

Pasco County Utilities

Remaining Disposal Capacity and Site Life Calculations West Pasco Class III Landfill

Reporting Year 2018

April 2019



Prepared For:

Pasco County Utilities

Prepared By:

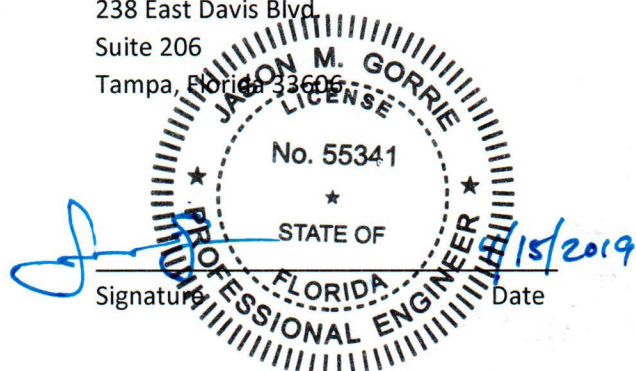
Jason Gorrie, P.E.

JMG Engineering, Inc.

238 East Davis Blvd.

Suite 206

Tampa, Florida 33606



Purpose of Report

Rule 62-701.500(13)(c) of the Florida Administrative Code (FAC) requires landfill owners and operators to annually prepare an estimate of the remaining life and capacity (in cubic yards) of the existing, constructed landfill and an annual estimate of the life and capacity of other permitted areas not yet constructed. For the purposes of this report, the “existing, constructed landfill” is considered to be the currently active portions of the site designated as Class III (subcells 1, 2, 3, and 4 of 4). The Class I portions of the West Pasco Resource Recovery Facility Landfill are addressed in a separate Report.

Procedure

The currently permitted capacity of the Class III Landfill is considered to be 487,904 cubic yards. In order to estimate the current volume of waste in place in subcells 1, 2, 3, and 4 the Pasco County Engineering Services Department conducted a topographic survey of Class III landfill in March 2019. The topographic contours identified through the survey are included as **Attachment 1**.

Using the elevations reported on the topographic survey in conjunction with the known elevations of the liner system, it is possible to estimate the volume of waste in place in the landfill. Mathematically, the volume under a function is defined by the double integral:

$$\int_{x-\min}^{x-\max} \int_{y-\min}^{y-\max} f(x, y) dx dy$$

To determine the function $f(x, y)$ defining the shape of the landfill surfaces, JMG Engineering relied upon the volume calculation algorithms of the surface mapping software program Surfer® 13. The total volume of waste calculated to be currently in place in the Class III Landfill is approximately 214,000 cubic yards.

Given the permitted volumetric capacity of 487,904 cubic yards and subtracting the 214,000 cubic yards calculated from the 2019 survey to be currently in place, approximately 273,900 cubic yards of airspace remains available for disposal. Compacted construction and demolition debris waste has an approximate density of 1,200 pounds per cubic yard. Using the assumed density, the 273,900 remaining cubic yards can accommodate approximately 164,000 tons of construction and demolition debris.

As shown in Table 1, the Class III waste disposal rate has varied from year to year. However, because the tipping fee charged by Pasco County to use the Class III cells is considerably higher than that of nearby private Class III landfills, it is safe to assume that the annual waste placement rate will not differ significantly from approximately 4,000 tons/year (6,667 cubic yards/year). Using this as a future disposal rate along with an estimated 10% weekly cover rate (667 cubic yards/year) results in an estimated future airspace consumption rate of 7,333 cubic yards per year. Dividing the remaining airspace of 273,900 cubic yards by the estimated future consumption rate of 7,333 cubic yards per year results in an **estimated remaining life of 37 years**.

TABLE 1
Monthly Tonnage Summary for 2018

Month	West Pasco Class III (tons)
January	207
February	255
March	279
April	457
May	283
June	331
July	286
August	217
September	211
October	169
November	212
December	207
Total	3,114

Historical Tonnage Summary

2012	2,822
2013	3,206
2014	4,433
2015	4,125
2016	3,094
2017	3,227

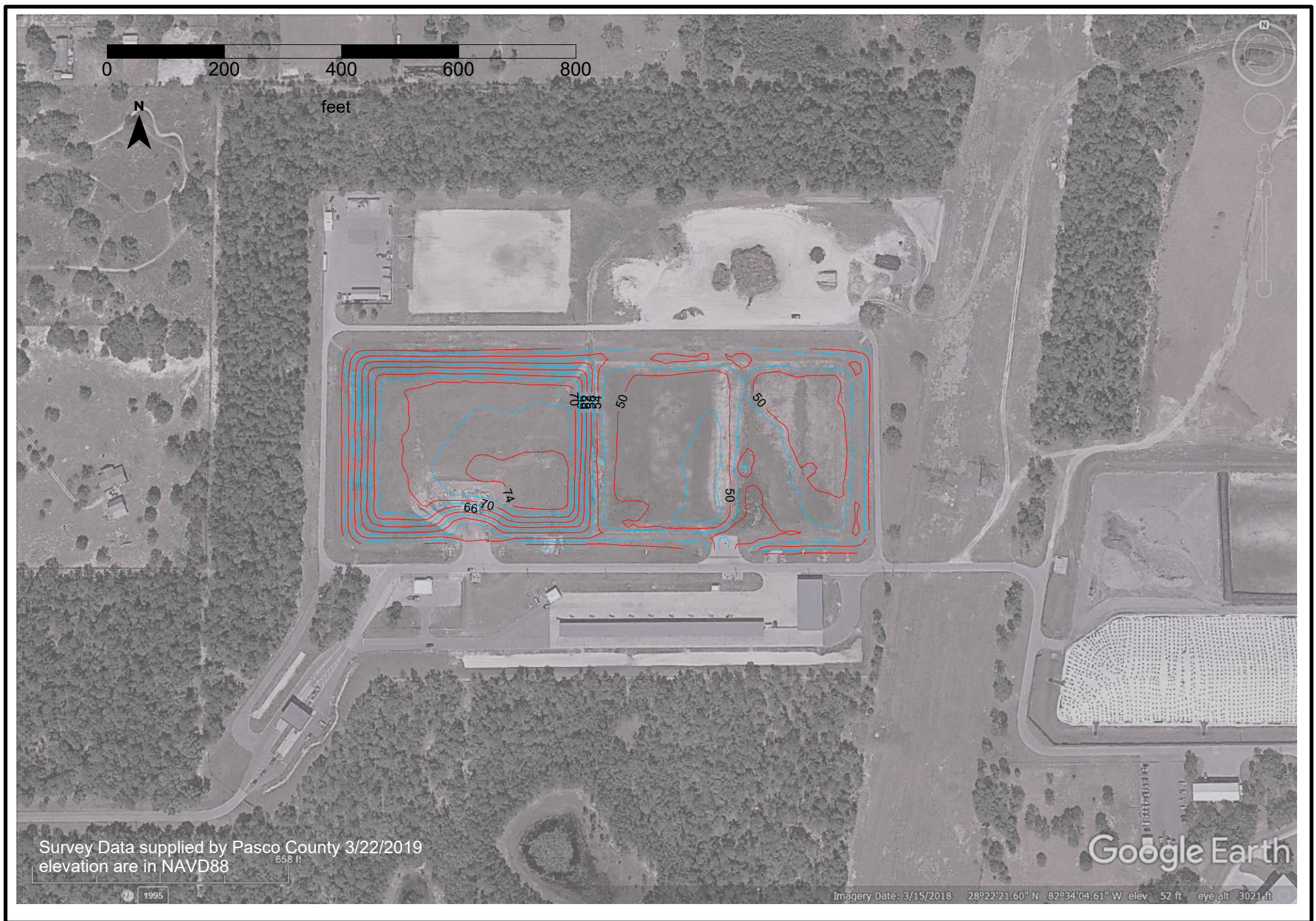
Attachments

Attachment 1: Topographical Contours

Attachment 2: Grid Volume Report

Attachment 3: 2018 Waste Placement Records

ATTACHMENT 1
Landfill Contours



ATTACHMENT 2
Grid Volume Report

Grid Volume Computations

Mon Apr 15 10:37:16 2019

Upper Surface

Grid File Name: C:\Users\jason\OD\Pasco\Solid Waste Facilities Compliance Assistance
(TO 1-19)\Landfill Useful Life\Class III\1819-066_C3_Points.grd

Grid Size: 40 rows x 100 columns

X Minimum: 472677.393
X Maximum: 474077.39
X Spacing: 14.141383838384

Y Minimum: 1468379.594
Y Maximum: 1468929.593
Y Spacing: 14.10253846154

Z Minimum: 43.797649914085
Z Maximum: 75.699284017431

Lower Surface

Level Surface defined by Z = 50

Volumes

Z Scale Factor: 1

Total Volumes by:

Trapezoidal Rule: 5510847.9728094
Simpson's Rule: 5518440.0780061
Simpson's 3/8 Rule: 5508353.0138762

Cut & Fill Volumes

Positive Volume [Cut]: 5777826.8147445 (~ 214,000 cubic yards)
Negative Volume [Fill]: 266978.84193513
Net Volume [Cut-Fill]: 5510847.9728094

Areas

Planar Areas

Positive Planar Area [Cut]: 531850.96287888

Negative Planar Area [Fill]: 186294.34065938
Blanked Planar Area: 51851.646464856
Total Planar Area: 769996.95000311

Surface Areas

Positive Surface Area [Cut]: 537518.37997124
Negative Surface Area [Fill]: 187008.41581982

ATTACHMENT 3
Waste Placement Records

**FLORIDA DEPARTMENT OF
Environmental Protection**

Ron DeSantis
Governor

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

Electronic Submission Receipt

Solid Waste Quantity Report

Thank you for submitting a Solid Waste Quantity Report for the facility PASCO COUNTY RESOURCE RECOVERY with WACS ID 45799.

You have submitted your Solid Waste Quantity Report as required by Rule 62-701.500 F.A.C. which implements the requirements of the Florida Solid Waste Management Act, § 403.702-.7193 and 403.75-.769, Florida Statutes.

A copy of the report has been attached for your records. Should additional information be required, you will be contacted.

If you have any questions regarding your submission, please contact the Solid Waste Program Coordinator with the Solid Waste Program Office at (850) 245-8707 or send e-mail to SWPP@dep.state.fl.us.



FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

Electronic Submission

Solid Waste Quantity Report

You have submitted your Solid Waste Quantity Report as required by Rule 62-701.500 F.A.C. which implements the requirements of the Florida Solid Waste Management Act, § 403.702-.7193 and 403.75-.769, Florida Statutes.

Below is a copy of the information you submitted for your records.

Facility Information

Facility ID: 45799
Facility or Business Name: PASCO COUNTY RESOURCE RECOVERY
Address Line 1: 14230 HAYS RD
Address Line 2:
City/State/Zip Code: Spring Hill, FL 34610 7630
County: Pasco

Mailing Address

Company Name: PASCO COUNTY COMMISSIONERS
Address Line 1: COUNTY COURTHOUSE
Address Line 2: 8731 CITIZENS DRIVE
City/State/Zip Code: NEW PORT RICHEY, FL 34654 0

Site Supervisor

Name: JOHN POWER
Phone Number: (727) 857-2780
Extension:
E-mail Address: jpower@pascocountyfl.net

If you have any questions or concerns about the information contained in this report, please contact the Solid Waste Program Coordinator in the Solid Waste Program Office at (850) 245-8707 or send e-mail to SWPP@dep.state.fl.us.

Annual Report Summary

(all values in tons)

Facility Type	Class I Waste	Class III Waste	Ash Residue	Other Wastes
Class I Landfill	15551.06	0.0	85874.76	0.0
Class III Landfill	0.0	3114.01	0.0	0.0

County of Origin: PASCO

Class I Report Information (all values in tons)

Month/Year	Class I Waste	Class III Waste	Ash Residue	Other Wastes
1/2018	119.70	0.00	7556.99	0.00
2/2018	61.14	0.00	6747.48	0.00
3/2018	4986.32	0.00	6010.38	0.00
4/2018	2028.09	0.00	6652.15	0.00
5/2018	5428.76	0.00	7930.52	0.00
6/2018	33.30	0.00	6940.41	0.00
7/2018	2804.13	0.00	7428.73	0.00
8/2018	1.15	0.00	7765.86	0.00
9/2018	5.51	0.00	7735.40	0.00
10/2018	43.36	0.00	6679.64	0.00
11/2018	12.82	0.00	7128.17	0.00
12/2018	26.78	0.00	7299.03	0.00
Total	15551.06	3114.01	85874.76	0.00

Additional information describing the **Other Waste** disposed of:

--

County of Origin: PASCO

Class III Report Information (all values in tons)

Month/Year	Class I Waste	Class III Waste	Ash Residue	Other Wastes
1/2018	0.00	207.07	0.00	0.00
2/2018	0.00	254.78	0.00	0.00
3/2018	0.00	278.51	0.00	0.00
4/2018	0.00	456.76	0.00	0.00
5/2018	0.00	283.31	0.00	0.00
6/2018	0.00	330.95	0.00	0.00

7/2018	0.00	285.91	0.00	0.00
8/2018	0.00	217.49	0.00	0.00
9/2018	0.00	210.65	0.00	0.00
10/2018	0.00	169.12	0.00	0.00
11/2018	0.00	212.27	0.00	0.00
12/2018	0.00	207.19	0.00	0.00
Total	15551.06	3114.01	85874.76	0.00

Additional information describing the **Other Waste** disposed of:

--

Report Submitted By

Name: Joanne Chamberlain
Phone Number: (727) 847-8041
Extension:
E-mail Address: jchamberlain@pascocountyfl.net

All information submitted was certified true, accurate, and correct to the best of the knowledge of the person whose name appears above.