 0 | 0 | |
| 22 | 0.00 | 19,054,136 | 25.8 | 1,834,287 | 31,188 | 5,257,622 | 1,301 | 598,182 | 3,311,280 | 3.4 | 1.7 | 42,465 | 11.00 | 8.00 | 29,882 | 134,067 | 0 | 0 | |
| 23 | 0.00 | 19,166,894 | 24.8 | 1,841,139 | 31,189 | 5,271,761 | 1,408 | 655,657 | 3,365,582 | 3.6 | 2.0 | 0 | 9.42 | 6.67 | 30,601 | 116,972 | 0 | 0 | |
| 24 | 0.52 | 19,269,781 | 26.5 | 1,847,073 | 31,190 | 5,283,263 | 1,496 | 690,721 | 3,415,921 | 3.5 | 2.4 | 0 | 11.84 | 6.38 | 30,601 | 0 | 0 | 0 | |
| 25 | 0.47 | 19,372,668 | 28.2 | 1,853,006 | 31,190 | 5,294,764 | 1,584 | 725,785 | 3,466,260 | 3.4 | 2.7 | 0 | 14.25 | 6.08 | 30,601 | 129,240 | 0 | 0 | |
| 26 | 0.01 | 19,470,834 | 19.2 | *1,858,948* | 31,190 | 5,306,295 | 1,654 | 750,928 | 3,480,183 | 3.4 | 3.2 | 49,937 | 14.58 | 5.08 | 31,343 | 130,251 | 0 | 0 | |
| 27 | 0.00 | 19,570,556 | 21.0 | 1,862,309 | 31,192 | 5,317,813 | 1,725 | 792,553 | 3,526,715 | 3.4 | 2.6 | 50,948 | 13.75 | 4.42 | 29,947 | 122,415 | 0 | 0 | |
| 28 | 1.40 | 19,672,868 | 17.4 | 1,871,850 | 31,193 | 5,329,027 | 1,826 | 837,828 | 3,575,918 | 3.4 | 2.3 | 8,090 | 11.42 | 6.17 | 31,829 | 149,538 | 0 | 0 | |
| 29 | 0.32 | 19,805,550 | 20.4 | 1,880,873 | 31,193 | 5,343,773 | 1,895 | 853,811 | 3,612,540 | 3.3 | 3.0 | 0 | 10.58 | 6.00 | 30,458 | 113,149 | 0 | 0 | |
| 30 | 0.00 | 19,875,556 | 25.2 | 1,887,109 | 31,194 | 5,352,561 | 1,962 | 896,344 | 3,654,327 | 3.3 | 3.4 | 43,927 | 10.58 | 6.00 | 21,959 | 78,495 | 0 | 0 | |
| 31 | 0.00 | 19,980,668 | 24.0 | 1,892,728 | 31,194 | 5,361,086 | 2,029 | 938,716 | 3,674,606 | 3.3 | 2.6 | 29,565 | 13.25 | 6.00 | 21,959 | 0 | 0 | 0 | |
| Totals | 3.49 | | | | | | | | | | | 1,008,574 | | | 1,148,209 | 3,912,966 | 24,671 | | 0 |

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

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

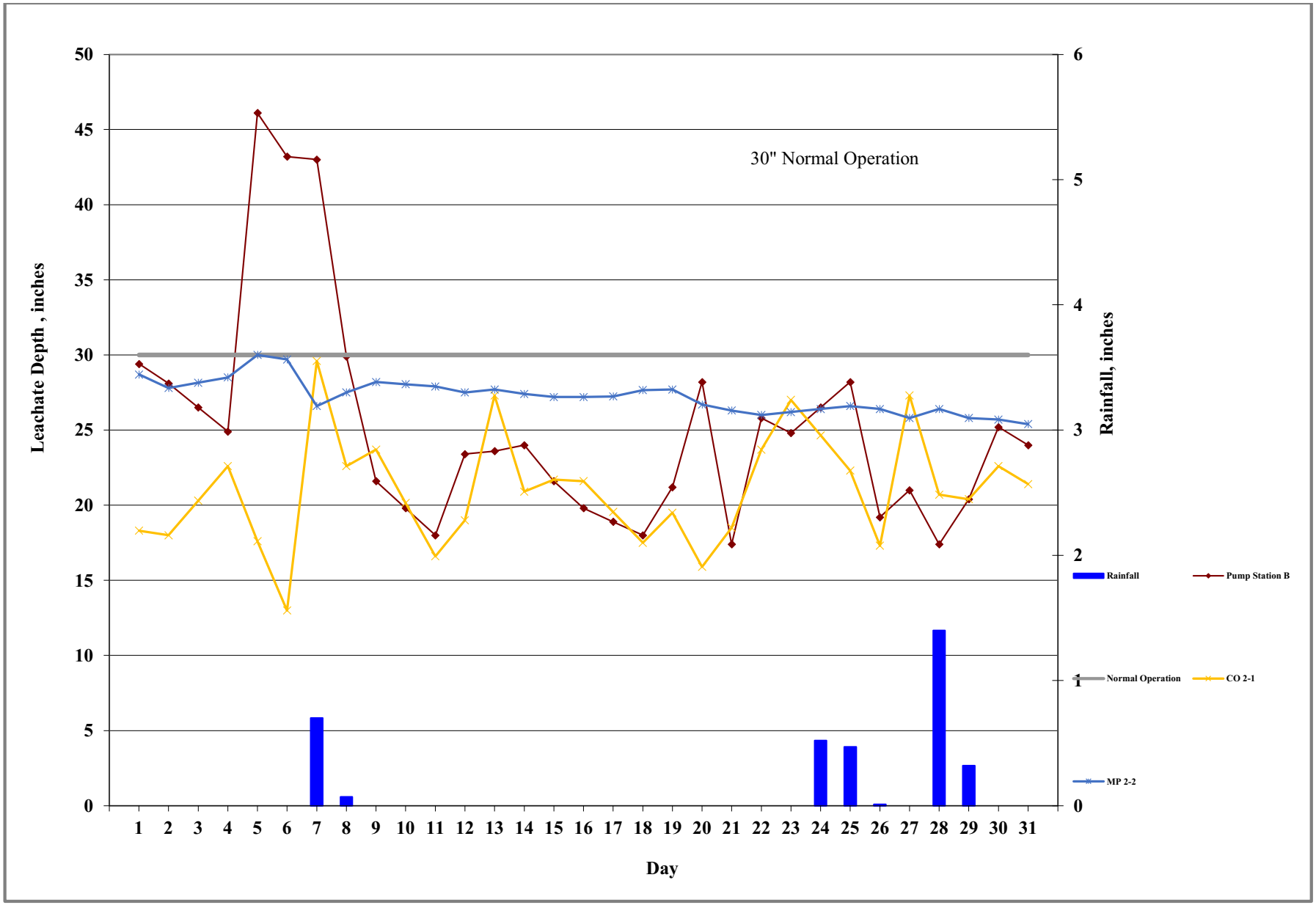


**Figure 1. Leachate Levels in Pump Station B and Rainfall for October 2021**

**TABLE 3. LEACHATE BALANCE SUMMARY**
**SOUTHEAST COUNTY LANDFILL**
**HILLSBOROUGH COUNTY, FLORIDA**
**YEAR-2021**

| | | Leachate Arriving at LTRF | | | | Leachate Leaving LTRF | | | LEF | Effluent Disposal | | | Inflow / Outflow For L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | Total Leachate Hauled from LTRF (gal.) | Leachate Dust Control (Sprayed) (gal.) | Leachate Treated at LTRF (gal.) | Leachate Treated at LEF (gal.) | Total Effluent Hauled (gal.) | Effluent Dust Control (Sprayed) (gal.) | Effluent Irrigation (gal.) | Total Inflow to LTRF (gal.) | Total Outflow from LTRF (gal.) |
| January | 1.38 | 240 | 151,803 | 252,214 | 2,851,511 | 2,492,589 | 7,043 | 867,500 | 0 | 0 | 0 | 933,772 | 3,255,768 | 3,367,132 |
| February | 4.53 | 532 | 128,100 | 184,450 | 2,334,983 | 1,989,793 | 3,048 | 515,325 | 0 | 0 | 0 | 402,814 | 2,648,065 | 2,508,166 |
| March | 1.75 | 290 | 123,318 | 194,837 | 2,431,421 | 2,249,071 | 3,534 | 816,961 | 0 | 0 | 0 | 791,751 | 2,749,866 | 3,069,566 |
| April | 4.18 | 522 | 91,296 | 142,727 | 2,166,002 | 1,595,033 | 3,700 | 829,417 | 0 | 0 | 0 | 590,194 | 2,400,547 | 2,428,150 |
| May | 0.77 | 104 | 114,629 | 127,374 | 2,016,306 | 1,535,387 | 2,981 | 811,156 | 0 | 0 | 0 | 546,887 | 2,258,412 | 2,349,524 |
| June | 5.96 | 1,140 | 107,211 | 132,370 | 1,818,520 | 1,783,721 | 3,697 | 754,519 | 0 | 0 | 0 | 416,077 | 2,059,240 | 2,541,937 |
| July | 15.45 | 1,740 | 316,344 | 382,643 | 2,621,204 | 2,507,051 | 0 | 753,907 | 0 | 0 | 39,138 | 629,769 | 3,321,931 | 3,260,958 |
| August | 7.85 | 1,260 | 310,327 | 501,887 | 3,482,010 | 2,901,269 | 5,436 | 624,583 | 0 | 0 | 0 | 704,760 | 4,295,484 | 3,531,288 |
| September | 11.90 | 1,149 | 395,092 | 610,808 | 3,796,207 | 2,987,400 | 171,120 | 764,137 | 1,336,672 | 0 | 0 | 731,282 | 4,803,256 | 5,259,329 |
| October | 3.49 | 487 | 379,328 | 565,204 | 4,682,773 | 3,912,966 | 24,671 | 1,148,209 | 1,265,394 | 0 | 0 | 1,008,574 | 5,627,792 | 6,351,240 |
| November | | | | | | | | | | | | | | |
| December | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| YTD Total | 57.26 | 7,464 | 2,117,448 | 3,094,513 | 28,200,935 | 23,954,280 | 225,230 | 7,885,714 | 2,602,066 | 0 | 39,138 | 6,755,880 | 33,420,360 | 34,667,290 |

Note:

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

Hillsborough County Florida

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



**MEMORANDUM**

**DATE:** December 15, 2021

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

**FROM:** Ron W. Wiesman, Manager, Solid Waste Management Division

**SUBJECT:** Leachate Water Balance Report Forms for November 2021
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 2021 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 3.84 inches of rainfall recorded at the Southeast County Landfill (SCLF).

**Depth in Pond A (Column III)**

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 2.1 feet.

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

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 3.3 feet.

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

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The depth recorded on the fifteenth was due to a high storage tank level, after off-site hauling the level returned to normal range by end of day. The average recorded depth of leachate in the PS-B sump was 24.8 inches.

**Depth in Clean Out 2-1 (CO 2-1) (Column VI)**

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The average recorded depth of leachate in the CO 2-1 was 20.4 inches.

**Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)**

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column the average recorded depth of leachate in the MP 2-2 was 25.9 inches.

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

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 129,088 gallons. A total of 3,872,647 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 1,873 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

Column X presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 429,931 gallons was removed.

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

Column XI presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 3,606,564 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 389,987 gallons of leachate was pumped this month.

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

Column XIII presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 6,131 gallons of leachate was removed from the leak detection system.

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

Column XIV presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 441,033 gallons of leachate was stored in the tank.

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

Column XV typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 354,167 gallons of leachate was stored in the tank.

**Leachate Treated at LEF (Column XVI)**

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 779,680 gallons of leachate was treated at the evaporator.

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

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 702,162 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 3,228,258 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 20,812 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 57,000 gallons of effluent was stored in Pond A.

**Pond B Storage (Column XXI)**

Column XXI presents the daily amount of leachate, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 274,500 gallons of leachate was stored in Pond B.

**Effluent Irrigation (Column XXII)**

Column XXII presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is measured from the flow meter at the irrigation pump station. This month a total of 672,096 gallons of effluent was sprayed.

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

Column XXIII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

**Total Effluent Hauled (Column XXIV)**

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

**Total Evaporation (Column XXV)**

Column XXV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 1,255,800 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 4,699,183 gallons. Total outflow quantity from the LTRF was 4,730,912 gallons. The change in storage for the month decreased by 31,729 gallons. Please advise should you have any questions concerning the information provided.

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**
**NOVEMBER 2021**
**SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | XVII | XVIII | XIX | XX | XXI | XXII | XXIII | XXIV | XXV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Rainfall (in.) | Depth in Pond A (ft.) | Depth in Pond B (ft.) | Estimated Depth at PS-B (in) | Depth in CO 2-1 (in) | Depth in MP 2-2 (in.) | Leachate Pumped to MLPS from Phases I-VI (gal.) | Leachate Pumped from Sections 7-8 LDS (gal.) | Leachate Pumped to MLPS from Sections 7-8 (gal.) | Leachate Pumped to LTRF from MPLS (gal.) | Leachate Pumped to LTRF from Section 9 (gal.) | Leachate Pumped from Section 9 LDS (gal.) | Leachate in 575K Tank (gal.) | Effluent in 575K Tank (gal.) | Leachate Treated at LEF (gal.) | Leachate Treated at LTRF (gal.) | Total Leachate Hauled (gal.) | Leachate Dust Control (Sprayed) (gal.) | Pond A Storage (gal.) | Pond B Storage (gal) | Effluent Irrigation (gal.) | Effluent Dust Control (Sprayed) (gal.) | Total Effluent Hauled (gal.) | Total Evaporation (gal.) |
| 1 | 0.00 | 2.6 | 3.2 | 20.4 | 19.0 | 25.3 | 117,739 | 66 | 9,937 | 120,438 | 0 | 0 | 461,000 | 168,000 | 31,430 | 21,959 | 96,352 | 0 | 88,000 | 265,000 | 58,750 | 0 | 0 | 75,300 |
| 2 | 0.00 | 1.9 | 3.2 | 24.0 | 22.2 | 25.6 | 123,675 | 66 | 10,587 | 87,825 | 11,356 | 1 | 422,000 | 202,000 | 45,546 | 25,743 | 82,871 | 0 | 57,000 | 265,000 | 39,810 | 0 | 0 | 72,800 |
| 3 | 0.00 | 1.6 | 3.3 | 18.0 | 16.6 | 25.8 | 124,840 | 68 | 10,235 | 109,028 | 8,053 | 1 | 451,000 | 185,000 | 19,138 | 24,578 | 117,490 | 0 | 44,000 | 277,000 | 32,313 | 0 | 0 | 43,100 |
| 4 | 0.30 | 1.3 | 3.3 | 17.4 | 24.6 | 25.8 | 125,568 | 66 | 9,710 | 135,278 | 1 | 0 | 396,000 | 259,000 | 0 | 23,170 | 126,596 | 0 | 36,000 | 277,000 | 21,492 | 0 | 0 | 17,200 |
| 5 | 3.07 | 1.4 | 3.4 | 25.2 | 26.3 | 25.7 | 112,976 | 65 | 11,001 | 123,977 | 74 | 0 | 374,000 | 290,000 | 0 | 24,373 | 91,450 | 0 | 36,000 | 289,000 | 0 | 0 | 0 | 0 |
| 6 | 0.00 | 2.0 | 3.6 | 25.8 | 24.5 | 27.1 | 144,565 | 49 | 9,712 | 154,277 | 0 | 1 | 403,000 | 266,000 | 223 | 16,865 | 116,727 | 0 | 61,000 | 312,000 | 0 | 0 | 0 | 200 |
| 7 | 0.00 | 2.4 | 3.6 | 27.5 | 26.3 | 25.4 | 136,498 | 59 | 14,624 | 151,122 | 0 | 5 | 499,000 | 259,000 | 0 | 16,865 | 0 | 0 | 79,000 | 312,000 | 41,941 | 0 | 0 | 33,600 |
| 8 | 0.02 | 1.9 | 3.6 | 28.3 | 25.4 | 25.4 | 141,211 | 58 | 16,907 | 158,118 | 0 | 0 | 468,000 | 394,000 | 0 | 16,865 | 132,268 | 0 | 57,000 | 312,000 | 0 | 0 | 0 | 0 |
| 9 | 0.00 | 2.2 | 3.6 | 19.2 | 16.9 | 25.8 | 139,536 | 28 | 17,046 | 156,582 | 0 | 0 | 355,000 | 502,000 | 0 | 17,598 | 145,139 | 0 | 70,000 | 312,000 | 41,660 | 0 | 0 | 33,300 |
| 10 | 0.00 | 2.7 | 3.5 | 22.8 | 18.5 | 26.1 | 133,615 | 65 | 15,658 | 149,273 | 3,885 | 0 | 470,000 | 470,000 | 10,627 | 18,473 | 125,513 | 0 | 93,000 | 300,000 | 15,293 | 0 | 0 | 21,800 |
| 11 | 0.18 | 1.8 | 3.2 | 27.0 | 16.1 | 26.1 | 137,565 | 66 | 16,196 | 153,761 | 64,341 | 1,371 | 502,000 | 432,000 | 41,587 | 18,459 | 166,894 | 0 | 52,000 | 265,000 | 3,523 | 0 | 0 | 40,200 |
| 12 | 0.00 | 2.1 | 3.2 | 26.8 | 16.3 | 26.1 | 160,363 | 62 | 16,621 | 141,930 | 19,991 | 2 | 475,000 | 461,000 | 38,025 | 17,775 | 132,772 | 0 | 65,000 | 265,000 | 13,476 | 0 | 0 | 45,000 |
| 13 | 0.00 | 1.8 | 3.2 | 19.8 | 20.6 | 26.8 | 124,317 | 66 | 17,770 | 85,379 | 18,160 | 1,353 | 449,000 | 439,000 | 47,768 | 16,495 | 92,601 | 0 | 52,000 | 265,000 | 61,127 | 0 | 0 | 91,900 |
| 14 | 0.00 | 1.6 | 3.2 | 31.4 | 19.1 | 25.8 | 82,268 | 56 | 13,533 | 72,648 | 10,462 | 28 | 475,000 | 452,000 | 21,877 | 16,495 | 6,022 | 0 | 44,000 | 265,000 | 0 | 0 | 0 | 19,700 |
| 15 | 0.00 | 1.4 | 3.2 | 43.0 | 17.6 | 25.4 | 103,021 | 56 | 13,533 | 93,401 | 10,462 | 28 | 502,000 | 466,000 | 21,877 | 16,495 | 138,698 | 0 | 36,000 | 265,000 | 0 | 0 | 0 | 19,700 |
| 16 | 0.00 | 1.9 | 3.2 | 22.0 | 25.5 | 25.9 | 158,710 | 65 | 19,182 | 174,521 | 16,292 | 35 | 494,000 | 482,000 | 12,913 | 21,388 | 199,558 | 0 | 57,000 | 265,000 | 1,537 | 0 | 0 | 12,900 |
| 17 | 0.00 | 2.3 | 3.2 | 28.2 | 21.1 | 25.9 | 150,898 | 30 | 10,581 | 119,140 | 17,346 | 3,202 | 408,000 | 463,000 | 40,492 | 21,605 | 194,585 | 0 | 74,000 | 265,000 | 27,610 | 0 | 0 | 58,500 |
| 18 | 0.00 | 2.0 | 3.2 | 24.6 | 24.7 | 26.3 | 125,098 | 66 | 14,998 | 94,261 | 25,848 | 0 | 396,000 | 439,000 | 41,692 | 17,880 | 191,763 | 0 | 61,000 | 265,000 | 23,366 | 0 | 0 | 56,200 |
| 19 | 0.00 | 1.6 | 3.2 | 24.0 | 24.1 | 25.7 | 141,105 | 33 | 15,490 | 106,075 | 33,920 | 0 | 348,000 | 389,000 | 51,053 | 17,181 | 158,262 | 0 | 44,000 | 265,000 | 26,474 | 0 | 0 | 67,100 |
| 20 | 0.00 | 1.6 | 3.2 | 21.6 | 14.1 | 26.1 | 128,888 | 64 | 13,783 | 118,282 | 28,389 | 0 | 389,000 | 322,000 | 15,729 | 16,207 | 124,313 | 0 | 44,000 | 265,000 | 40,489 | 0 | 0 | 46,500 |
| 21 | 0.27 | 1.6 | 3.3 | 22.5 | 19.9 | 26.2 | 133,875 | 49 | 28,564 | 119,792 | 17,363 | 0 | 425,000 | 325,000 | 48,034 | 16,207 | 0 | 0 | 44,000 | 265,000 | 0 | 0 | 0 | 43,200 |
| 22 | 0.00 | 1.6 | 3.3 | 23.4 | 25.6 | 25.9 | 137,120 | 49 | 28,564 | 123,037 | 17,363 | 0 | 461,000 | 329,000 | 48,034 | 16,207 | 148,617 | 0 | 44,000 | 277,000 | 0 | 0 | 0 | 43,200 |
| 23 | 0.00 | 1.8 | 3.1 | 25.4 | 16.5 | 26.0 | 127,432 | 64 | 12,417 | 110,640 | 14,363 | 0 | 461,000 | 295,000 | 22,087 | 15,857 | 160,382 | 0 | 52,000 | 254,000 | 24,599 | 0 | 0 | 39,600 |
| 24 | 0.00 | 1.2 | 3.2 | 24.6 | 21.0 | 25.4 | 128,497 | 59 | 12,938 | 141,435 | 8,421 | 1 | 446,000 | 252,000 | 8,308 | 15,815 | 156,460 | 0 | 32,000 | 265,000 | 31,557 | 0 | 0 | 32,700 |
| 25 | 0.00 | 1.5 | 3.2 | 23.7 | 17.8 | 25.6 | 125,811 | 79 | 12,299 | 118,934 | 12,356 | 2 | 453,000 | 289,000 | 29,418 | 37,417 | 0 | 0 | 40,000 | 265,000 | 0 | 0 | 0 | 26,500 |
| 26 | 0.00 | 1.8 | 3.2 | 22.8 | 14.6 | 25.8 | 124,733 | 79 | 12,299 | 117,856 | 12,356 | 2 | 461,000 | 326,000 | 29,418 | 37,417 | 5,980 | 0 | 52,000 | 265,000 | 17,457 | 0 | 0 | 40,400 |
| 27 | 0.00 | 2.3 | 3.2 | 28.2 | 17.2 | 25.6 | 111,475 | 62 | 10,256 | 105,376 | 11,275 | 9 | 494,000 | 324,000 | 20,270 | 46,453 | 21,180 | 0 | 74,000 | 265,000 | 60,749 | 0 | 0 | 66,800 |
| 28 | 0.00 | 2.0 | 3.1 | 28.5 | 24.2 | 26.5 | 120,695 | 91 | 13,512 | 98,891 | 11,610 | 84 | 492,000 | 295,000 | 45,278 | 46,453 | 5,999 | 20,812 | 61,000 | 254,000 | 26,305 | 0 | 0 | 78,400 |
| 29 | 0.00 | 2.4 | 3.3 | 20.4 | 17.5 | 26.3 | 121,479 | 91 | 10,257 | 75,591 | 9,599 | 0 | 451,000 | 425,000 | 44,911 | 46,453 | 133,866 | 0 | 79,000 | 277,000 | 28,207 | 0 | 0 | 63,000 |
| 30 | 0.00 | 2.5 | 3.3 | 27.5 | 17.2 | 25.9 | 129,078 | 98 | 11,723 | 89,699 | 6,701 | 7 | 350,000 | 425,000 | 43,947 | 37,414 | 155,900 | 0 | 83,000 | 277,000 | 34,361 | 0 | 0 | 67,000 |
| 31 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 3.84 | | | | | | 3,872,647 | 1,873 | 429,931 | 3,606,564 | 389,987 | 6,131 | | | 779,680 | 702,162 | 3,228,258 | 20,812 | | | 672,096 | 0 | 0 | 1,255,800 |
| Daily Average | | 1.9 | 3.3 | 24.8 | 20.4 | 25.9 | 129,088 | 62 | 14,331 | 120,219 | 13,000 | 204 | 441,033 | 354,167 | | | | | 57,000 | 274,500 | | | | |
| Mo. Average | | | | | 20 | 30 | 129,090 | 60 | 14,330 | 120,220 | 13,000 | 200 | 441,030 | 354,170 | 25,990 | 23,410 | 107,610 | 690 | 57,030 | 274,500 | 22,400 | 0 | 0 | 41,860 |

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

**TABLE 2. FIELD DATA ENTRY FORM**
**NOVEMBER 2021**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Rainfall (in.) | Flow Meter Pump Sta. A (gal.) | Reading PS-B (in.) | Section 9 Pumps (gal.) | Section 9 LDS (gal.) | Sections 7-8 Pump (gal.) | Sections 7-8 LDS (gal.) | MLPS to Pond B (gal.) | Pond B to LEF (gal.) | Pond B Depth (ft.) | Pond A Depth (ft.) | Effluent Spray Irrigation (gal.) | Depth in 575K Tank Leachate (ft.) | Depth in 575K Tank Effluent (ft.) | Leachate Treated at LTRF (gal.) | Leachate Hauled (gal.) | Leachate Dust Control (Sprayed) (gal.) | Effluent Hauled (gal.) | Effluent Dust Control (Sprayed) (gal) |
| 1 | 0.00 | 20,070,584 | 20.4 | 1,892,728 | 31,194 | 5,371,023 | 2,095 | 945,954 | 3,706,036 | 3.2 | 2.6 | 58,750 | 16.00 | 5.83 | 21,959 | 96,352 | 0 | 0 | 0 |
| 2 | 0.00 | 20,162,400 | 24.0 | 1,904,084 | 31,195 | 5,381,610 | 2,161 | 992,391 | 3,751,582 | 3.2 | 1.9 | 39,810 | 14.67 | 7.00 | 25,743 | 82,871 | 0 | 0 | 0 |
| 3 | 0.00 | 20,254,016 | 18.0 | 1,912,137 | 31,196 | 5,391,845 | 2,229 | 1,018,438 | 3,770,720 | 3.3 | 1.6 | 32,313 | 15.67 | 6.42 | 24,578 | 117,490 | 0 | 0 | 0 |
| 4 | 0.30 | 20,345,200 | 17.4 | 1,912,138 | 31,196 | 5,401,555 | 2,295 | 1,018,438 | 3,770,720 | 3.3 | 1.3 | 21,492 | 13.75 | 9.00 | 23,170 | 126,596 | 0 | 0 | 0 |
| 5 | 3.07 | 20,441,600 | 25.2 | 1,912,212 | 31,196 | 5,412,556 | 2,360 | 1,018,438 | 3,770,720 | 3.4 | 1.4 | 0 | 13.00 | 10.08 | 24,373 | 91,450 | *0* | *0* | 0 |
| 6 | 0.00 | 20,547,856 | 25.8 | 1,912,212 | 31,197 | 5,422,268 | 2,409 | 1,018,438 | 3,770,943 | 3.6 | 2.0 | 0 | 14.00 | 9.25 | 16,865 | 116,727 | 0 | 0 | 0 |
| 7 | 0.00 | 20,649,730 | 27.5 | 1,912,212 | 31,202 | 5,436,892 | 2,468 | 1,018,438 | 3,770,943 | 3.6 | 2.4 | 41,941 | 17.33 | 9.00 | 16,865 | 0 | 0 | 0 | 0 |
| 8 | 0.02 | 20,758,742 | 28.3 | 1,912,212 | 31,202 | 5,453,799 | 2,526 | 1,018,438 | 3,770,943 | 3.6 | 1.9 | 0 | 16.25 | 13.67 | 16,865 | 132,268 | 0 | 0 | 0 |
| 9 | 0.00 | 20,864,944 | 19.2 | 1,912,212 | 31,202 | 5,470,845 | 2,554 | 1,018,438 | 3,770,943 | 3.6 | 2.2 | 41,660 | 12.33 | 17.42 | 17,598 | 145,139 | 0 | 0 | 0 |
| 10 | 0.00 | 20,965,136 | 22.8 | 1,916,097 | 31,202 | 5,486,503 | 2,619 | 1,018,438 | 3,781,570 | 3.5 | 2.7 | 15,293 | 16.33 | 16.33 | 18,473 | 125,513 | 0 | 0 | 0 |
| 11 | 0.18 | 21,061,150 | 27.0 | 1,980,438 | 32,573 | 5,502,699 | 2,685 | 1,018,438 | 3,823,157 | 3.2 | 1.8 | 3,523 | 17.42 | 15.00 | 18,459 | 166,894 | 0 | 0 | 0 |
| 12 | 0.00 | 21,186,700 | 26.8 | 2,000,429 | 32,575 | 5,519,320 | 2,747 | 1,053,492 | 3,861,182 | 3.2 | 2.1 | 13,476 | 16.50 | 16.00 | 17,775 | 132,772 | 0 | 0 | 0 |
| 13 | 0.00 | 21,288,926 | 19.8 | 2,018,589 | 33,928 | 5,537,090 | 2,813 | 1,110,200 | 3,908,950 | 3.2 | 1.8 | 61,127 | 15.58 | 15.25 | 16,495 | 92,601 | 0 | 0 | 0 |
| 14 | 0.00 | *21,349,103* | *31.4* | *2,029,051* | *33,956* | *5,550,623* | *2,869* | *1,133,353* | *3,930,827* | *3.2* | *1.6* | 0 | *16.50* | *15.71* | 16,495 | 6,022 | 0 | 0 | 0 |
| 15 | 0.00 | 21,409,280 | 43.0 | 2,039,513 | 33,984 | 5,564,155 | 2,925 | 1,156,505 | 3,952,703 | 3.2 | 1.4 | 0 | 17.42 | 16.17 | 16,495 | 138,698 | 0 | 0 | 0 |
| 16 | 0.00 | 21,540,184 | 22.0 | 2,055,805 | 34,019 | 5,583,337 | 2,990 | 1,159,876 | 3,965,616 | 3.2 | 1.9 | 1,537 | 17.17 | 16.75 | 21,388 | 199,558 | 0 | 0 | 0 |
| 17 | 0.00 | 21,654,846 | 28.2 | 2,073,151 | 37,221 | 5,593,918 | 3,020 | 1,202,215 | 4,006,108 | 3.2 | 2.3 | 27,610 | 14.17 | 16.08 | 21,605 | 194,585 | 0 | 0 | 0 |
| 18 | 0.00 | 21,742,114 | 24.6 | 2,098,999 | 37,221 | 5,608,916 | 3,086 | 1,248,050 | 4,047,800 | 3.2 | 2.0 | 23,366 | 13.75 | 15.25 | 17,880 | 191,763 | 0 | 0 | 0 |
| 19 | 0.00 | 21,851,300 | 24.0 | 2,132,919 | 37,221 | 5,624,406 | 3,119 | 1,298,570 | 4,098,853 | 3.2 | 1.6 | 26,474 | 12.08 | 13.50 | 17,181 | 158,262 | 0 | 0 | 0 |
| 20 | 0.00 | 21,946,888 | 21.6 | 2,161,308 | 37,221 | 5,638,189 | 3,183 | 1,322,959 | 4,114,582 | 3.2 | 1.6 | 40,489 | 13.50 | 11.17 | 16,207 | 124,313 | 0 | 0 | 0 |
| 21 | 0.27 | *22,047,463* | *22.5* | *2,178,671* | *37,221* | *5,666,753* | *3,232* | *1,365,606* | *4,162,616* | *3.3* | *1.6* | 0 | *14.75* | *11.30* | 16,207 | 0 | 0 | 0 | 0 |
| 22 | 0.00 | 22,148,038 | 23.4 | 2,196,034 | 37,221 | 5,695,317 | 3,280 | 1,408,252 | 4,210,649 | 3.3 | 1.6 | 0 | 16.00 | 11.42 | 16,207 | 148,617 | 0 | 0 | 0 |
| 23 | 0.00 | 22,245,560 | 25.4 | 2,210,397 | 37,221 | 5,707,734 | 3,344 | 1,437,461 | 4,232,736 | 3.1 | 1.8 | 24,599 | 16.00 | 10.25 | 15,857 | 160,382 | 0 | 0 | 0 |
| 24 | 0.00 | 22,342,666 | 24.6 | 2,218,818 | 37,222 | 5,720,672 | 3,403 | 1,437,461 | 4,241,044 | 3.2 | 1.2 | 31,557 | 15.50 | 8.75 | 15,815 | 156,460 | 0 | 0 | 0 |
| *25* | *0.00* | *22,437,086* | *23.7* | *2,231,174* | *37,224* | *5,732,971* | *3,482* | *1,456,637* | *4,270,462* | *3.2* | *1.5* | *0* | *15.75* | *10.04* | *37,417* | *0* | *0* | *0* | *0* |
| 26 | 0.00 | 22,531,506 | 22.8 | *2,243,530* | 37,225 | 5,745,269 | 3,560 | 1,475,812 | 4,299,880 | 3.2 | 1.8 | 17,457 | 16.00 | 11.33 | 37,417 | 5,980 | 0 | *0* | 0 |
| 27 | 0.00 | 22,609,392 | 28.2 | 2,254,805 | 37,234 | 5,755,525 | 3,622 | 1,492,167 | 4,320,150 | 3.2 | 2.3 | 60,749 | 17.17 | 11.25 | 46,453 | 21,180 | 0 | 0 | 0 |
| 28 | 0.00 | 22,699,354 | 28.5 | 2,266,415 | 37,318 | 5,769,037 | 3,713 | 1,527,483 | 4,365,428 | 3.1 | 2.0 | 26,305 | 17.08 | 10.25 | 46,453 | 5,999 | 20,812 | 0 | 0 |
| 29 | 0.00 | 22,791,988 | 20.4 | 2,276,014 | 37,318 | 5,779,294 | 3,804 | 1,583,628 | 4,410,339 | 3.3 | 2.4 | 28,207 | 15.67 | 14.75 | 46,453 | 133,866 | 0 | 0 | 0 |
| 30 | 0.00 | 22,893,854 | 27.5 | 2,282,715 | 37,325 | 5,791,017 | 3,902 | 1,634,730 | 4,454,286 | 3.3 | 2.5 | 34,361 | 12.17 | 14.75 | 37,414 | 155,900 | 0 | 0 | 0 |
| 31 | 0.00 | | | | | | | | | | | | | | | | 0 | 0 | 0 |
| Totals | 3.84 | | | | | | | | | | | 672,096 | | | 702,162 | 3,228,258 | 20,812 | 0 | 0 |

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

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

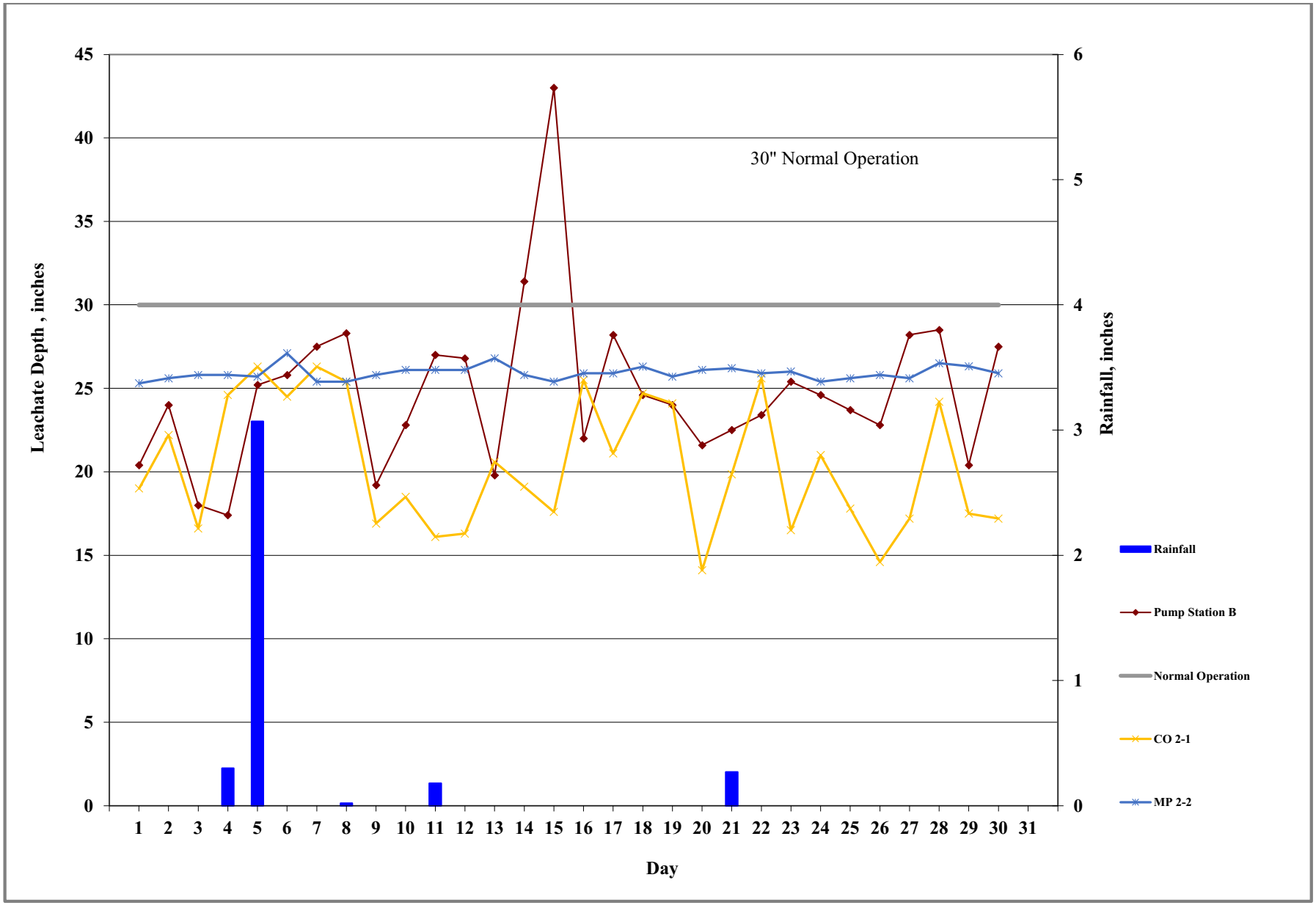


**Figure 1. Leachate Levels in Pump Station B and Rainfall for November 2021**

**TABLE 3. LEACHATE BALANCE SUMMARY**
**SOUTHEAST COUNTY LANDFILL**
**HILLSBOROUGH COUNTY, FLORIDA**
**YEAR-2021**

| | | Leachate Arriving at LTRF | | | | Leachate Leaving LTRF | | | LEF | Effluent Disposal | | | Inflow / Outflow For L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | Total Leachate Hauled from LTRF (gal.) | Leachate Dust Control (Sprayed) (gal.) | Leachate Treated at LTRF (gal.) | Leachate Treated at LEF (gal.) | Total Effluent Hauled (gal.) | Effluent Dust Control (Sprayed) (gal.) | Effluent Irrigation (gal.) | Total Inflow to LTRF (gal.) | Total Outflow from LTRF (gal.) |
| January | 1.38 | 240 | 151,803 | 252,214 | 2,851,511 | 2,492,589 | 7,043 | 867,500 | 0 | 0 | 0 | 933,772 | 3,255,768 | 3,367,132 |
| February | 4.53 | 532 | 128,100 | 184,450 | 2,334,983 | 1,989,793 | 3,048 | 515,325 | 0 | 0 | 0 | 402,814 | 2,648,065 | 2,508,166 |
| March | 1.75 | 290 | 123,318 | 194,837 | 2,431,421 | 2,249,071 | 3,534 | 816,961 | 0 | 0 | 0 | 791,751 | 2,749,866 | 3,069,566 |
| April | 4.18 | 522 | 91,296 | 142,727 | 2,166,002 | 1,595,033 | 3,700 | 829,417 | 0 | 0 | 0 | 590,194 | 2,400,547 | 2,428,150 |
| May | 0.77 | 104 | 114,629 | 127,374 | 2,016,306 | 1,535,387 | 2,981 | 811,156 | 0 | 0 | 0 | 546,887 | 2,258,412 | 2,349,524 |
| June | 5.96 | 1,140 | 107,211 | 132,370 | 1,818,520 | 1,783,721 | 3,697 | 754,519 | 0 | 0 | 0 | 416,077 | 2,059,240 | 2,541,937 |
| July | 15.45 | 1,740 | 316,344 | 382,643 | 2,621,204 | 2,507,051 | 0 | 753,907 | 0 | 0 | 39,138 | 629,769 | 3,321,931 | 3,260,958 |
| August | 7.85 | 1,260 | 310,327 | 501,887 | 3,482,010 | 2,901,269 | 5,436 | 624,583 | 0 | 0 | 0 | 704,760 | 4,295,484 | 3,531,288 |
| September | 11.90 | 1,149 | 395,092 | 610,808 | 3,796,207 | 2,987,400 | 171,120 | 764,137 | 1,336,672 | 0 | 0 | 731,282 | 4,803,256 | 5,259,329 |
| October | 3.49 | 487 | 379,328 | 565,204 | 4,682,773 | 3,912,966 | 24,671 | 1,148,209 | 1,265,394 | 0 | 0 | 1,008,574 | 5,627,792 | 6,351,240 |
| November | 3.84 | 487 | 396,118 | 429,931 | 3,872,647 | 3,228,258 | 20,812 | 702,162 | 779,680 | 0 | 0 | 672,096 | 4,699,183 | 4,730,912 |
| December | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| YTD Total | 61.10 | 7,951 | 2,513,566 | 3,524,444 | 32,073,583 | 27,182,538 | 246,042 | 8,587,876 | 3,381,746 | 0 | 39,138 | 7,427,976 | 38,119,543 | 39,398,202 |

Note:

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

Hillsborough County Florida

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



**MEMORANDUM**

**DATE:** January 15, 2022

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

**FROM:** Ron W. Wiesman, Manager, Solid Waste Management Division

**SUBJECT:** Leachate Water Balance Report Forms for December 2021
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 2021 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 1.13 inches of rainfall recorded at the Southeast County Landfill (SCLF).

**Depth in Pond A (Column III)**

Column III presents the daily depth, in feet, of effluent stored in effluent pond (Pond A). The daily depth in Pond A varies as a function of the spray irrigation frequency/duration and effluent hauled from the pond. This month the daily average of effluent stored in Pond A was 1.7 feet.

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

Column IV presents the daily depth, in feet, of effluent or leachate that is stored in the effluent/leachate storage pond (Pond B). The depth in Pond B varies as a function of the evaporation frequency/duration and effluent or leachate hauled from the pond. This month the daily average depth of leachate in Pond B was 3.3 feet.

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

Column V presents the depth of leachate, in inches, in the PS-B sump. Leachate from Phases I-VI flows to the PS-B sump for removal from the landfill. PS-B then pumps the leachate to Pump Station A (PS-A). Daily depth readings from the PS-B sump are included in this column. The depth recorded on the fifteenth was due to a high storage tank level, after off-site hauling the level returned to normal range by end of day. The average recorded depth of leachate in the PS-B sump was 22.2 inches.

**Depth in Clean Out 2-1 (CO 2-1) (Column VI)**

Column VI presents the depth of leachate, in inches, in the East side of the landfill. Daily depth readings from the CO 2-1 are included in this column. The depth recorded on the sixteenth and the twenty-ninth was due to a pump malfunction. The vendor was called out and the level returned to normal by the end of the day. The average recorded depth of leachate in the CO 2-1 was 20.7 inches.

**Depth in Monitoring Port 2-2 (MP 2-2) (Column VII)**

Column VII presents the depth of leachate, in inches, in the South East side of the landfill. Daily depth readings from the MP 2-2 are included in this column the average recorded depth of leachate in the MP 2-2 was 25.7 inches.

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

Column VIII presents the daily amount of leachate, in gallons, collected from PS-A and pumped through the MLPS to the 575,000-gallon storage tank at the Leachate Treatment and Reclamation Facility (LTRF) for treatment or disposal. This column also includes the Phase II

data from the dewatering wells and PS-2. The average daily amount of leachate pumped from PS-A was 110,807 gallons. A total of 3,435,005 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 1,646 gallons of leachate was removed from the leak detection system of Sections 7-8.

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

Column X presents the quantity of leachate collected at Sections 7-8 and pumped to the MLPS. The quantity is measured by a flow meter and includes any leachate removed from the leak detection system of Sections 7-8 (Column VII). This month a total of 342,445 gallons was removed.

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

Column XI presents the total quantity of leachate pumped to the LTRF from Phases I-VI (including condensate removed from LFG Wells and Condensate Traps), and Sections 7-8. This month a total of 2,590,534 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 226,703 gallons of leachate was pumped this month.

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

Column XIII presents the daily amount of leachate, in gallons, collected from the LDS of Section 9 and pumped to the 575,000-gallon storage tank at the LTRF for

treatment or disposal. The removal rate did not exceed 4,651 gallons per day. This month 8,334 gallons of leachate was removed from the leak detection system.

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

Column XIV presents the daily amount of leachate, in gallons, stored in the 575,000-gallon leachate holding tank T1 at the LTRF. The amount of leachate stored in T1 is calculated based on the circumference of the tank and the daily level reading. This month an average of 305,548 gallons of leachate was stored in the tank.

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

Column XV typically presents the daily amount of effluent, in gallons, stored in the 575,000- gallon effluent holding tank T6 at the LTRF. The amount of effluent/leachate stored in T6 is calculated based on the circumference of the tank and the daily level reading. This month an average of 212,935 gallons of leachate was stored in the tank.

**Leachate Treated at LEF (Column XVI)**

Column XVI presents the daily amount of leachate, in gallons, treated at the LEF (Leachate Evaporator Facility). On September 1, 2021, Hillsborough County started treating leachate at the LEF. This month a total of 1,167,384 gallons of leachate was treated at the evaporator.

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

Column XVII presents the daily amount of leachate, in gallons, treated at the LTRF. On September 15, 2019, plant staff restarted treatment operations. This month a total of 550,051 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 2,411,826 gallons of leachate was hauled off site.

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

Column XIX presents the daily amount of leachate, in gallons, measured from the flow meter at the bypass-loading arm at the leachate storage tank. The leachate is used for dust control in the active area of the landfill. This month a total of zero gallons of leachate was used for dust control.

**Pond A Storage (Column XX)**

Column XX presents the daily amount of effluent, in gallons, stored in Pond A. The daily amount stored in the pond is calculated by using the daily depth of effluent in the Pond A (Column III). Under normal operating conditions, the daily amount of effluent stored in the pond varies depending upon the daily amount of leachate treated at the LTRF, the daily rainfall, daily effluent hauling operations, daily spray irrigation operations, and the daily amount of effluent used for dust control/evaporation. This month a daily average of 51,000 gallons of effluent was stored in Pond A.

**Pond B Storage (Column XXI)**

Column XXI presents the daily amount of leachate, in gallons, stored in Pond B. The daily amount stored in the pond is calculated by using the daily depth of liquid in Pond B (Column IV). Under normal operating conditions, the amount stored in the pond will vary depending upon the daily amount of leachate pumped from the pond to the evaporator, hauled from the pond, used for dust control or evaporated. This month a daily average of 270,500 gallons of leachate was stored in Pond B.

**Effluent Irrigation (Column XXII)**

Column XXII presents the daily amount of effluent, in gallons, used for spray irrigation on top of Phases IV-VI. The daily amount of effluent irrigation on Phases I-VI is

measured from the flow meter at the irrigation pump station. This month a total of 541,707 gallons of effluent was sprayed.

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

Column XXIII presents the daily amount of effluent, in gallons, sprayed for dust control in the active areas of the SCLF. The daily amount of effluent used for dust control, is measured from the flow meter at the bypass-loading arm. This month zero gallons of effluent was sprayed as dust control.

**Total Effluent Hauled (Column XXIV)**

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

**Total Evaporation (Column XXV)**

Column XXV presents the daily amount of leachate and effluent, in gallons, that evaporates and therefore will not be returned to the SCLF and/or requires treatment. Evaporation rates of 80 percent and 5 percent evaporation rate for spray in Pond B are assumed. Total evaporation estimated for this month was 1,483,900 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 4,036,689 gallons. Total outflow quantity from the LTRF was 4,129,261 gallons. The change in storage for the month decreased by 92,572 gallons. Please advise should you have any questions concerning the information provided.

**TABLE 1. LEACHATE WATER BALANCE REPORT FORM**
**DECEMBER 2021**
**SOUTHEAST COUNTY LANDFILL, HILLSBOROUGH COUNTY, FLORIDA**

| I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII | XIII | XIV | XV | XVI | XVII | XVIII | XIX | XX | XXI | XXII | XXIII | XXIV | XXV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Rainfall (in.) | Depth in Pond A (ft.) | Depth in Pond B (ft.) | Estimated Depth at PS-B (in) | Depth in CO 2-1 (in) | Depth in MP 2-2 (in.) | Leachate Pumped to MLPS from Phases I-VI (gal.) | Leachate Pumped from Sections 7-8 LDS (gal.) | Leachate Pumped to MLPS from Sections 7-8 (gal.) | Leachate Pumped to LTRF from MPLS (gal.) | Leachate Pumped to LTRF from Section 9 (gal.) | Leachate Pumped from Section 9 LDS (gal.) | Leachate in 575K Tank (gal.) | Effluent in 575K Tank (gal.) | Leachate Treated at LEF (gal.) | Leachate Treated at LTRF (gal.) | Total Leachate Hauled (gal.) | Leachate Dust Control (Sprayed) (gal.) | Pond A Storage (gal.) | Pond B Storage (gal) | Effluent Irrigation (gal.) | Effluent Dust Control (Sprayed) (gal.) | Total Effluent Hauled (gal.) | Total Evaporation (gal.) |
| 1 | 0.00 | 2.5 | 3.3 | 17.4 | 21.3 | 25.9 | 119,320 | 64 | 10,988 | 126,591 | 7,934 | 1,343 | 358,000 | 408,000 | 204 | 35,923 | 161,127 | 0 | 83,000 | 277,000 | 42,206 | 0 | 0 | 33,900 |
| 2 | 0.00 | 2.2 | 3.3 | 27.4 | 18.8 | 26.1 | 126,752 | 98 | 11,535 | 113,723 | 15,956 | 1,406 | 319,000 | 358,000 | 38,660 | 34,958 | 128,715 | 0 | 70,000 | 277,000 | 53,904 | 0 | 0 | 77,900 |
| 3 | 0.00 | 1.9 | 3.2 | 26.4 | 15.0 | 26.0 | 120,721 | 62 | 10,987 | 107,007 | 5,962 | 816 | 281,000 | 329,000 | 20,970 | 33,461 | 151,839 | 0 | 57,000 | 265,000 | 26,747 | 0 | 0 | 40,300 |
| 4 | 0.00 | 1.7 | 3.2 | 17.4 | 16.4 | 25.9 | 118,831 | 91 | 10,083 | 84,549 | 6,736 | 873 | 250,000 | 288,000 | 44,520 | 32,054 | 140,182 | 0 | 48,000 | 265,000 | 55,529 | 0 | 0 | 84,500 |
| 5 | 0.00 | 1.9 | 3.3 | 18.3 | 16.9 | 25.8 | 120,836 | 67 | 7,756 | 94,006 | 6,975 | 1,937 | 276,000 | 267,000 | 30,346 | 32,054 | 0 | 0 | 57,000 | 265,000 | 0 | 0 | 0 | 27,300 |
| 6 | 0.00 | 2.1 | 3.3 | 19.2 | 17.3 | 25.6 | 122,759 | 67 | 7,756 | 95,929 | 6,975 | 1,937 | 302,000 | 247,000 | 30,346 | 32,054 | 156,996 | 0 | 65,000 | 277,000 | 34,198 | 0 | 0 | 54,700 |
| 7 | 0.03 | 2.0 | 3.3 | 25.2 | 23.0 | 25.7 | 119,045 | 70 | 35,096 | 154,141 | 7,959 | 15 | 326,000 | 209,000 | 2,303 | 31,127 | 130,618 | 0 | 61,000 | 277,000 | 21,324 | 0 | 0 | 19,100 |
| 8 | 0.08 | 3.1 | 3.3 | 26.8 | 19.2 | 25.7 | 117,877 | 69 | 23,113 | 87,982 | 4,731 | 0 | 290,000 | 185,000 | 42,886 | 30,108 | 139,129 | 0 | 113,000 | 277,000 | 0 | 0 | 0 | 38,600 |
| 9 | 0.00 | 2.5 | 3.3 | 24.0 | 18.5 | 25.8 | 114,523 | 36 | 8,608 | 86,670 | 6,774 | 5 | 274,000 | 146,000 | 44,640 | 24,913 | 102,509 | 0 | 83,000 | 277,000 | 0 | 0 | 0 | 40,200 |
| 10 | 0.00 | 2.9 | 3.3 | 26.8 | 19.5 | 25.4 | 119,821 | 69 | 9,400 | 93,603 | 5,556 | 0 | 259,000 | 146,000 | 27,580 | 23,071 | 98,852 | 0 | 103,000 | 277,000 | 60,530 | 0 | 0 | 73,200 |
| 11 | 0.00 | 2.1 | 3.3 | 22.2 | 18.6 | 25.7 | 112,087 | 67 | 9,969 | 78,747 | 7,133 | 0 | 252,000 | 137,000 | 47,830 | 20,795 | 51,204 | 0 | 65,000 | 277,000 | 61,890 | 0 | 0 | 92,600 |
| 12 | 0.00 | 1.9 | 3.2 | 20.7 | 16.9 | 25.7 | 114,874 | 63 | 9,522 | 81,266 | 5,887 | 0 | 299,000 | 134,000 | 43,461 | 20,795 | 0 | 0 | 57,000 | 254,000 | 0 | 0 | 0 | 39,100 |
| 13 | 0.00 | 1.7 | 3.0 | 19.2 | 15.1 | 25.2 | 116,196 | 63 | 9,522 | 82,588 | 5,887 | 0 | 345,000 | 132,000 | 43,461 | 20,795 | 113,088 | 0 | 48,000 | 242,000 | 22,474 | 0 | 0 | 57,100 |
| 14 | 0.00 | 1.7 | 3.4 | 18.6 | 22.0 | 25.4 | 112,415 | 62 | 8,988 | 60,672 | 6,127 | 1 | 261,000 | 132,000 | 48,257 | 21,163 | 104,248 | 0 | 48,000 | 289,000 | 17,797 | 0 | 0 | 57,700 |
| 15 | 0.00 | 1.6 | 3.2 | 22.8 | 17.0 | 25.6 | 74,583 | 64 | 7,363 | 42,850 | 5,269 | 0 | 235,000 | 132,000 | 47,381 | 21,299 | 98,590 | 0 | 44,000 | 265,000 | 0 | 0 | 0 | 42,600 |
| 16 | 0.00 | 1.2 | 3.2 | 25.8 | 40.1 | 27.1 | 107,829 | 34 | 10,246 | 58,572 | 4,434 | 0 | 178,000 | 117,000 | 53,068 | 4,360 | 90,846 | 0 | 32,000 | 265,000 | 18,003 | 0 | 0 | 62,200 |
| 17 | 0.00 | 1.0 | 3.2 | 26.4 | 29.7 | 28.4 | 113,546 | 36 | 8,630 | 73,932 | 6,600 | 0 | 180,000 | 132,000 | 46,828 | 0 | 84,734 | 0 | 24,000 | 265,000 | 0 | 0 | 0 | 42,100 |
| 18 | 0.00 | 1.0 | 3.2 | 22.8 | 24.1 | 25.7 | 118,987 | 39 | 8,491 | 72,486 | 6,765 | 0 | 209,000 | 132,000 | 53,064 | 0 | 0 | 0 | 24,000 | 265,000 | 0 | 0 | 0 | 47,800 |
| 19 | 0.00 | 1.0 | 3.3 | 22.2 | 23.3 | 25.6 | 116,423 | 53 | 9,050 | 76,395 | 9,683 | 0 | 284,000 | 133,000 | 49,254 | 0 | 0 | 0 | 24,000 | 265,000 | 0 | 0 | 0 | 44,300 |
| 20 | 0.05 | 1.0 | 3.3 | 21.6 | 22.5 | 25.9 | 118,279 | 53 | 9,050 | 78,251 | 9,683 | 0 | 360,000 | 134,000 | 49,254 | 0 | 89,012 | 0 | 24,000 | 277,000 | 0 | 0 | 0 | 44,300 |
| 21 | 0.97 | 1.0 | 3.3 | 21.6 | 18.3 | 26.1 | 121,987 | 35 | 10,703 | 98,362 | 14,336 | 0 | 377,000 | 132,000 | 29,652 | 0 | 97,490 | 0 | 24,000 | 277,000 | 0 | 0 | 0 | 26,700 |
| 22 | 0.00 | 1.0 | 3.3 | 25.2 | 17.4 | 24.6 | 101,191 | 35 | 6,032 | 107,223 | 4,306 | 1 | 405,000 | 132,000 | 0 | 0 | 98,050 | 0 | 24,000 | 277,000 | 0 | 0 | 0 | 0 |
| 23 | 0.00 | 1.0 | 3.3 | 17.4 | 18.5 | 25.3 | 100,514 | 64 | 8,331 | 108,845 | 4,414 | 0 | 391,000 | 132,000 | 0 | 642 | 32,288 | 0 | 24,000 | 277,000 | 0 | 0 | 0 | 0 |
| 24 | 0.00 | 1.0 | 3.3 | 18.6 | 21.2 | 25.0 | 104,910 | 31 | 8,227 | 78,247 | 5,235 | 0 | 453,000 | 132,000 | 43,068 | 17,326 | 0 | 0 | 24,000 | 277,000 | 0 | 0 | 0 | 38,800 |
| 25 | 0.00 | 1.5 | 3.3 | 24.0 | 19.9 | 25.2 | 100,009 | 35 | 8,240 | 54,153 | 6,724 | 0 | 432,000 | 188,000 | 50,134 | 16,065 | 0 | 0 | 40,000 | 265,000 | 0 | 0 | 0 | 45,100 |
| 26 | 0.00 | 2.0 | 3.2 | 29.4 | 18.5 | 25.3 | 98,914 | 35 | 8,240 | 53,058 | 6,724 | 0 | 410,000 | 245,000 | 50,134 | 16,065 | 6,010 | 0 | 61,000 | 265,000 | 0 | 0 | 0 | 45,100 |
| 27 | 0.00 | 2.3 | 3.2 | 21.0 | 16.2 | 25.5 | 106,112 | 36 | 9,069 | 69,330 | 9,493 | 0 | 394,000 | 297,000 | 50,855 | 16,065 | 19,542 | 0 | 74,000 | 265,000 | 27,968 | 0 | 0 | 68,100 |
| 28 | 0.00 | 2.1 | 3.2 | 22.2 | 22.7 | 25.3 | 83,441 | 38 | 11,447 | 37,576 | 5,946 | 0 | 348,000 | 353,000 | 50,048 | 17,355 | 88,445 | 0 | 65,000 | 265,000 | 37,934 | 0 | 0 | 75,400 |
| 29 | 0.00 | 1.8 | 3.2 | 28.5 | 33.3 | 27.1 | 106,943 | 37 | 22,576 | 79,669 | 10,909 | 0 | 261,000 | 358,000 | 50,501 | 16,903 | 120,405 | 0 | 52,000 | 265,000 | 27,583 | 0 | 0 | 67,500 |
| 30 | 0.00 | 1.5 | 3.3 | 16.2 | 18.1 | 25.3 | 102,647 | 37 | 19,021 | 90,263 | 4,983 | 0 | 245,000 | 353,000 | 36,612 | 15,805 | 107,907 | 0 | 40,000 | 277,000 | 33,620 | 0 | 0 | 59,800 |
| 31 | 0.00 | 1.0 | 3.3 | 13.8 | 22.7 | 25.3 | 102,637 | 38 | 4,409 | 63,853 | 10,609 | 0 | 218,000 | 381,000 | 42,070 | 14,895 | 0 | 0 | 24,000 | 277,000 | 0 | 0 | 0 | 37,900 |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Total | 1.13 | | | | | | 3,435,005 | 1,646 | 342,445 | 2,590,534 | 226,703 | 8,334 | | | 1,167,384 | 550,051 | 2,411,826 | 0 | | | 541,707 | 0 | 0 | 1,483,900 |
| Daily Average | | 1.7 | 3.3 | 22.2 | 20.7 | 25.7 | 110,807 | 53 | 11,047 | 83,566 | 7,313 | 269 | 305,548 | 212,935 | | | | | 51,000 | 270,500 | | | | |
| Mo. Average | | | | | 0 | 0 | | | | | | | | | | | | 0 | | | 0 | 0 | 0 | 0 |

Notes:
1. NR = No Records, NA = Not Available.
2. Values in bold are estimated; values in italic are substitute for missing data and are based on averaged values.
3. Daily average is calculated by dividing the total by the actual days measured in the month.
4. Monthly average calculated by dividing the total by the number of days of the month.
5. Column II, Trace is less than 0.01 inches and is not included in total.
6. Columns III and IV, field measured at staff gauges.
7. Column VI is recorded from the pressure liquid level sensor in CO 2-1.
8. Column VII is recorded from the pressure liquid level sensor in MP 2-2.
9. Columns IX, Section 7-8 leak detection pumped into Section 7 leachate sump riser.
10. Column XIV and XV, calculated from depth in 575,000 gal. tanks.
11. Columns VIII-XIII, XVI-XIX, and XXII-XXIV, quantities from flow meters.
12. Column XXV includes 80% of the daily values from Columns XIX, XXII - XXIII, plus 90% of Column XVI.

**TABLE 2. FIELD DATA ENTRY FORM**
**DECEMBER 2021**
**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Rainfall (in.) | Flow Meter Pump Sta. A (gal.) | Reading PS-B (in.) | Section 9 Pumps (gal.) | Section 9 LDS (gal.) | Sections 7-8 Pump (gal.) | Sections 7-8 LDS (gal.) | MLPS to Pond B (gal.) | Pond B to LEF (gal.) | Pond B Depth (ft.) | Pond A Depth (ft.) | Effluent Spray Irrigation (gal.) | Depth in 575K Tank Leachate (ft.) | Depth in 575K Tank Effluent (ft.) | Leachate Treated at LTRF (gal.) | Leachate Hauled (gal.) | Leachate Dust Control (Sprayed) (gal.) | Effluent Hauled (gal.) | Effluent Dust Control (Sprayed) (gal) |
| 1 | 0.00 | 22,982,868 | 17.4 | 2,290,649 | 38,668 | 5,802,005 | 3,966 | 1,638,447 | 4,454,490 | 3.3 | 2.5 | 42,206 | 12.42 | 14.17 | 35,923 | 161,127 | | | |
| 2 | 0.00 | 23,077,268 | 27.4 | 2,306,605 | 40,074 | 5,813,540 | 4,064 | 1,663,011 | 4,493,150 | 3.3 | 2.2 | 53,904 | 11.08 | 12.42 | 34,958 | 128,715 | | | |
| 3 | 0.00 | 23,169,250 | 26.4 | 2,312,567 | 40,890 | 5,824,527 | 4,126 | 1,687,712 | 4,514,120 | 3.2 | 1.9 | 26,747 | 9.75 | 11.42 | 33,461 | 151,839 | | | |
| 4 | 0.00 | 23,258,794 | 17.4 | 2,319,303 | 41,763 | 5,834,610 | 4,217 | 1,732,077 | 4,558,640 | 3.2 | 1.7 | 55,529 | 8.67 | 10.00 | 32,054 | 140,182 | | | |
| 5 | 0.00 | *23,350,343* | *18.3* | *2,326,278* | *43,700* | *5,842,366* | *4,284* | *1,766,663* | *4,588,986* | *3.3* | *1.9* | *0* | *9.59* | *9.29* | 32,054 | 0 | | | |
| 6 | 0.00 | 23,441,892 | 19.2 | 2,333,253 | 45,637 | 5,850,121 | 4,351 | 1,801,248 | 4,619,331 | 3.3 | 2.1 | 34,198 | 10.50 | 8.58 | 32,054 | 156,996 | | | |
| 7 | 0.03 | 23,532,974 | 25.2 | 2,341,212 | 45,652 | 5,885,217 | 4,421 | 1,801,248 | 4,621,634 | 3.3 | 2.0 | 21,324 | 11.33 | 7.25 | 31,127 | 130,618 | | | |
| 8 | 0.08 | 23,617,042 | 26.8 | 2,345,943 | 45,652 | 5,908,330 | 4,490 | 1,854,256 | 4,664,520 | 3.3 | 3.1 | 0 | 10.08 | 6.42 | 30,108 | 139,129 | | | |
| 9 | 0.00 | 23,704,106 | 24.0 | 2,352,717 | 45,657 | 5,916,938 | 4,526 | 1,890,717 | 4,709,160 | 3.3 | 2.5 | 0 | 9.50 | 5.08 | 24,913 | 102,509 | | | |
| 10 | 0.00 | 23,793,630 | 26.8 | 2,358,273 | 45,657 | 5,926,338 | 4,595 | 1,926,335 | 4,736,740 | 3.3 | 2.9 | 60,530 | 9.00 | 5.08 | 23,071 | 98,852 | | | |
| 11 | 0.00 | 23,878,934 | 22.2 | 2,365,406 | 45,657 | 5,936,307 | 4,662 | 1,969,644 | 4,784,570 | 3.3 | 2.1 | 61,890 | 8.75 | 4.75 | 20,795 | 51,204 | | | |
| 12 | 0.00 | *23,967,025* | *20.7* | *2,371,293* | *45,657* | *5,945,829* | *4,725* | *2,012,774* | *4,828,031* | *3.2* | *1.9* | *0* | *10.38* | *4.67* | 20,795 | 0 | | | |
| 13 | 0.00 | 24,055,116 | 19.2 | 2,377,180 | 45,657 | 5,955,350 | 4,788 | 2,055,903 | 4,871,492 | 3.0 | 1.7 | 22,474 | 12.00 | 4.58 | 20,795 | 113,088 | | | |
| 14 | 0.00 | 24,142,086 | 18.6 | 2,383,307 | 45,658 | 5,964,338 | 4,850 | 2,116,634 | 4,919,749 | 3.4 | 1.7 | 17,797 | 9.08 | 4.58 | 21,163 | 104,248 | | | |
| 15 | 0.00 | 24,213,836 | 22.8 | 2,388,576 | 45,658 | 5,971,701 | 4,914 | 2,155,730 | 4,967,130 | 3.2 | 1.6 | 0 | 8.17 | 4.58 | 21,299 | 98,590 | | | |
| 16 | 0.00 | 24,299,664 | 25.8 | 2,393,010 | 45,658 | 5,981,947 | 4,948 | 2,215,233 | 5,020,198 | 3.2 | 1.2 | 18,003 | 6.17 | 4.08 | 4,360 | 90,846 | | | |
| 17 | 0.00 | 24,381,804 | 26.4 | 2,399,610 | 45,658 | 5,990,577 | 4,984 | 2,263,477 | 5,067,026 | 3.2 | 1.0 | 0 | 6.25 | 4.58 | 0 | 84,734 | | | |
| 18 | 0.00 | 24,468,600 | 22.8 | 2,406,375 | 45,658 | 5,999,068 | 5,023 | 2,318,469 | 5,120,090 | 3.2 | 1.0 | 0 | 7.25 | 4.58 | 0 | 0 | | | |
| 19 | 0.00 | *24,552,832* | *22.2* | *2,416,058* | *45,658* | *6,008,118* | *5,076* | *2,367,547* | *5,169,344* | *3.3* | *1.0* | 0 | *9.88* | *4.63* | 0 | 0 | | | |
| 20 | 0.05 | 24,637,064 | 21.6 | 2,425,740 | 45,658 | 6,017,168 | 5,128 | 2,416,625 | 5,218,597 | 3.3 | 1.0 | 0 | 12.50 | 4.67 | 0 | 89,012 | | | |
| 21 | 0.97 | 24,730,510 | 21.6 | 2,440,076 | 45,658 | 6,027,871 | 5,163 | 2,450,953 | 5,248,249 | 3.3 | 1.0 | 0 | 13.08 | 4.58 | 0 | 97,490 | | | |
| 22 | 0.00 | 24,809,270 | 25.2 | 2,444,382 | 45,659 | 6,033,903 | 5,198 | 2,450,953 | 5,248,249 | 3.3 | 1.0 | 0 | 14.08 | 4.58 | 0 | 98,050 | | | |
| 23 | 0.00 | 24,889,966 | 17.4 | 2,448,796 | 45,659 | 6,042,234 | 5,262 | 2,450,953 | 5,248,249 | 3.3 | 1.0 | 0 | 13.58 | 4.58 | 642 | 32,288 | | | |
| 24 | 0.00 | 24,970,634 | 18.6 | 2,454,031 | 45,659 | 6,050,461 | 5,293 | 2,485,843 | 5,291,317 | 3.3 | 1.0 | 0 | 15.75 | 4.58 | 17,326 | 0 | | | |
| 25 | 0.00 | *25,046,401* | *24* | *2,460,755* | *45,659* | *6,058,701* | *5,328* | *2,539,939* | *5,341,451* | *3* | *2* | *0* | *15.00* | *6.54* | *16,065* | *0* | | | |
| 26 | 0.00 | 25,122,168 | 29.4 | 2,467,478 | 45,659 | 6,066,940 | 5,362 | 2,594,035 | 5,391,584 | 3.2 | 2.0 | 0 | 14.25 | 8.50 | 16,065 | 6,010 | | | |
| 27 | 0.00 | 25,205,038 | 21.0 | 2,476,971 | 45,659 | 6,076,009 | 5,398 | 2,639,886 | 5,442,439 | 3.2 | 2.3 | 27,968 | 13.67 | 10.33 | 16,065 | 19,542 | | | |
| 28 | 0.00 | 25,282,446 | 22.2 | 2,482,917 | 45,659 | 6,087,456 | 5,436 | 2,697,198 | 5,492,487 | 3.2 | 2.1 | 37,934 | 12.08 | 12.25 | 17,355 | 88,445 | | | |
| 29 | 0.00 | 25,361,190 | 28.5 | 2,493,826 | 45,659 | 6,110,032 | 5,473 | 2,747,048 | 5,542,988 | 3.2 | 1.8 | 27,583 | 9.08 | 12.42 | 16,903 | 120,405 | | | |
| 30 | 0.00 | 25,440,222 | 16.2 | 2,498,809 | 45,659 | 6,129,053 | 5,510 | 2,778,453 | 5,579,600 | 3.3 | 1.5 | 33,620 | 8.50 | 12.25 | 15,805 | 107,907 | | | |
| 31 | 0.00 | 25,518,802 | 13.8 | 2,509,418 | 45,659 | 6,133,462 | 5,548 | 2,821,646 | 5,621,670 | 3.3 | 1.0 | 0 | 7.58 | 13.25 | 14,895 | 0 | | | |
| Totals | 1.13 | | | | | | | | | | | 541,707 | | | 550,051 | 2,411,826 | | | 0 |

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

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

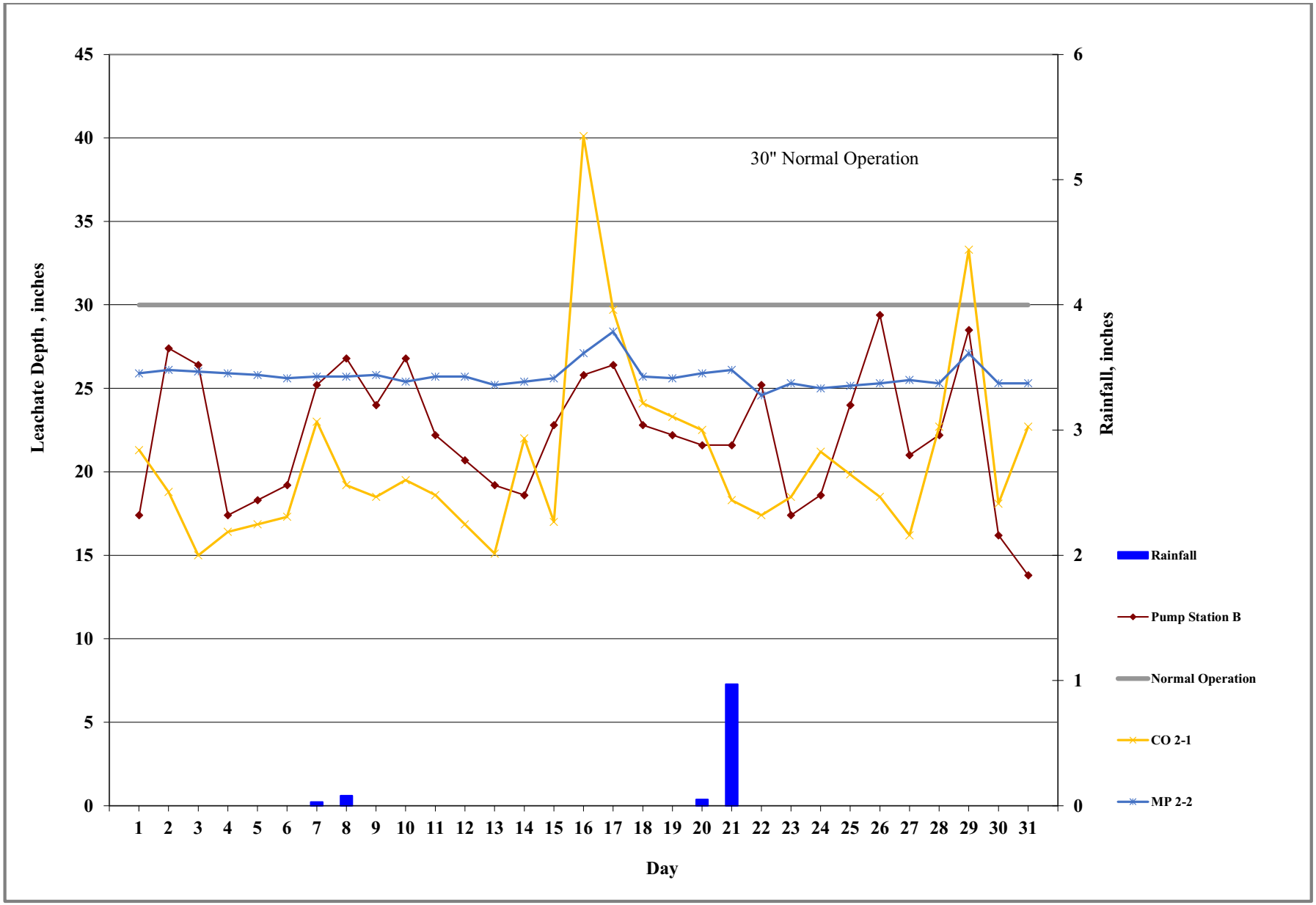


**Figure 1. Leachate Levels in Pump Station B and Rainfall for December 2021**

**TABLE 3. LEACHATE BALANCE SUMMARY**
**SOUTHEAST COUNTY LANDFILL**
**HILLSBOROUGH COUNTY, FLORIDA**
**YEAR-2021**

| | | Leachate Arriving at LTRF | | | | Leachate Leaving LTRF | | | LEF | Effluent Disposal | | | Inflow / Outflow For L | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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.) | Total Leachate Hauled from LTRF (gal.) | Leachate Dust Control (Sprayed) (gal.) | Leachate Treated at LTRF (gal.) | Leachate Treated at LEF (gal.) | Total Effluent Hauled (gal.) | Effluent Dust Control (Sprayed) (gal.) | Effluent Irrigation (gal.) | Total Inflow to LTRF (gal.) | Total Outflow from LTRF (gal.) |
| January | 1.38 | 240 | 151,803 | 252,214 | 2,851,511 | 2,492,589 | 7,043 | 867,500 | 0 | 0 | 0 | 933,772 | 3,255,768 | 3,367,132 |
| February | 4.53 | 532 | 128,100 | 184,450 | 2,334,983 | 1,989,793 | 3,048 | 515,325 | 0 | 0 | 0 | 402,814 | 2,648,065 | 2,508,166 |
| March | 1.75 | 290 | 123,318 | 194,837 | 2,431,421 | 2,249,071 | 3,534 | 816,961 | 0 | 0 | 0 | 791,751 | 2,749,866 | 3,069,566 |
| April | 4.18 | 522 | 91,296 | 142,727 | 2,166,002 | 1,595,033 | 3,700 | 829,417 | 0 | 0 | 0 | 590,194 | 2,400,547 | 2,428,150 |
| May | 0.77 | 104 | 114,629 | 127,374 | 2,016,306 | 1,535,387 | 2,981 | 811,156 | 0 | 0 | 0 | 546,887 | 2,258,412 | 2,349,524 |
| June | 5.96 | 1,140 | 107,211 | 132,370 | 1,818,520 | 1,783,721 | 3,697 | 754,519 | 0 | 0 | 0 | 416,077 | 2,059,240 | 2,541,937 |
| July | 15.45 | 1,740 | 316,344 | 382,643 | 2,621,204 | 2,507,051 | 0 | 753,907 | 0 | 0 | 39,138 | 629,769 | 3,321,931 | 3,260,958 |
| August | 7.85 | 1,260 | 310,327 | 501,887 | 3,482,010 | 2,901,269 | 5,436 | 624,583 | 0 | 0 | 0 | 704,760 | 4,295,484 | 3,531,288 |
| September | 11.90 | 1,149 | 395,092 | 610,808 | 3,796,207 | 2,987,400 | 171,120 | 764,137 | 1,336,672 | 0 | 0 | 731,282 | 4,803,256 | 5,259,329 |
| October | 3.49 | 487 | 379,328 | 565,204 | 4,682,773 | 3,912,966 | 24,671 | 1,148,209 | 1,265,394 | 0 | 0 | 1,008,574 | 5,627,792 | 6,351,240 |
| November | 3.84 | 487 | 396,118 | 429,931 | 3,872,647 | 3,228,258 | 20,812 | 702,162 | 779,680 | 0 | 0 | 672,096 | 4,699,183 | 4,730,912 |
| December | 1.13 | 145 | 235,037 | 342,445 | 3,459,062 | 2,411,826 | 0 | 550,051 | 1,167,384 | 0 | 0 | 541,707 | 4,036,689 | 4,129,261 |
| | | | | | | | | | | | | | | |
| YTD Total | 62.23 | 8,096 | 2,748,603 | 3,866,889 | 35,532,645 | 29,594,364 | 246,042 | 9,137,927 | 4,549,130 | 0 | 39,138 | 7,969,683 | 42,156,232 | 43,527,463 |

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.