

## Johnson, Sabrina O

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**From:** Jason Gorrie <jason@jmg-eng.com>  
**Sent:** Monday, April 15, 2019 2:16 PM  
**To:** SWD\_Waste  
**Cc:** Justin G. Roessler; 'ckimble@pascocountyfl.net'  
**Subject:** West Pasco Class I and Class III Landfills - Remaining Useful Life Reports  
**Attachments:** 2018 Remaining Useful Life Report - West Pasco Class I Landfill.pdf; West Pasco Class III Landfill - 2019 Remaining Life Estimate.pdf

*Jason M. Gorrie, P.E., BCEE*  
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<https://clicktime.symantec.com/3Fdn7pmFVVi2zemDHxhCAkU7Vc?u=www.jmg-eng.com>

# Pasco County Utilities

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

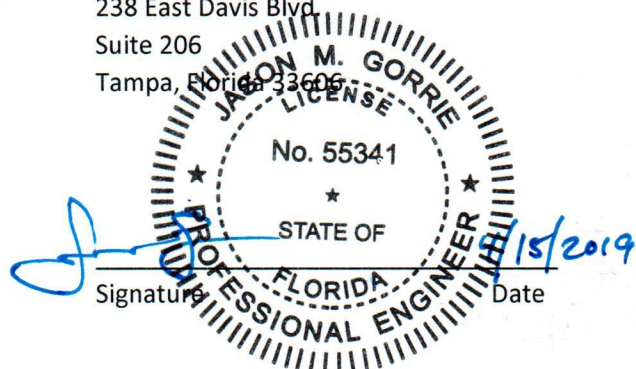
Reporting Year 2018

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
<b>Total</b>	<b>3,114</b>

Historical Tonnage Summary

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

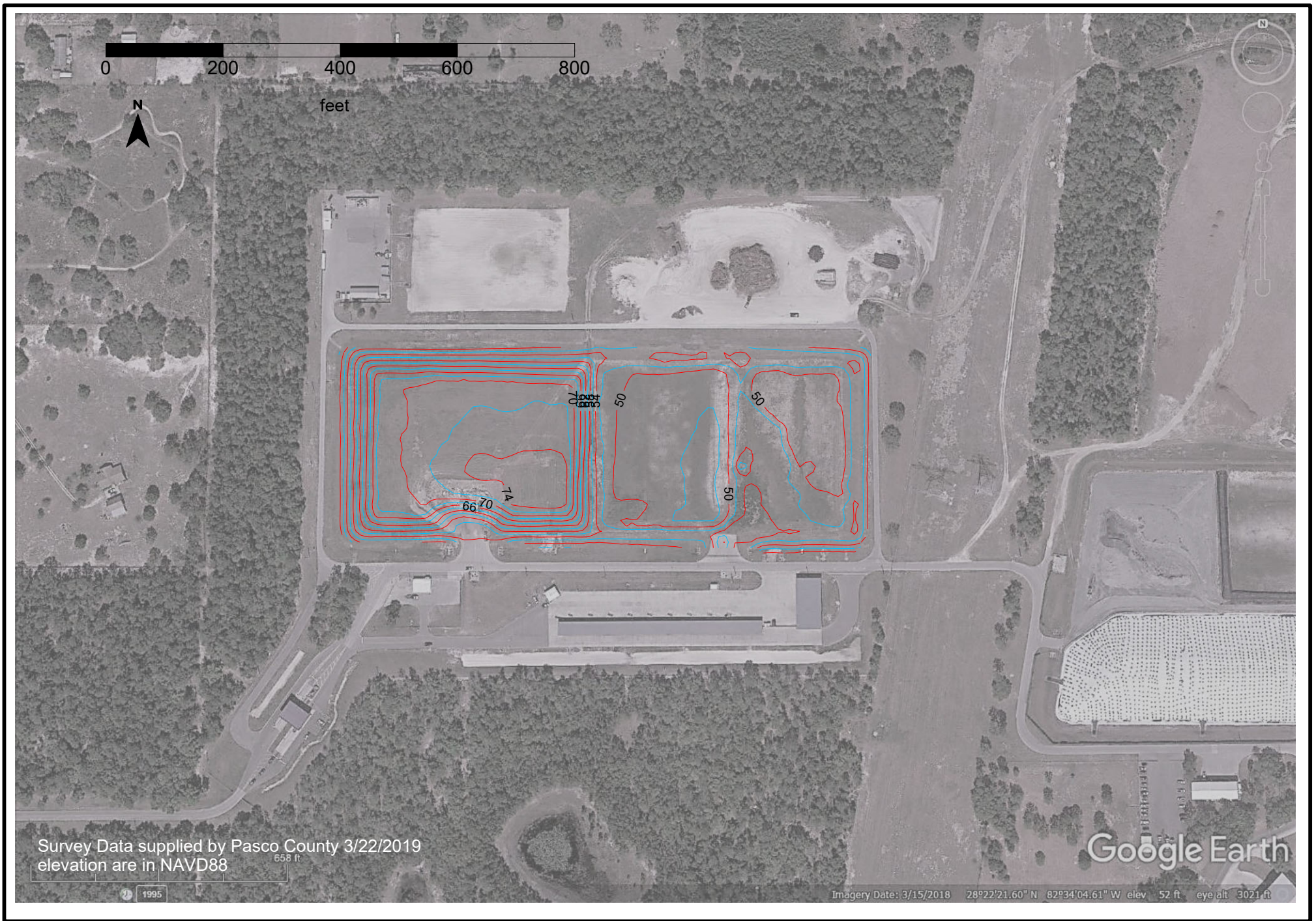
## Attachments

Attachment 1: Topographical Contours

Attachment 2: Grid Volume Report

Attachment 3: 2018 Waste Placement Records

ATTACHMENT 1  
Landfill Contours



ATTACHMENT 2  
Grid Volume Report

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# Grid Volume Computations

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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](mailto:SWPP@dep.state.fl.us).



FLORIDA DEPARTMENT OF  
Environmental Protection

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

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Lt. Governor

**Noah Valenstein**  
Secretary

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**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
<b>Total</b>	<b>15551.06</b>	<b>3114.01</b>	<b>85874.76</b>	<b>0.00</b>

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

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**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:

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**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.

# Pasco County Utilities

## Remaining Disposal Capacity and Site Life Calculations Pasco County Resource Recovery Facility

Reporting Year 2018

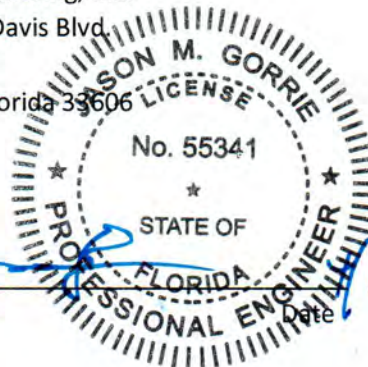
April 2019



Prepared For:  
Pasco County Utilities

Prepared By:  
Jason Gorrie, P.E.  
JMG Engineering, Inc.  
238 East Davis Blvd.  
Suite 206  
Tampa, Florida 33606

Signature



Date

4/15/2019

## 1.0 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 A-4 (for combustion ash) and SW-1/SW-2 (for unprocessed municipal solid waste.) The remaining useful life of disposal cell A-4 is presented in **Section 3.0**. The remaining useful life of disposal cell SW-1/SW-2 is presented in **Section 4.0**. Finally, the remaining useful life of future disposal cells permitted by Power Plant Siting Act Conditions of Certification PA 87-23C are presented in **Section 5**.

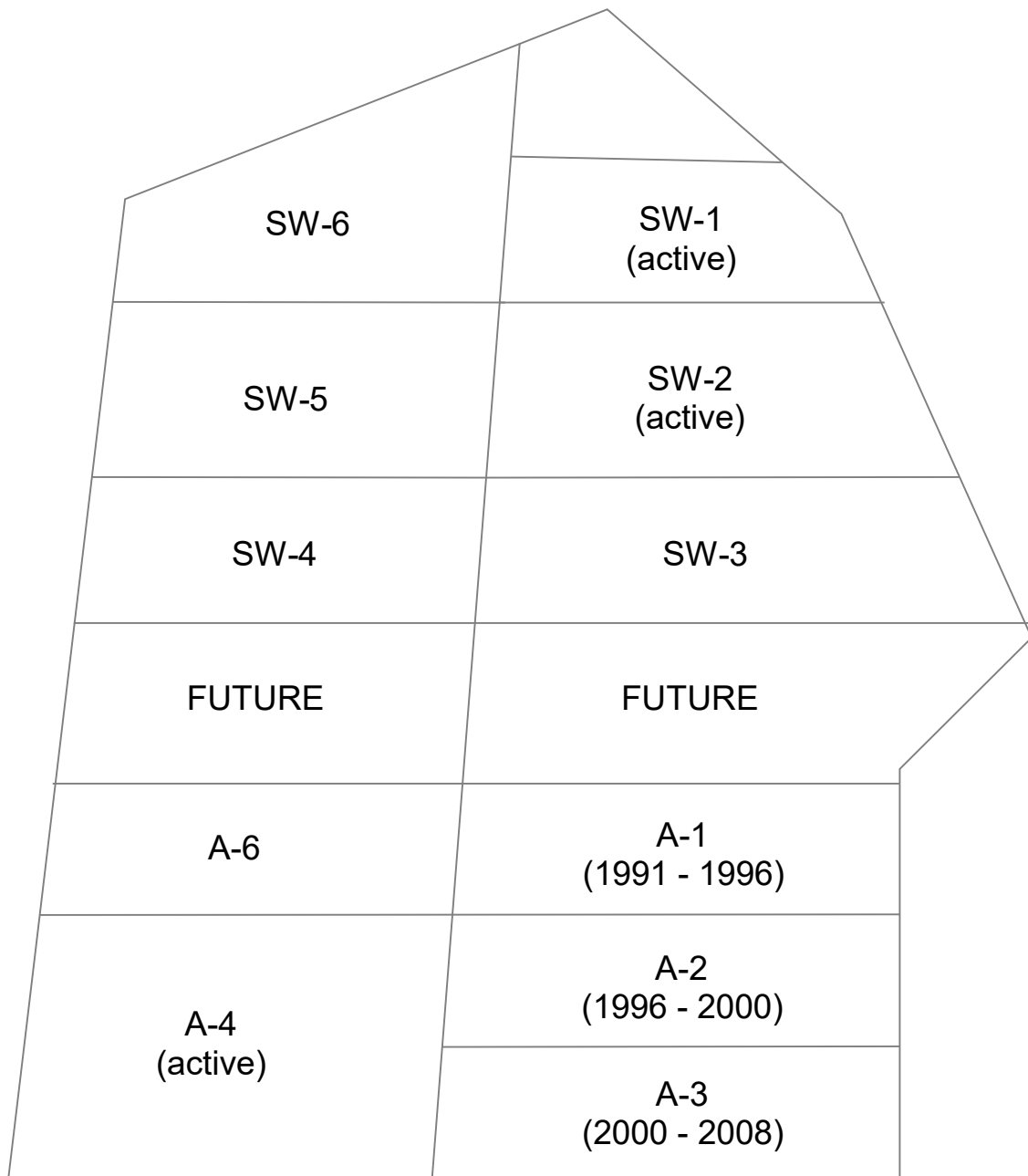
## 2.0 Assumptions Used in Report

- The primary disposal mechanism for municipal solid waste generated within Pasco County is the Pasco County Resource Recovery Facility. The Resource Recovery Facility is permitted to combust approximately 1,050 tons per day of municipal solid waste. Residue from the combustion of the municipal solid waste (hereinafter referred to as “ash”) is disposed in those areas identified in **Figure 1** as “Ash Disposal Cells.” As of the writing of this Report, disposal cells A-1, A-2, and A-3 are temporarily inactive and not receiving ash. While these cells are not currently receiving ash and are temporarily capped with a tarp to minimize leachate generation, they are still available for additional disposal in the future. Disposal cell A-4 is the currently active disposal cell for ash residue and receives all ash generated by the Resource Recovery Facility<sup>1</sup>.
- The actual mass value of waste that can be processed by the Resource Recovery Facility is variable due to the heating value of the waste. Drier waste and waste containing larger amounts of plastics has a higher heating value, resulting in less mass throughput through the Resource Recovery Facility. Wetter waste and waste containing less plastics has a lower heating value, resulting in more mass throughput through the Resource Recovery Facility. The heating value of the waste (measured in British thermal units per pound of waste, or Btu/lb) has been observed to be gradually increasing over the course of several years, resulting in a slightly lower mass throughput capability of the Resource Recovery Facility. For purposes of this Report, it is assumed that the annual solid waste mass throughput capacity of the Resource Recovery Facility will remain at 1,050 tons per day for the foreseeable future. Assuming no changes in facility availability, the Resource Recovery Facility is capable of

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<sup>1</sup> The Florida Department of Environmental Protection has authorized Pasco County to beneficially utilize a significant portion of the ash generated by the Resource Recovery Facility. For purposes of this Report, it is conservatively assumed that all ash will be placed in the Ash Disposal Cells and not beneficially utilized. It should be noted that future beneficial reuse projects undertaken in accordance with the FDEP’s approval could substantially reduce the amount of ash placed in the Ash Disposal Cells in future years.





**LEGEND**

- A-x     Ash Disposal Cells
- SW-x   Solid Waste Disposal Cells



**FIGURE 1**  
Class I Landfill Footprint

2018 Useful Life Estimate  
Pasco County Class I  
Landfill

processing approximately 331,000 tons per years given the 1,050 tons per day design capacity, 90% availability and a standard higher heating value of 4,800 Btu per pound. (CDM Smith, 2015)

- The quantity of ash generated by the combustion process at the Resource Recovery Facility is relatively consistent at 23% (by mass) of the municipal solid waste combusted. (Pasco County Utilities, 2018) Previous studies by Covanta and others have demonstrated that the density of the ash is also relatively consistent over protracted periods at 2,200 pounds per cubic yard. Municipal solid waste that is bypassed from the Resource Recovery Facility and placed in the solid waste disposal cells is assumed to have a compacted density of approximately 1,100 pounds per cubic yard.
- It is widely recognized that the population of Pasco County is growing. Future waste generation rates were estimated in 2015 based on population projections generated by the University of Florida’s Bureau of Economic and Business Research. These numbers are relied upon in this Report and presented in Table 1.

## 2.1 Permitted Disposal Capacity

Construction and operation of the disposal cells at the site is governed by Power Plant Siting Act Conditions of Certification PA87-23C. The permitted maximum elevation of the currently active Ash Disposal Cell (A-4) is 120 feet NGVD. In 2015, CDM-Smith estimated the total volume available for disposal in cell A-4 to be 1,254,269 cubic yards (CDM-Smith, 2015).

The permitted maximum elevation of the currently active Solid Waste Disposal Cell (SW-2) is 101 feet NGVD. In January of 2019, Pasco County modified the Landfill Operations Plan to reflect a new Fill Sequence for SW-1/SW-2. Previous Fill Sequencing anticipated construction of a new Cell SW-3 once the permitted elevation of 101 feet NGVD was reached. The revised Fill Sequence anticipates merging SW-1 and SW-2 by filling the interstice (or “valley”) between the two cells, then filling vertically (with modified sideslopes) to the permitted elevation of 101 feet. This modification will result in an estimated total volume available for disposal of approximately 900,000 cubic yards, shown in **Attachment 6**.

## 3.0 Useful Remaining Life of Cell A-4

The currently permitted capacity of Ash Disposal Cell A-4 is considered to be 1,254,269 cubic yards. At present, subcells 1, 2, 3, and 4 (of 6) of Ash Disposal Cell A-4 have received waste and are considered to be “active”. 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 cell A-4 in January 2018. The elevation contours of the A4 disposal cell are depicted at **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 ash in place in cell A-4. 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 ash calculated to be currently in place in A-4 is approximately 418,000 cubic yards.

Given the permitted volumetric capacity of 1,254,269 cubic yards and subtracting the 418,000 cubic yards calculated from the 2019 survey to be currently in place, approximately 836,000 cubic yards of airspace remains available for disposal. Municipal waste combustor ash has an approximate density of 2,200 pounds per cubic yard. Using the assumed density, the 836,000 remaining cubic yards can accommodate approximately 760,000 tons of ash.

**Table 1** below shows the projected ash generation rate as a function of anticipated Resource Recovery Facility capacity. Because the waste-to-energy facility is currently operating at its maximum capacity, no changes in the ash generation rate are expected in the immediate future. By dividing the calculated remaining capacity of A-4 (760,000 tons) by the anticipated annual ash generation rate of 76,130 tons per year, **the estimated remaining useful life of Cell A-4 (as currently designed and permitted) is 11 years.**

#### 4.0 Useful Remaining Life of Cell SW-2

The calculation procedures used to estimate the remaining useful life for disposal cell SW-1/SW-2 are identical to those described above for disposal cell A-4. Utilizing the surveyed elevations provided by Pasco County Engineering Services Department (see **Attachment 2**), the Surfer 13® algorithms determined that the volume of solid waste present in SW-1/SW-2 is approximately 500,000 cubic yards (see **Attachment 4**).

The permitted volumetric capacity of SW-1/SW-2 is assumed to be 900,000 cubic yards (see **Attachment 6**). Subtracting the 500,000 cubic yards calculated to be currently in place, approximately 400,000 cubic yards of airspace remains available for disposal.

The intent of the solid waste cells (inclusive of SW-1/SW-2) as stated in the original application for Power Plant Siting Certification is to accommodate solid waste deliveries in excess of the Resource Recovery Facility's capacity. As stated previously, the Resource Recovery Facility is operating at capacity. This necessitates periodic (and temporary) diversions during times when the Resource Recovery Facility must operate at reduced capacity to facilitate maintenance activities.

**Table 1** below shows the projected waste diversion volume as a function of anticipated Resource Recovery Facility capacity and future population growth<sup>2</sup>. Using an assumed density of 1,100 pounds per cubic yard for municipal solid waste compacted in-place (USEPA, 2016), and further assuming that daily cover equivalent to 10% (by volume) per year will be utilized, it is estimated that remaining airspace will be consumed at the rate identified in Table 1. Accordingly, **the estimated remaining useful life of cell SW-1/SW-2 (as currently designed and permitted) is approximately 4 years using a combination of exporting waste out-of-county and disposal in SW-1/SW-2.**

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<sup>2</sup> The diversion rates listed in Table 1 are conservative. The actual diversion rate is expected to be less than that presented in Table 1 because the Resource Recovery Facility has demonstrated an ability to process waste in excess of the 331,000 tons per year listed in the 2015 Solid Waste Master Plan.

## 5.0 Useful Remaining Life of Future Disposal Cells

As shown in Figure 1, several acres of permitted disposal space remain available for future use by the County. At present, liner and leachate collection systems have been constructed for the following disposal cells: SW-1, SW-2, A-1, A-2, A-3, and A-4. Because these lined cells are adjacent to each other, it is possible to maximize the airspace over existing lined areas by utilizing the interstitial space (or valley) between the existing cells. Such a practice will delay the need for construction of additional liner and leachate collection systems.

Finally, those cells identified in Figure 1 as SW-3, SW-4, SW-5, and SW-6 are sited and permitted as disposal areas but are yet to be constructed. Assuming that the ultimate capacity of these yet-to-be constructed cells will have an approximate capacity of 750,000 cubic yards each<sup>3</sup>, an additional 3 million cubic yards of disposal volume for MSW remains available to Pasco County. This equates to roughly 13 years of disposal capacity at the reasonably foreseeable MSW disposal rates anticipated in the future, as depicted in **Table 2**. Use of these permitted cells for disposal of ash from the Resource Recovery Facility will prolong the remaining useful life even further.

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<sup>3</sup> It is assumed that landfill operators will be able to achieve greater compaction efficiencies and lower daily cover application rates if it becomes necessary to operate the solid waste disposal cells in a permanent (rather than intermittent) fashion, resulting in a larger disposal capacity than is currently achieved in SW-1/SW-2.

**Table 1  
Estimated Waste Generation Rates, Waste Disposal Rates, and Remaining Disposal Capacity**

Year	Resource Recovery Facility				A-4 Disposal Cell			SW-1/SW-2 Disposal Cell					Hauled Out-of County	
	Projected Total Waste Received <sup>1</sup> (tons)	Estimated Waste Processed <sup>1a</sup> (tons)	Estimated Ash Generation Rate (tons) (yds <sup>3</sup> ) <sup>5</sup>	Estimated Ash In Place at Beginning of Calendar Year (yds <sup>3</sup> )	Estimated Waste Placement Rate (yds <sup>3</sup> )	Estimated Remaining Disposal Capacity at End of Calendar Year <sup>3</sup> (yds <sup>3</sup> )	Estimated Waste In Place at Beginning of Calendar Year <sup>9</sup> (yds <sup>3</sup> )	Estimated Waste Placement Rate (tons)	Estimated Waste Placement Rate (yds <sup>3</sup> ) <sup>6</sup>	Estimated Daily Cover Application Rate (yds <sup>3</sup> ) <sup>10</sup>	Estimated Remaining Disposal Capacity at End of Calendar Year <sup>2</sup> (yds <sup>3</sup> )	Estimated Waste Transferred <sup>8</sup> (tons)	Estimated Waste Transferred (yds <sup>3</sup> ) <sup>2</sup>	
2018 <sup>7</sup>	389,687	341,122	83,853	76,230	346,700	76,230	836,000	219,261	15,093	27,442	4,116	403,000	4,134	27,560
2019	420,000	331,000	76,130	69,209	418,000	69,209	767,060	500,000	19,000	34,545	5,182	363,273	70,000	466,667
2020	440,000	331,000	76,130	69,209	487,209	69,209	697,851	539,727	19,000	34,545	5,182	323,545	90,000	600,000
2021	450,000	331,000	76,130	69,209	556,418	69,209	628,642	579,455	19,000	34,545	5,182	283,818	100,000	666,667
2022	460,000	331,000	76,130	69,209	625,627	69,209	559,433	619,182	129,000	234,545	35,182	14,091		
2023	475,000	331,000	76,130	69,209	694,836	69,209	490,224	888,909	144,000	261,818	39,273			
2024	485,000	331,000	76,130	69,209	764,045	69,209	421,014							
2025	495,000	331,000	76,130	69,209	833,255	69,209	351,805							
2026	505,000	331,000	76,130	69,209	902,464	69,209	282,596							
2027	515,000	331,000	76,130	69,209	971,673	69,209	213,387							
2028	525,000	331,000	76,130	69,209	1,040,882	69,209	144,178							
2029	530,000	331,000	76,130	69,209	1,110,091	69,209	74,969							
2030	545,000	331,000	76,130	69,209	1,179,300	74,700	0							
2031	550,000	331,000	76,130	69,209										

<sup>1</sup> Source: Integrated Solid Waste Management System Master Plan Update, Figure 3-2, CDM-Smith,2019

<sup>1a</sup> Source: Integrated Solid Waste Management System Master Plan Update, Section 3, CDM-Smith,2019

<sup>2</sup> assume density of uncompacted mixed MSW to be 300 lbs/cu. yd

<sup>3</sup> assume total capacity of A4 is 1,254,269 cu. yds.

<sup>4</sup> assume total capacity of SW1/SW2 is 900,000 cu. yds.

<sup>5</sup> assume density of ash to be 2,200 lbs/cu. yd.

<sup>6</sup> assume density of compacted mixed MSW to be 1,100 lbs/cu. yd.

<sup>7</sup> 2018 Values are actual values as reported by Pasco County, 1/17/19 Memorandum from J. Chamberlain to M. Carballa

<sup>8</sup> Assumes a combination of exporting waste out of County and utilizing SW-1/SW-2 Disposal Cell

<sup>9</sup> 2018 value is for SW only. 2019 value estimated from 2019 topographical survey and estimated bottom liner elevations of combined SW1 and SW2

**TABLE 2**  
**Future Cells SW-3, SW-4, SW-5, and SW-6**

Year	Projected Total Waste Received <sup>1</sup> (tons)				Estimated Remaining Disposal Capacity at End of Calendar Year <sup>4</sup> (yds <sup>3</sup> )
		Estimated Waste Placement Rate <sup>2</sup> (tons)	Estimated Waste Placement Rate (yds <sup>3</sup> )	Estimated Daily Cover Application Rate (yds <sup>3</sup> ) <sup>6</sup>	
2022	400,000	69,000	98,571	9,857	2,891,571
2023	410,000	79,000	112,857	11,286	2,767,429
2024	425,000	94,000	134,286	13,429	2,619,714
2025	435,000	104,000	148,571	14,857	2,456,286
2026	450,000	119,000	170,000	17,000	2,269,286
2027	452,000	121,000	172,857	17,286	2,079,143
2028	460,000	129,000	184,286	18,429	1,876,429
2029	475,000	144,000	205,714	20,571	1,650,143
2030	480,000	149,000	212,857	21,286	1,416,000
2031	490,000	159,000	227,143	22,714	1,166,143
2032	500,000	169,000	241,429	24,143	900,571
2033	510,000	179,000	255,714	25,571	619,286
2034	520,000	189,000	270,000	27,000	322,286
2035	530,000	199,000	284,286	28,429	9,571
2036	530,000				
2037	530,000				

<sup>1</sup> Source: Integrated Solid Waste Management System Master Plan, Figure 2-3, CDM-Smith,2015

<sup>2</sup> Projected Total Waste Delivered minus 331,000 tons processed in WTE Facility

## References

CDM Smith. (2015). *Integrated Solid Waste Management System Master Plan*.

CDM-Smith. (2015). *Annual Remaining Disposal Capacity and Site Life Calculations*.

Pasco County Utilities. (2018). *Waste to Energy Tonnage Report*.

USEPA. (2016). *Volume to Weight Conversion Factors, Office of Resource Conservation and Recovery*.

## Attachments

Attachment 1: A-4 Topographic Contours

Attachment 2: SW-2 Topographic Contours

Attachment 3: A-4 Grid Volume Computations

Attachment 4: SW-2 Grid Volume Computations

Attachment 5: Waste Placement Records

Attachment 6: SW-1/SW-2 Grid Volume Calculations at Buildout

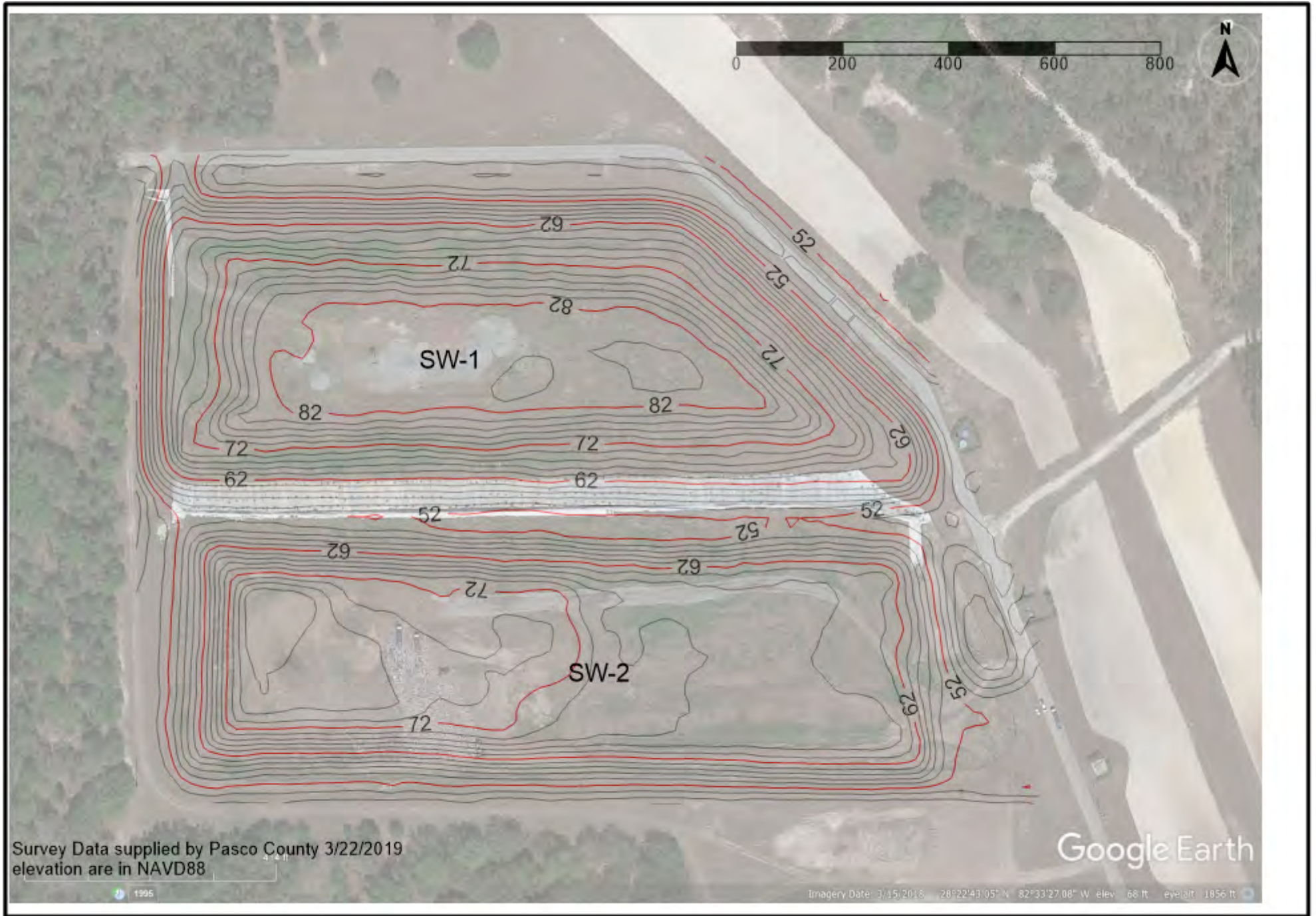
# ATTACHMENT 1

## A-4 Contours





ATTACHMENT 2  
SW-2 Contours



ATTACHMENT 3  
A-4 Grid Volume Calculations

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# Grid Volume Computations

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Sun Mar 31 09:25:52 2019

## Upper Surface

Grid File Name: D:\OneDrive - JMG Engineering\Pasco\Solid Waste Facilities Compliance Assistance (TO 1-19)\Landfill Useful Life\A4\1819-066\_A4 CELL with 2018 points on covered cells.grd

Grid Size: 100 rows x 62 columns

X Minimum: 1467773.842  
X Maximum: 1468576.076  
X Spacing: 13.151377049179

Y Minimum: 474591.9089  
Y Maximum: 475902.171  
Y Spacing: 13.234970707071

Z Minimum: 37.808426001886  
Z Maximum: 91.797511907439

## Lower Surface

Level Surface defined by  $Z = 48$

## Volumes

Z Scale Factor: 1

### Total Volumes by:

Trapezoidal Rule: 11303381.249468 (approx. 418,000 yds<sup>3</sup>)

Simpson's Rule: 11306739.759647

Simpson's 3/8 Rule: 11307156.951544

### Cut & Fill Volumes

Positive Volume [Cut]: 11815832.561425

Negative Volume [Fill]: 512598.75495361

Net Volume [Cut-Fill]: 11303233.806471

## Areas

### Planar Areas

Positive Planar Area [Cut]: 899345.13658761

Negative Planar Area [Fill]: 151791.6689437  
Blanked Planar Area: 0  
Total Planar Area: 1051136.8055313

**Surface Areas**

Positive Surface Area [Cut]: 915723.48358859  
Negative Surface Area [Fill]: 152165.36543015

ATTACHMENT 4  
SW-2 Grid Volume Calculations

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# Grid Volume Computations

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Wed Apr 03 15:07:20 2019

## Upper Surface

Grid File Name: C:\Users\jason\OD\Pasco\Solid Waste Facilities Compliance Assistance  
(TO 1-19)\Landfill Useful Life\SW1and2\1819-066\_SW1\_SW2\_POINTS.grd  
Grid Size: 100 rows x 72 columns

X Minimum: 1470242.593  
X Maximum: 1471267.591  
X Spacing: 14.436591549294

Y Minimum: 476066.776  
Y Maximum: 477491.773  
Y Spacing: 14.393909090909

Z Minimum: 42.142374411277  
Z Maximum: 84.869828676101

## Lower Surface

Grid File Name: C:\Users\jason\OD\Pasco\Solid Waste Facilities Compliance Assistance  
(TO 1-19)\Landfill Useful Life\SW1and2\SW1 and 2 bottom digitized.grd  
Grid Size: 100 rows x 72 columns

X Minimum: 1470279.551  
X Maximum: 1471159.941  
X Spacing: 12.399859154931

Y Minimum: 476102.8426  
Y Maximum: 477353.9757  
Y Spacing: 12.637708080808

Z Minimum: 40.002282092702  
Z Maximum: 61.746376197676

## Volumes

Z Scale Factor: 1

### Total Volumes by:

Trapezoidal Rule: 13431045.841591  
Simpson's Rule: 13419279.132271  
Simpson's 3/8 Rule: 13408643.774971



### **Cut & Fill Volumes**

Positive Volume [Cut]:	14329743.765521
Negative Volume [Fill]:	898697.92392967
Net Volume [Cut-Fill]:	13431045.841591 (497,446 cubic yards)

### **Areas**

#### **Planar Areas**

Positive Planar Area [Cut]:	823175.76833905
Negative Planar Area [Fill]:	113219.74101397
Blanked Planar Area:	165089.56055617
Total Planar Area:	1101485.0699092

#### **Surface Areas**

Positive Surface Area [Cut]:	839034.49229864
Negative Surface Area [Fill]:	116121.33166909

ATTACHMENT 5  
Waste Placement Records



**PUBLIC INFRASTRUCTURE BRANCH**  
Administration and Support Services

*"Bringing Opportunities Home"*

**INTEROFFICE  
MEMORANDUM**

DATE: January 17, 2019

TO: Michael J. Carballa, P. E., BCEE, Interim Assistant County Administrator (Public Infrastructure)

THRU: Justin Grant, MPA, Public Infrastructure Administration and Support Services Interim Director  
*Joanne M. Chamberlain*

FROM: Joanne M. Chamberlain, Accountant II, Public Infrastructure Administration and Support Services

FILE: UT19 - 0511

SUBJECT: Quarterly Tonnage Report, Waste-to-Energy Facility, December 2018

REFERENCES:

Attached are the latest monthly totals for Solid Waste and Ash processed at the Pasco County Waste-To-Energy Facility. This report is provided quarterly, but presented by month, with daily averages.

Current Quarter's ratio of ash to waste by month:  
This Fiscal Year's monthly average ratio ash to waste =

	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
	24%	23%	23%

Current Quarter's processable waste by month:                    27,678    30,806    31,685 Tons

Current Quarter's Recycling totals by month:                    617.46    705.13    731.47 \* Tons

\* as of October 2011, this figure is based on Recycling hauled out

**FY 2019 DIVERTED WASTE:**                    0 Tons Bypassed to SW Cells (Not Included in WTE Report Tonnage)  
4,134 Tons Hauled Out of County (Not Included in WTE Tonnage)

**MSW ACTIVITY:**

<u>FY 14</u>	<u>FY 15</u>	<u>FY 16</u>	<u>FY 17</u>	<u>FY 18</u>	
324,260	338,197	354,273	364,947	378,733	Total MSW for Fiscal Year
323,065	337,622	342,645	339,615	341,122	Tons of MSW delivered to the Waste-to-Energy Facility during FY
0	0	3,156	0	15,093	Tons of MSW Bypassed to the SW Cells during FY
1,196	575	8,472	25,333	22,518	Tons of MSW Hauled out of the County during FY

cc: John Power, Solid Waste Facility Director  
Justin Roessler, Assistant Solid Waste Director  
Rachelle Dobbs, Recycling Supervisor

*Mission: Providing our community, customers, and future generations with high quality, efficient, and innovative water, wastewater, and solid waste services*

**Pasco County Waste - to - Energy Tonnage Report**

MONTH/ YEAR	WEST PASCO		EAST PASCO TONNAGE HAULED OUT (Info Only)	EAST PASCO			TOTAL PASCO	DAILY AVG	HERNANDO		PROCESSABLE WASTE		ASH		% ASH/ MSW	RECYCLING TOTAL TONS	MEGA WATTS	
	TONS	DAILY AVG		LOADS	TONS	DAILY AVG			WASTE	DAILY AVG	TOTAL TONS	DAILY AVG	TOTAL TONS	DAILY AVG			MONTHLY GEN.	12 MONTH ROLLING AVERAGE
Oct-18	24,600.84	793.58	3,896.68	145	3,077.07	99.26	27,677.91	892.84	0.00	0.00	27,677.91	892.84	6,679.64	215.47	0.24	617.46	15.54	21.67
Nov-18	23,792.76	793.09	237.05	326	7,013.06	233.77	30,805.82	1,026.86	0.00	0.00	30,805.82	1,026.86	7,128.17	237.61	0.23	705.13	23.55	21.75
Dec-18	24,223.27	781.40	0.00	341	7,461.50	240.69	31,684.77	1,022.09	0.00	0.00	31,684.77	1,022.09	7,299.03	235.45	0.23	731.47	not yet available	
Jan-19																		
Feb-19																		
Mar-19																		
Apr-19																		
May-19																		
Jun-19																		
Jul-19																		
Aug-19																		
Sep-19																		
Total 19	72,616.87		4,133.73	812	17,551.63		90,168.50		0.00		90,168.50		21,106.84			2,054.06	39.08	
Average19	24,205.62	789.35	1,377.91	271	5,850.54	191.24	30,056.17	980.60	0.00	0.00	30,056.17	980.60	7,035.61	229.51	0.23	684.69	19.54	











**Pasco County Waste - to - Energy Tonnage Report**

MONTH/ YEAR	WEST PASCO		EAST PASCO TONNAGE HAULED OUT (Info Only)	EAST PASCO			TOTAL PASCO	DAILY AVG	HERNANDO		PROCESSABLE WASTE		ASH		% ASH/ MSW	RECYCLING TOTAL TONS	MEGA WATTS	
	TONS	DAILY AVG		LOADS	TONS	DAILY AVG			WASTE	DAILY AVG	TOTAL TONS	DAILY AVG	TOTAL TONS	DAILY AVG			MONTHLY GEN.	12 MONTH ROLLING AVERAGE
Oct 03	21,907.80	706.70		294	6,350.01	204.84	28,257.81	911.54	0.00	0.00	28,257.81	911.54	9,230.21	297.75	0.33	187.25	23.50	21.63
Nov 03	20,972.68	699.09		275	5,933.04	197.77	26,905.72	896.86	0.00	0.00	26,905.72	896.86	8,164.05	272.14	0.30	167.03	23.40	21.88
Dec 03	22,771.81	734.57		332	6,967.23	224.75	29,739.04	959.32	0.00	0.00	29,739.04	959.32	8,143.00	262.68	0.27	208.89	23.09	21.81
Jan 04	22,552.24	727.49		343	7,337.80	236.70	29,890.04	964.19	0.00	0.00	29,890.04	964.19	8,120.39	261.95	0.27	228.03	23.28	22.33
Feb 04	21,419.69	764.99		323	6,905.32	246.62	28,325.01	1,011.61	0.00	0.00	28,325.01	1,011.61	7,641.34	272.91	0.27	204.61	20.94	22.29
Mar 04	22,345.65	720.83		414	8,820.53	284.53	31,166.18	1,005.36	0.00	0.00	31,166.18	1,005.36	6,353.84	204.96	0.20	238.11	14.96	21.60
Apr 04	21,089.12	702.97		380	8,077.21	269.24	29,166.33	972.21	0.00	0.00	29,166.33	972.21	8,135.55	271.19	0.28	231.78	23.16	21.65
May 04	21,556.48	695.37		335	7,157.13	230.88	28,713.61	926.25	0.00	0.00	28,713.61	926.25	8,478.76	273.51	0.30	193.86	22.89	21.64
Jun 04	22,481.91	749.40		332	7,290.70	243.02	29,772.61	992.42	0.00	0.00	29,772.61	992.42	8,077.51	269.25	0.27	200.61	21.65	21.55
Jul 04	22,884.54	738.21		327	7,170.58	231.31	30,055.12	969.52	0.00	0.00	30,055.12	969.52	8,506.18	274.39	0.28	191.95	21.55	21.48
Aug 04	23,184.54	747.89		325	7,294.42	235.30	30,478.96	983.19	0.00	0.00	30,478.96	983.19	8,806.05	284.07	0.29	192.36	22.99	22.11
Sep 04	25,976.59	837.95		358	8,038.00	259.29	34,014.59	1,097.24	0.00	0.00	34,014.59	1,097.24	7,673.00	247.52	0.23	209.19	21.14	21.88
Total 04	269,143.05			4,038	87,341.97		356,485.02		0.00		356,485.02		97,329.88			2,453.67	262.55	
Average04	22,428.59	735.46		337	7,278.50	238.69	29,707.09	974.14	0.00	0.00	29,707.09	974.14	8,110.82	266.02	0.27	204.47	21.88	
Oct 04	11,736.44	378.59		348	7,596.30	245.04	19,332.74	623.64	0.00	0.00	19,332.74	623.64	5,604.91	180.80	0.29	203.23	13.96	21.08
Nov 04	20,613.33	687.11		355	7,711.99	257.07	28,325.32	944.18	0.00	0.00	28,325.32	944.18	7,959.89	265.33	0.28	190.51	22.07	20.97
Dec 04	16,018.98	516.74		383	7,825.57	252.44	23,844.55	769.18	0.00	0.00	23,844.55	769.18	8,656.58	279.24	0.36	212.85	22.86	20.95
Jan 05	16,927.80	546.06		362	7,795.85	251.48	24,723.65	797.54	0.00	0.00	24,723.65	797.54	7,976.42	257.30	0.32	236.81	21.39	20.80
Feb 05	21,715.73	700.51		156	3,703.64	119.47	25,419.37	819.98	0.00	0.00	25,419.37	819.98	7,553.34	243.66	0.30	204.62	21.34	20.83
Mar 05	10,396.45	335.37		416	8,951.55	288.76	19,348.00	624.13	0.00	0.00	19,348.00	624.13	5,046.05	162.78	0.26	230.44	10.64	20.47
Apr 05	16,988.68	566.29		377	7,981.43	266.05	24,970.11	832.34	0.00	0.00	24,970.11	832.34	7,970.34	265.68	0.32	225.52	22.19	20.39
May 05	23,638.44	787.95		353	6,962.90	232.10	30,601.34	1,020.04	0.00	0.00	30,601.34	1,020.04	8,921.38	297.38	0.29	221.92	23.44	20.43
Jun 05	25,477.24	849.24		329	6,904.78	230.16	32,382.02	1,079.40	0.00	0.00	32,382.02	1,079.40	8,355.30	278.51	0.26	211.55	21.72	20.44
Jul 05	24,432.32	814.41		319	6,790.55	226.35	31,222.87	1,040.76	0.00	0.00	31,222.87	1,040.76	8,620.73	287.36	0.28	198.12	22.74	20.54
Aug 05	25,750.36	830.66		330	6,977.37	225.08	32,727.73	1,055.73	0.00	0.00	32,727.73	1,055.73	8,946.38	288.59	0.27	211.78	22.68	20.51
Sep 05	23,243.76	774.79		284	6,030.38	201.01	29,274.14	975.80	0.00	0.00	29,274.14	975.80	8,071.52	269.05	0.28	209.33	22.45	20.62
Total 05	236,939.53			4,012	85,232.31		322,171.84		0.00		322,171.84		93,682.84			2,556.68	247.48	
Average05	19,744.96	648.98		334	7,102.69	232.92	26,847.65	881.89	0.00	0.00	26,847.65	881.89	7,806.90	256.31	0.29	213.06	20.62	
Oct 05	15,396.01	496.65		284	6,085.76	196.31	22,602.52	692.96	0.00	0.00	22,602.52	692.96	5,620.72	181.31	0.26	210.69	13.34	20.57
Nov 05	27,035.70	901.19		66	817.45	27.25	27,853.15	928.44	0.00	0.00	27,853.15	928.44	8,211.93	273.73	0.29	226.55	22.98	20.65
Dec 05	30,948.94	998.35		27	138.81	4.48	31,087.75	1,002.83	0.00	0.00	31,087.75	1,002.83	8,190.64	264.21	0.26	232.48	23.34	20.69
Jan 06	21,468.13	692.52		22	98.10	3.16	21,566.23	695.68	0.00	0.00	21,566.23	695.68	7,913.01	255.26	0.37	250.93	22.03	20.74
Feb 06	14,635.31	522.89		19	102.16	3.65	14,737.47	526.34	0.00	0.00	14,737.47	526.34	4,476.19	159.86	0.30	208.37	6.53	19.51
Mar 06	25,897.81	835.41		337	6,908.60	222.86	32,806.41	1,058.27	0.00	0.00	32,806.41	1,058.27	7,786.17	251.17	0.24	262.62	22.92	20.53
Apr 06	18,632.38	623.08		292	5,941.64	198.05	24,574.02	819.13	0.00	0.00	24,574.02	819.13	7,631.53	254.38	0.31	238.33	23.10	20.61
May 06	25,526.66	823.44		308	6,116.43	197.30	31,643.09	1,020.74	0.00	0.00	31,643.09	1,020.74	8,877.02	197.30	0.19	232.74	24.05	20.66
Jun 06	22,036.18	734.54		282	5,648.05	188.27	27,684.23	922.81	0.00	0.00	27,684.23	922.81	7,877.40	262.58	0.28	220.05	22.38	20.71
Jul 06	25,419.09	819.97		251	5,144.73	165.96	30,563.82	985.93	0.00	0.00	30,563.82	985.93	8,473.91	273.35	0.28	210.32	23.10	20.74
Aug 06	24,626.89	794.42		263	5,414.21	174.65	30,041.10	969.07	0.00	0.00	30,041.10	969.07	7,794.06	251.42	0.26	254.41	20.97	20.60
Sep 06	17,854.76	595.16		255	5,193.99	173.13	23,048.75	768.29	0.00	0.00	23,048.75	768.29	7,284.48	242.82	0.32	249.71	19.19	20.33
Total 06	269,477.86			2,406	47,609.93		318,208.54		0.00		318,208.54		90,137.06			2,797.20	243.94	
Average06	22,456.49	736.28		201	3,967.49	129.59	26,517.38	865.87	0.00	0.00	26,517.38	865.87	7,511.42	238.95	0.28	233.10	20.33	

Pasco County Waste - to - Energy Tonnage Report

MONTH/ YEAR	WEST PASCO		EAST PASCO			TOTAL PASCO		HERNANDO		PLANT CITY		HILLSBOROUGH		SUMTER		CITRUS		PROCESSABLE WASTE		ASH		% ASH/ MSW	RECYCLING TOTAL TONS	MEGA WATTS	
	TONS	DAILY AVG	LOADS	TONS	DAILY AVG	TONS	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	TOTAL TONS	DAILY AVG	TOTAL TONS	DAILY AVG			TOTAL TONS	MONTHLY GEN.
Oct 00	17,608.74	568.02	334	5,053.61	163.02	22,662.35	731.04	2,924.19	94.33	2,118.51	68.34	0.00	0.00	0.00	0.00	0.00	0.00	27,705.05	893.71	5,435.60	175.34	0.20	183.12	14.05	18.80
Nov 00	17,291.86	576.40	369	5,892.07	196.40	23,183.93	772.80	2,733.58	91.12	2,066.29	68.88	0.00	0.00	0.00	0.00	0.00	0.00	27,983.80	932.79	8,294.53	276.48	0.30	193.41	25.84	19.50
Dec 00	16,628.92	536.42	360	5,721.84	184.58	22,350.76	720.99	2,725.21	87.91	2,061.24	66.49	0.00	0.00	0.00	0.00	0.00	0.00	27,137.21	875.39	7,743.33	249.78	0.29	200.16	23.89	19.59
Jan 01	18,736.13	604.39	399	6,358.17	205.10	25,094.30	809.49	3,192.44	102.98	2,256.93	72.80	0.00	0.00	0.00	0.00	0.00	0.00	30,543.67	985.28	8,585.58	276.95	0.28	232.66	24.25	20.19
Feb 01	18,491.68	660.42	371	6,013.80	214.78	24,505.48	875.20	2,932.30	104.73	2,020.83	72.17	0.00	0.00	22.63	0.81	0.00	0.00	29,458.61	1,052.09	7,550.85	269.67	0.26	209.70	25.09	20.62
Mar 01	18,389.54	593.21	456	7,374.52	237.89	25,764.06	831.10	3,158.57	101.89	2,595.95	83.74	0.00	0.00	0.00	0.00	0.00	0.00	31,518.58	1,016.73	8,125.29	262.11	0.26	240.79	22.30	21.05
Apr 01	16,385.88	546.20	393	6,267.91	208.93	22,653.79	755.13	3,057.81	101.93	2,194.39	73.15	0.00	0.00	0.00	0.00	0.00	0.00	27,905.99	930.20	7,918.56	263.95	0.28	219.32	22.93	21.78
May 01	8,777.52	283.15	382	5,991.90	193.29	14,769.42	476.43	1,569.90	50.64	2,176.86	70.22	0.00	0.00	0.00	0.00	0.00	0.00	18,516.18	597.30	5,701.30	183.91	0.31	208.60	14.98	21.68
Jun 01	18,992.74	633.09	364	5,573.56	185.79	24,566.30	818.88	0.00	0.00	2,315.43	77.18	0.00	0.00	0.00	0.00	0.00	0.00	26,881.73	896.06	7,934.15	264.47	0.30	190.56	22.31	21.84
Jul 01	20,798.19	670.91	371	5,624.45	181.43	26,422.64	852.34	0.00	0.00	2,437.41	78.63	0.00	0.00	0.00	0.00	0.00	0.00	28,860.05	930.97	8,766.29	282.78	0.30	187.53	21.88	21.69
Aug 01	20,775.34	670.17	385	5,621.69	181.34	26,397.03	851.52	0.00	0.00	2,501.88	80.71	0.00	0.00	0.00	0.00	0.00	0.00	28,898.91	932.22	8,426.93	271.84	0.29	197.70	21.48	21.82
Sep 01	19,161.68	638.72	348	5,209.76	173.66	24,371.44	812.38	0.00	0.00	2,200.55	73.35	0.00	0.00	0.00	0.00	0.00	0.00	26,571.99	885.73	8,176.71	272.56	0.31	169.00	22.82	21.82
Total 01	212,038.22		4,532	70,703.28		282,741.50		22,294.00		26,946.27		0.00		22.63		0.00		331,981.77		92,659.12			2,432.55	261.81	
Average01	17,669.85	581.76	378	5,891.94	193.85	23,561.79	775.61	1,857.83	61.29	2,245.52	73.80	0.00	0.00	1.89	0.07	0.00	0.00	27,665.15	910.71	7,721.59	254.15	0.28	202.71	21.82	
Oct 01	20,379.01	657.39	370	5,534.50	178.53	25,913.51	835.92	0.00	0.00	2,305.17	74.36	0.00	0.00	0.00	0.00	0.00	0.00	28,218.68	910.28	6,727.09	217.00	0.24	188.14	14.87	21.89
Nov 01	18,791.62	626.39	366	5,662.29	188.74	24,453.91	815.13	0.00	0.00	2,205.50	73.52	0.00	0.00	0.00	0.00	0.00	0.00	26,659.41	888.65	7,414.02	247.13	0.28	197.67	22.10	21.57
Dec 01	18,995.06	612.74	372	5,716.14	184.39	24,711.20	797.14	0.00	0.00	2,282.05	73.61	0.00	0.00	0.00	0.00	0.00	0.00	26,993.25	870.75	8,014.20	258.52	0.30	186.97	23.87	21.57
Jan 02	21,146.97	682.16	416	6,597.23	212.81	27,744.20	894.97	0.00	0.00	2,393.67	77.22	0.00	0.00	0.00	0.00	0.00	0.00	30,137.87	972.19	8,124.15	262.07	0.27	235.98	21.87	21.37
Feb 02	19,033.84	679.78	362	5,827.00	208.11	24,860.84	887.89	0.00	0.00	2,225.23	79.47	0.00	0.00	0.00	0.00	0.00	0.00	27,086.07	967.36	7,355.20	262.69	0.27	199.16	22.72	21.18
Mar 02	21,388.13	689.94	424	6,647.97	214.45	28,036.10	904.39	0.00	0.00	2,487.14	80.23	0.00	0.00	0.00	0.00	0.00	0.00	30,523.24	984.62	7,455.75	240.51	0.24	214.94	21.88	21.14
Apr 02	22,061.82	735.39	419	6,475.94	215.86	28,537.76	951.26	0.00	0.00	2,600.72	86.69	0.00	0.00	0.00	0.00	0.00	0.00	31,138.48	1,037.95	8,089.54	269.65	0.26	248.63	22.04	21.07
May 02	17,538.90	565.77	383	5,691.56	183.60	23,230.46	749.37	0.00	0.00	2,522.53	81.37	0.00	0.00	0.00	0.00	0.00	0.00	25,752.99	830.74	7,265.80	234.38	0.28	207.91	19.31	21.43
Jun 02	6,827.76	227.59	395	6,082.16	202.74	12,909.92	430.33	0.00	0.00	2,468.99	82.30	0.00	0.00	0.00	0.00	0.00	0.00	15,378.91	512.63	3,610.66	120.36	0.23	183.79	6.95	20.15
Jul 02	21,292.03	686.84	426	6,691.30	215.85	27,983.33	902.69	0.00	0.00	2,608.19	84.14	0.00	0.00	0.00	0.00	0.00	0.00	30,591.52	986.82	8,632.40	278.46	0.28	196.93	21.76	20.14
Aug 02	21,366.64	689.25	392	6,022.19	194.26	27,388.83	883.51	0.00	0.00	2,464.26	79.49	0.00	0.00	0.00	0.00	0.00	0.00	29,853.09	963.00	8,373.36	270.11	0.28	196.70	21.82	20.17
Sep 02	20,926.76	675.06	374	5,845.75	188.57	26,772.51	863.63	0.00	0.00	2,277.03	73.45	0.00	0.00	0.00	0.00	0.00	0.00	29,049.54	937.08	8,687.89	280.25	0.30	193.45	23.21	20.20
Total 02	229,748.54		4,699	72,794.03		302,542.57		0.00		28,840.48		0.00		0.00		0.00		331,383.05		89,750.06			2,450.27	242.38	
Average02	19,145.71	627.36	392	6,066.17	198.99	25,211.88	826.35	0.00	0.00	2,403.37	78.82	0.00	0.00	0.00	0.00	0.00	0.00	27,615.25	905.17	7,479.17	245.09	0.27	204.19	20.20	
Oct 02	20,783.03	670.42	418	6,563.13	211.71	27,346.16	882.13	0.00	0.00	2,512.95	81.06	0.00	0.00	0.00	0.00	0.00	0.00	29,859.11	963.20	7,165.25	231.14	0.24	210.48	14.65	20.18
Nov 02	19,402.73	646.76	384	6,155.20	205.17	25,557.93	851.93	0.00	0.00	2,150.71	71.69	0.00	0.00	0.00	0.00	0.00	0.00	27,708.64	923.62	7,566.44	252.21	0.27	208.35	20.47	20.04
Dec 02	21,642.76	698.15	395	6,785.42	218.88	28,428.18	917.04	0.00	0.00	2,675.91	86.32	0.00	0.00	0.00	0.00	0.00	0.00	31,104.09	1,003.36	8,505.26	274.36	0.27	198.68	23.87	20.04
Jan 03	20,844.62	672.41	320	6,628.12	213.81	27,472.74	886.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,472.74	886.22	6,768.12	218.33	0.25	236.83	17.06	19.64
Feb 03	20,124.34	718.73	307	6,451.19	230.40	26,575.53	949.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26,575.53	949.13	7,267.98	259.57	0.27	211.58	21.43	19.54
Mar 03	24,129.00	778.35	389	8,205.28	264.69	32,334.28	1,043.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32,334.28	1,043.04	8,936.85	288.29	0.28	229.31	23.30	19.65
Apr 03	22,272.56	742.42	335	6,934.84	231.16	29,207.40	973.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29,207.40	973.58	8,212.96	273.77	0.28	232.25	22.51	19.69
May 03	21,440.00	691.61	311	6,373.03	205.58	27,813.03	897.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,813.03	897.19	8,507.66	274.44	0.31	203.34	22.98	20.00
Jun 03	21,341.82	711.39	292	6,111.42	203.71	27,453.24	915.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,453.24	915.11	8,796.12	293.20	0.32	176.59	22.72	21.31
Jul 03	22,393.41	746.45	307	6,476.41	215.88	28,869.82	962.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28,869.82	962.33	9,105.20	303.51	0.32	181.15	22.47	21.37
Aug 03	20,996.35	699.88	288	6,052.84	201.76	27,049.19	901.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,049.19	901.64	6,455.99	215.20	0.24	180.28	15.43	20.84
Sep 03	21,239.93	708.00	294	6,179.85	205.00	27,419.78	913.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27,419.78	913.99	9,332.65	311.09	0.34	182.61	23.88	20.90
Total 03	256,610.55		4,040	78,916.73		335,527.28		0.00		7,339.57		0.00		0.00		0.00		342,866.85		96,620.48			2,451.45	250.76	
Average03	21,384.21	707.05	337	6,576.39	217.40	27,960.61	924.44	0.00	0.00	611.63	19.92	0.00	0.00	0.00	0.00	0.00	0.00	28,572.24	944.37	8,051.71	266.26	0.28	204.29	20.90	

Pasco County Waste - to - Energy Tonnage Report

MONTH/ YEAR	WEST PASCO		EAST PASCO			TOTAL PASCO	DAILY AVG	HERNANDO		PLANT CITY		HILLSBOROUGH		SUMTER		CITRUS		PROCESSABLE WASTE		ASH		% ASH/ MSW	RECYCLING TOTAL TONS	MEGA	WATTS
	TONS	DAILY AVG	LOADS	TONS	DAILY AVG			WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	TOTAL TONS	DAILY AVG	TOTAL TONS	DAILY AVG			MONTHLY GEN.	12 MONTH ROLLING AVERAGE
Oct 97	15,513.19	500.43	319	5,216.93	168.29	20,730.12	668.71	3,119.90	100.64	1,936.72	62.47	0.00	0.00	0.00	0.00	0.00	0.00	25,786.74	831.83	5,223.16	168.49	0.20	235.81	14.49	20.28
Nov 97	14,299.33	476.64	304	5,155.36	171.85	19,454.69	648.49	3,034.16	101.14	1,706.09	56.87	0.00	0.00	0.00	0.00	0.00	0.00	24,194.94	806.50	5,852.15	195.07	0.24	230.99	19.14	20.27
Dec 97	13,768.74	444.15	361	5,930.27	191.30	19,699.01	635.45	3,188.62	102.86	2,273.56	73.34	0.00	0.00	423.40	13.66	0.00	0.00	25,584.59	825.31	5,362.75	172.99	0.21	278.83	15.14	19.49
Jan 98	13,853.89	446.90	367	6,275.10	202.42	20,128.99	649.32	3,079.81	99.35	2,045.54	65.99	0.00	0.00	0.00	0.00	0.00	0.00	25,254.34	814.66	6,292.45	202.98	0.25	315.48	18.76	19.05
Feb 98	16,107.24	575.26	353	5,767.77	205.99	21,875.01	781.25	3,194.20	114.08	1,930.89	68.96	0.00	0.00	0.00	0.00	0.00	0.00	27,000.10	964.29	5,368.49	191.73	0.20	254.59	17.69	18.70
Mar 98	13,627.77	439.81	395	6,359.52	205.15	19,987.29	644.75	3,042.53	98.15	2,326.96	75.06	0.00	0.00	0.00	0.00	0.00	0.00	25,356.78	817.96	5,561.54	179.40	0.22	297.38	15.66	18.42
Apr 98	11,339.37	377.98	341	5,784.79	192.83	17,124.16	570.81	3,094.58	103.15	1,925.08	64.17	0.00	0.00	0.00	0.00	0.00	0.00	22,143.82	738.13	5,821.09	194.04	0.26	300.49	17.16	18.15
May 98	13,124.30	423.36	273	4,855.94	156.64	17,980.24	580.01	3,002.18	96.84	1,883.42	60.76	0.00	0.00	110.49	3.56	1,883.42	60.76	22,865.82	737.61	6,529.26	210.62	0.29	247.54	20.18	18.04
Jun 98	21,583.05	719.44	301	4,656.96	155.23	26,240.01	874.67	3,055.19	101.84	2,062.02	68.73	0.00	0.00	0.00	0.00	0.00	0.00	31,357.22	1,045.24	8,580.40	286.01	0.27	239.95	22.71	18.47
Jul 98	18,401.73	593.60	326	5,104.27	164.65	23,506.00	758.26	3,262.17	105.23	2,086.57	67.31	0.00	0.00	0.00	0.00	0.00	0.00	28,854.74	930.80	7,506.85	242.16	0.26	234.88	19.58	18.38
Aug 98	19,112.60	616.54	290	4,594.11	148.20	23,706.71	764.73	3,104.06	100.13	1,949.60	62.89	0.00	0.00	0.00	0.00	0.00	0.00	28,760.37	927.75	8,059.42	259.98	0.28	207.90	20.56	18.39
Sep 98	23,347.27	778.24	307	4,900.80	163.36	28,248.07	941.60	3,131.08	104.37	2,050.15	68.34	0.00	0.00	0.00	0.00	0.00	0.00	33,429.30	1,114.31	7,785.87	258.86	0.23	210.17	18.96	18.34
Total 98	194,078.48		3,937	64,601.82		258,680.30		37,308.46		24,176.60		0.00		533.89		0.00		320,588.76		77,923.43			3,054.01	220.02	
Average98	16,173.21	532.68	328	5,383.49	177.16	21,556.69	709.84	3,109.04	102.32	2,014.72	66.24	0.00	0.00	44.49	1.44	0.00	0.00	26,715.73	879.53	6,493.62	213.53	0.24	254.50	18.34	
Oct 98	14,667.38	473.14	317	5,107.30	164.75	19,774.68	637.89	2,929.82	94.51	1,988.08	64.13	0.00	0.00	0.00	0.00	0.00	0.00	24,692.58	796.53	6,323.34	203.98	0.26	219.57	17.11	18.55
Nov 98	14,754.34	491.81	312	5,098.87	169.96	19,853.21	661.77	2,929.13	97.64	1,949.52	64.98	0.00	0.00	0.00	0.00	0.00	0.00	24,731.86	824.40	7,289.20	242.31	0.29	204.33	21.52	18.75
Dec 98	21,597.22	696.68	367	5,761.07	185.84	27,358.29	882.53	3,148.87	101.58	2,088.04	67.36	0.00	0.00	0.00	0.00	0.00	0.00	32,595.20	1,051.46	8,356.99	269.58	0.26	240.60	23.85	19.48
Jan 99	17,213.04	555.26	351	5,723.07	184.62	22,936.11	739.87	3,111.49	100.37	1,975.48	63.73	0.00	0.00	0.00	0.00	0.00	0.00	28,023.08	903.97	7,548.65	243.50	0.27	251.26	22.75	19.81
Feb 99	15,919.94	568.57	333	5,460.20	195.01	21,380.14	763.58	2,969.13	106.04	1,851.58	66.13	0.00	0.00	0.00	0.00	0.00	0.00	26,200.85	935.74	6,737.37	240.62	0.26	221.26	22.75	20.23
Mar 99	12,498.81	403.19	416	6,696.45	216.01	19,195.26	619.20	3,151.08	101.65	2,419.25	78.04	0.00	0.00	0.00	0.00	0.00	0.00	24,765.59	798.89	7,002.06	225.87	0.28	260.11	19.30	20.53
Apr 99	12,625.31	420.84	377	6,176.59	205.89	18,801.90	626.73	3,106.92	103.56	2,042.14	68.07	0.00	0.00	0.00	0.00	0.00	0.00	23,950.96	798.37	5,684.31	189.48	0.24	248.91	16.06	20.44
May 99	12,938.85	417.38	354	5,686.16	183.42	18,625.01	600.81	2,963.97	95.61	2,084.93	67.26	0.00	0.00	0.00	0.00	0.00	0.00	23,673.91	763.67	7,435.24	239.85	0.31	203.95	22.21	20.61
Jun 99	17,857.04	595.23	359	5,885.79	196.19	23,742.83	791.43	3,137.76	104.59	2,251.67	75.06	0.00	0.00	0.00	0.00	0.00	0.00	29,132.26	971.08	7,227.83	240.93	0.25	218.98	20.74	20.45
Jul 99	17,240.03	556.13	339	5,395.02	174.03	22,635.05	730.16	3,148.72	101.57	2,188.11	70.58	0.00	0.00	0.00	0.00	0.00	0.00	27,971.88	902.32	8,449.44	272.56	0.30	209.04	21.75	20.63
Aug 99	16,893.97	544.97	340	5,375.33	173.40	22,269.30	718.36	3,100.81	100.03	2,209.71	71.28	0.00	0.00	0.00	0.00	0.00	0.00	27,579.82	889.67	7,690.56	248.08	0.28	186.89	19.29	20.52
Sep 99	16,875.70	562.52	320	5,075.23	169.17	21,950.93	731.70	2,982.89	99.43	2,007.74	66.92	0.00	0.00	0.00	0.00	0.00	0.00	26,941.56	898.05	7,057.90	235.26	0.26	187.61	18.57	20.49
Total 99	191,081.63		4,185	67,441.08		258,522.71		36,680.59		25,056.25		0.00		0.00		0.00		320,259.55		86,782.89			2,652.51	245.90	
Average99	15,923.47	523.81	349	5,620.09	184.86	21,543.56	708.67	3,056.72	100.55	2,088.02	68.63	0.00	0.00	0.00	0.00	0.00	0.00	26,688.30	877.85	7,231.91	237.67	0.27	221.04	20.49	
Oct 99	16,738.73	539.96	314	5,112.79	164.93	21,851.52	704.89	2,859.87	92.25	1,943.69	62.70	0.00	0.00	0.00	0.00	0.00	0.00	26,655.08	859.84	6,832.63	220.41	0.26	207.51	19.73	20.71
Nov 99	17,242.98	574.77	357	5,864.02	195.47	23,107.00	770.23	3,037.05	101.24	2,172.97	72.43	0.00	0.00	0.00	0.00	0.00	0.00	28,317.02	943.90	6,693.56	223.12	0.24	214.00	17.47	20.37
Dec 99	16,957.57	547.02	385	5,315.04	171.45	22,272.61	718.47	3,038.67	98.02	2,169.89	70.00	0.00	0.00	0.00	0.00	0.00	0.00	27,953.58	901.73	7,544.87	243.38	0.27	225.58	22.80	20.29
Jan 00	12,242.34	394.91	398	5,282.65	170.41	17,524.99	565.32	3,095.89	99.87	2,153.40	69.46	0.00	0.00	0.00	0.00	0.00	0.00	22,774.28	734.65	5,889.26	189.98	0.26	232.19	17.09	19.81
Feb 00	16,712.88	576.31	369	5,689.54	196.19	22,402.42	772.50	3,040.37	104.84	2,199.44	75.84	0.00	0.00	0.00	0.00	0.00	0.00	27,651.06	953.48	6,731.59	232.12	0.24	224.02	19.85	19.57
Mar 00	11,229.95	362.26	437	7,051.21	227.46	18,281.16	589.71	3,051.84	98.45	2,612.41	84.27	0.00	0.00	344.35	11.11	0.00	0.00	23,945.41	772.43	6,118.54	197.37	0.26	234.57	17.18	19.40
Apr 00	7,270.13	242.34	360	5,817.43	193.91	13,087.56	436.25	3,113.98	103.80	2,154.97	71.83	0.00	0.00	745.56	24.85	0.00	0.00	18,356.51	611.88	5,211.05	173.70	0.28	203.28	14.17	19.24
May 00	9,788.71	315.76	355	5,511.32	177.78	15,300.03	493.55	3,108.73	100.28	2,305.37	74.37	0.00	0.00	61.88	2.00	0.00	0.00	20,714.13	668.20	6,240.40	201.30	0.30	212.88	16.22	18.74
Jun 00	15,809.18	526.97	356	5,510.25	183.68	21,319.43	710.65	3,044.94	101.50	2,392.46	79.75	0.00	0.00	0.00	0.00	1.33	0.04	26,758.16	891.94	7,323.91	244.13	0.27	201.77	20.35	18.71
Jul 00	18,885.82	609.22	337	5,295.40	170.82	24,181.22	780.04	3,034.37	97.88	2,214.45	71.43	0.00	0.00	0.00	0.00	0.00	0.00	29,430.04	949.36	9,161.76	295.54	0.31	177.34	23.74	18.87
Aug 00	19,200.72	619.38	357	5,619.19	181.26	24,819.91	800.64	3,089.27	99.65	2,369.22	76.43	0.00	0.00	0.00	0.00	0.00	0.00	30,278.40	976.72	7,895.82	254.70	0.26	192.78	19.83	18.92
Sep 00	17,725.67	590.86	320	5,115.02	170.50	22,840.69	761.36	3,052.37	101.75	2,109.21	70.31	0.00	0.00	0.00	0.00	0.00	0.00	28,002.27	933.41	8,350.79	278.36	0.30	177.28	22.88	20.82
Total 00	179,804.68		4,345	67,183.86		246,988.54		36,567.35		26,797.48		0.00		1,151.79		1.33		310,835.94		83,994.18			2,503.20	231.31	
Average00	14,983.72	491.65	362	5,598.66	183.66	20,582.38	675.30	3,047.28	99.96	2,233.12	73.24	0.00	0.00	95.98	3.16	0.11	0.00	25,903.00	849.80	6,999.52	229.51	0.27	208.60	19.28	

Pasco County Waste - to - Energy Tonnage Report

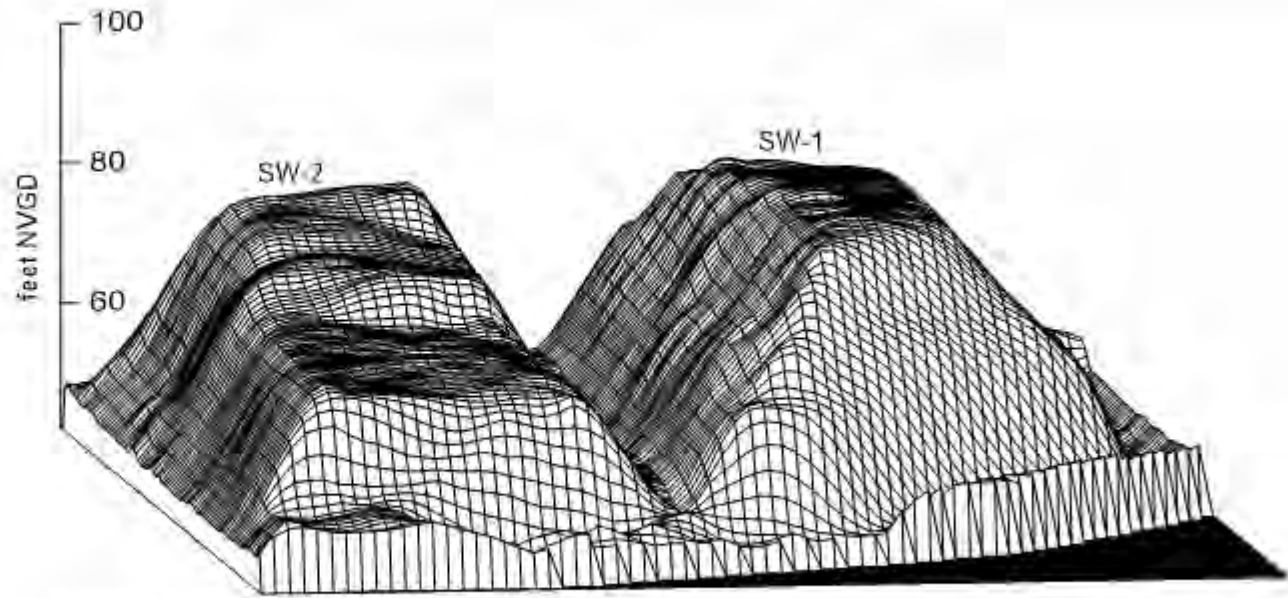
MONTH/ YEAR	WEST PASCO		EAST PASCO			TOTAL PASCO		HERNANDO		PLANT CITY		HILLSBOROUGH		SUMTER		CITRUS		PROCESSABLE WASTE		ASH		% ASH/ MSW	RECYCLING TOTAL TONS	MEGA WATTS	
	TONS	DAILY AVG	LOADS	TONS	DAILY AVG	TONS	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	TOTAL TONS	DAILY AVG	TOTAL TONS	DAILY AVG			TOTAL TONS	MONTHLY GEN.
Oct 94	14,407.73	464.77	351	4,671.27	150.69	19,079.00	615.45	3,982.91	128.48	1,890.34	60.98	98.64	3.18	0.00	0.00	0.00	0.00	25,050.89	808.09	5,579.46	179.98	0.22	288.76	16.86	20.36
Nov 94	15,177.29	505.91	372	4,197.78	139.93	19,375.07	645.84	4,263.10	142.10	1,962.63	65.42	708.69	23.62	0.00	0.00	0.00	0.00	26,309.49	876.98	5,486.86	182.90	0.21	291.18	18.18	20.37
Dec 94	14,446.17	466.01	343	4,139.39	133.53	18,585.56	599.53	4,313.13	139.13	1,992.92	64.29	0.00	0.00	0.00	0.00	255.16	8.23	25,146.77	811.19	5,728.08	184.78	0.23	327.20	17.68	19.86
Jan 95	15,532.24	501.04	383	5,158.95	166.42	20,691.19	667.46	4,199.45	135.47	1,985.48	64.05	0.00	0.00	0.00	0.00	610.19	19.68	27,486.31	886.66	6,217.08	200.55	0.23	372.24	22.07	20.06
Feb 95	13,835.23	494.12	352	4,772.94	170.46	18,608.17	664.58	4,119.76	147.13	1,832.32	65.44	0.00	0.00	0.00	0.00	149.69	5.35	24,709.94	882.50	5,672.81	202.60	0.23	367.19	21.93	19.79
Mar 95	15,822.50	510.40	449	6,424.61	207.25	22,247.11	717.65	4,478.00	144.45	2,384.91	76.93	0.00	0.00	0.00	0.00	178.47	5.76	29,288.49	944.79	6,549.00	211.26	0.22	363.29	20.92	19.77
Apr 95	13,789.48	459.65	348	5,157.32	171.91	18,946.80	631.56	4,120.89	137.36	1,826.70	60.89	0.00	0.00	0.00	0.00	171.93	5.73	25,066.32	835.54	5,928.42	197.61	0.24	302.73	19.38	19.76
May 95	15,618.54	503.82	388	5,002.19	161.36	20,620.73	665.18	4,389.81	141.61	2,193.90	70.77	0.00	0.00	0.00	0.00	123.46	3.98	27,327.90	881.55	8,208.70	264.80	0.30	330.18	24.40	19.72
Jun 95	19,424.06	647.47	381	5,111.87	170.40	24,535.93	817.86	4,293.56	143.12	2,148.55	71.62	0.00	0.00	0.00	0.00	139.01	4.63	31,117.05	1,037.24	7,353.06	245.10	0.24	251.31	22.19	19.71
Jul 95	19,479.32	628.37	318	4,535.67	146.31	24,014.99	774.68	3,934.16	126.91	1,887.64	60.89	0.00	0.00	0.00	0.00	88.58	2.86	29,925.37	965.33	7,734.42	249.50	0.26	295.78	22.60	20.01
Aug 95	15,868.49	511.56	330	5,149.31	166.11	21,007.80	677.67	4,494.02	144.97	2,020.03	65.16	0.00	0.00	0.00	0.00	0.00	0.00	27,521.85	887.80	6,870.29	221.62	0.25	254.67	21.08	20.20
Sep 95	14,737.82	491.26	289	4,611.45	153.72	19,349.27	644.98	4,095.58	136.52	1,850.68	61.69	0.00	0.00	0.00	0.00	0.00	0.00	25,295.53	843.18	6,634.04	221.13	0.26	247.85	20.31	20.63
Total 95	188,128.87		4,304	58,932.75		247,061.62		50,684.37		23,976.10		807.33		0.00		1,716.49		324,245.91		77,962.22			3,692.38	247.60	
Average 95	15,677.41	515.36	359	4,911.06	161.51	20,588.47	676.87	4,223.70	138.94	1,998.01	65.68	67.28	2.23	0.00	0.00	143.04	4.69	27,020.49	888.40	6,496.85	213.49	0.24	307.70	20.63	
Oct 95	16,079.27	518.69	320	5,034.19	162.39	21,113.46	681.08	3,229.60	104.18	1,959.09	63.20	0.00	0.00	0.00	0.00	0.00	0.00	26,302.15	848.46	5,541.49	178.76	0.21	276.19	16.13	20.57
Nov 95	14,526.70	484.22	299	4,820.69	160.69	19,347.39	644.91	2,829.74	94.32	1,816.22	60.54	0.00	0.00	0.00	0.00	0.00	0.00	23,993.35	799.78	5,378.12	179.27	0.22	293.26	17.54	20.52
Dec 95	13,596.36	438.59	303	4,804.90	155.00	18,401.26	593.59	3,210.21	103.56	1,756.42	56.66	0.00	0.00	0.00	0.00	0.00	0.00	23,367.89	753.80	6,041.48	194.89	0.26	283.84	20.89	20.79
Jan 96	15,862.19	511.68	371	5,813.67	188.83	21,675.86	700.51	3,431.25	110.69	2,106.00	67.94	0.00	0.00	0.00	0.00	0.00	0.00	27,213.11	879.13	5,919.14	190.94	0.22	350.14	18.89	20.52
Feb 96	14,971.99	482.97	331	5,176.54	168.73	20,148.53	651.69	3,047.05	98.29	1,918.30	61.88	0.00	0.00	0.00	0.00	0.00	0.00	25,113.88	811.87	6,198.76	199.96	0.25	314.45	20.50	20.40
Mar 96	15,746.96	507.97	388	6,012.91	195.35	21,759.87	703.32	3,300.10	106.45	2,267.71	73.15	0.00	0.00	0.00	0.00	0.00	0.00	27,327.68	882.93	5,538.52	178.66	0.20	313.39	17.81	20.14
Apr 96	9,594.15	319.05	368	5,940.16	198.77	15,534.31	517.81	3,450.23	115.01	2,194.25	73.14	0.00	0.00	8.38	0.27	0.00	0.00	21,187.17	705.96	6,254.83	208.49	0.30	311.02	16.92	19.94
May 96	15,652.22	504.91	328	5,282.66	170.41	20,934.88	675.32	3,328.94	107.39	2,033.24	65.59	0.00	0.00	865.56	27.92	0.00	0.00	27,162.62	848.29	7,042.57	227.18	0.27	313.00	21.83	19.72
Jun 96	13,282.79	442.76	294	4,701.98	156.73	17,984.77	599.49	2,626.43	87.55	1,963.87	65.46	0.00	0.00	0.00	0.00	0.00	0.00	22,575.07	752.50	6,302.25	210.08	0.28	247.86	17.50	19.33
Jul 96	17,962.39	579.43	315	5,103.98	164.64	23,066.37	744.08	2,833.37	91.40	2,014.94	65.00	0.00	0.00	0.00	0.00	0.00	0.00	27,914.68	900.47	7,652.38	246.85	0.27	258.72	20.33	19.14
Aug 96	15,468.23	498.98	294	4,767.27	153.78	20,235.50	652.76	2,162.20	69.75	1,880.41	60.66	0.00	0.00	0.00	0.00	0.00	0.00	24,278.11	783.16	5,805.77	187.28	0.24	243.24	15.72	18.70
Sep 96	12,924.52	430.82	275	4,411.09	147.04	17,335.61	577.85	3,061.97	102.07	1,820.53	60.68	0.00	0.00	423.40	14.11	0.00	0.00	22,218.11	740.60	4,763.68	158.79	0.21	231.86	17.30	18.45
Total 96	175,667.77		3,886	61,870.04		237,537.81		36,511.09		23,730.98		0.00		1,297.34		0.00		298,653.82		72,438.99			3,436.97	221.36	
Average 96	14,638.98	476.67	324	5,155.84	168.53	19,794.82	645.20	3,042.59	99.22	1,977.58	64.49	0.00	0.00	108.11	3.53	0.00	0.00	24,887.82	808.91	6,036.58	196.76	0.24	286.41	18.45	
Oct 96	8,347.99	269.29	313	5,152.42	166.21	13,500.41	435.50	3,413.86	110.12	1,908.43	61.56	0.00	0.00	0.00	0.00	0.00	0.00	18,822.70	607.18	3,416.82	110.22	0.18	262.32	9.22	17.87
Nov 96	14,253.41	475.11	291	4,810.80	160.36	19,064.21	635.47	3,058.57	101.95	1,705.99	56.87	0.00	0.00	0.00	0.00	0.00	0.00	23,828.77	794.29	5,969.59	198.99	0.25	238.55	19.20	18.01
Dec 96	14,937.82	481.87	331	5,391.65	173.92	20,329.47	655.79	3,199.32	103.20	2,043.84	65.93	0.00	0.00	0.00	0.00	0.00	0.00	25,572.63	824.92	7,633.12	246.23	0.30	253.60	24.50	18.31
Jan 97	18,161.10	585.84	340	5,672.94	183.00	23,834.04	768.84	2,988.49	96.40	1,973.31	63.66	0.00	0.00	0.00	0.00	0.00	0.00	28,796.84	928.90	7,908.32	255.11	0.27	304.05	24.07	18.74
Feb 97	17,896.49	639.16	330	5,553.84	198.35	23,450.33	837.51	3,018.93	107.82	1,846.97	65.96	0.00	0.00	0.00	0.00	0.00	0.00	28,316.23	1,011.29	6,817.52	243.48	0.24	272.77	21.95	18.86
Mar 97	16,798.43	541.88	388	6,375.02	205.65	23,173.45	747.53	3,073.09	99.13	2,355.20	75.97	0.00	0.00	0.00	0.00	0.00	0.00	28,601.74	922.64	6,661.59	214.89	0.23	292.17	18.99	18.96
Apr 97	16,015.13	533.84	357	5,977.89	199.26	21,993.02	733.10	2,994.22	99.81	1,984.78	66.16	0.00	0.00	0.00	0.00	0.00	0.00	26,972.02	899.07	6,553.14	218.44	0.24	312.30	20.33	19.25
May 97	17,855.62	575.99	333	5,425.18	175.01	23,280.80	75.10	3,027.34	97.66	2,044.91	65.96	0.00	0.00	0.00	0.00	0.00	0.00	28,353.05	914.61	7,398.35	238.66	0.26	263.13	21.58	19.22
Jun 97	15,857.61	528.59	297	4,737.35	157.91	20,594.96	686.50	3,017.91	100.60	1,923.47	64.12	0.00	0.00	0.00	0.00	0.00	0.00	25,536.34	851.21	5,971.90	199.06	0.23	237.52	17.47	19.22
Jul 97	22,055.62	711.47	316	5,087.14	164.10	27,142.76	875.57	2,976.83	96.02	1,990.92	64.22	0.00	0.00	0.00	0.00	0.00	0.00	32,110.31	1,035.82	7,784.94	251.13	0.24	262.95	20.74	19.26
Aug 97	17,182.96	554.29	307	4,975.13	160.49	22,158.09	714.78	3,024.31	97.56	1,884.15	60.78	0.00	0.00	0.00	0.00	0.00	0.00	27,066.55	873.11	7,293.32	235.27	0.27	221.49	20.39	19.65
Sep 97	14,555.66	485.19	272	4,816.07	160.54	19,371.73	645.72	3,196.86	106.56	1,966.71	65.56	0.00	0.00	0.00	0.00	0.00	0.00	24,535.30	817.84	6,666.79	222.23	0.27	219.33	19.63	19.84
Total 97	193,917.84		3,875	63,975.43		257,893.27		36,989.53		23,628.68		0.00		0.00		0.00		318,511.48		80,075.40			3,140.18	238.08	
Average 97	16,159.82	531.88	323	5,331.29	175.40	21,491.11	650.95	3,082.46	101.40	1,969.06	64.73	0.00	0.00	0.00	0.00	0.00	0.00	26,542.62	873.41	6,672.95	219.47	0.25	261.68	19.84	

Pasco County Waste - to - Energy Tonnage Report

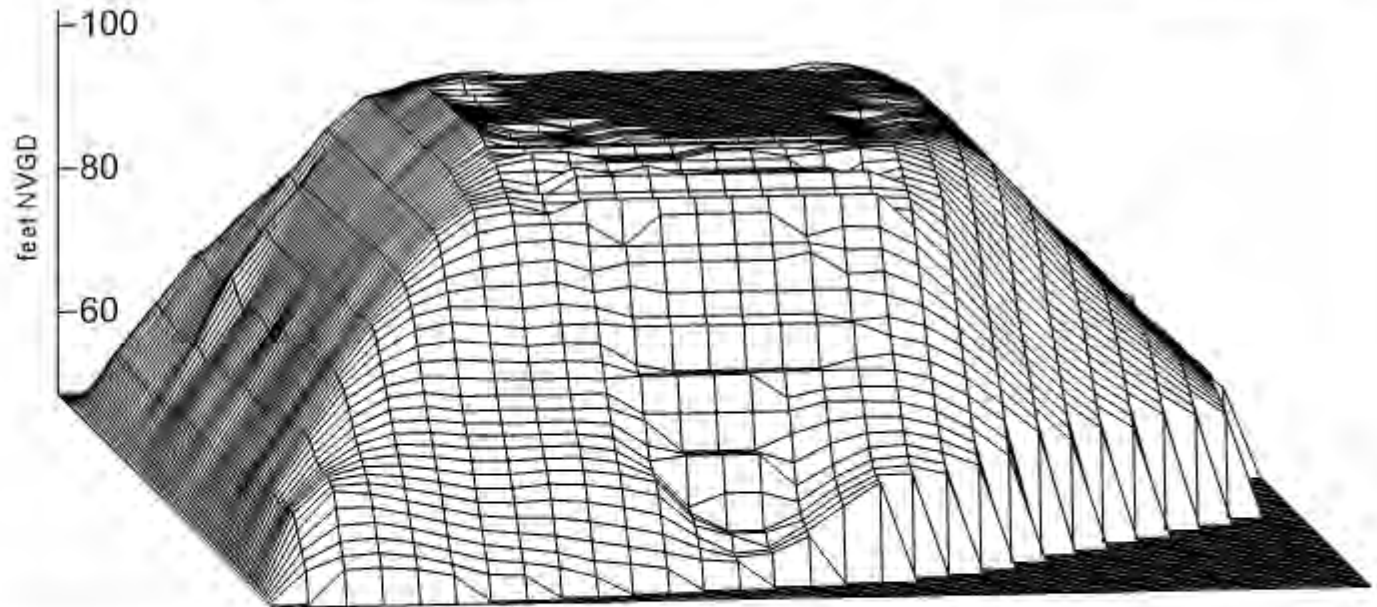
MONTH/ YEAR	WEST PASCO		EAST PASCO			TOTAL PASCO		HERNANDO		PLANT CITY		HILLSBOROUGH		SUMTER		CITRUS		PROCESSABLE WASTE		ASH		% ASH/ MSW	RECYCLING TOTAL TONS	MEGA WATTS	
	TONS	DAILY AVG	LOADS	TONS	DAILY AVG	TONS	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	WASTE	DAILY AVG	TOTAL TONS	DAILY AVG	TOTAL TONS	DAILY AVG			MONTHLY GEN.	12 MONTH ROLLING AVERAGE
18-28 Feb	4,053.12	405.31		0.00		4,053.12	405.31					0.00	0.00					4,053.12	405.31						
Mar 91	16,907.78	545.41		0.00		16,907.78	545.41	3,068.83	98.99			6,426.51	207.31					24,611.61	793.92	6,698.98	216.10	0.27		12.47	12.47
Apr 91	17,718.31	590.61		0.00		17,718.31	590.61	3,178.99	105.97			10,825.37	360.85					31,722.72	1,057.42	8,056.29	268.54	0.25		24.46	18.47
May 91	15,227.39	491.21	173	3,192.78	102.99	18,420.17	594.20	3,246.11	104.71			5,963.20	192.36					27,610.76	890.67	6,401.68	206.51	0.23		17.50	18.14
Jun 91	12,699.35	423.31	178	3,329.09	110.97	16,028.44	534.28	2,903.51	96.78			9,774.19	325.81					28,701.27	956.71	5,991.98	199.73	0.21		17.69	18.03
Jul 91	15,178.62	489.63	197	3,724.71	120.15	18,903.33	609.78	3,242.08	104.58			0.00	0.00					22,243.20	717.52	5,931.36	191.33	0.27		14.12	17.25
Aug 91	13,557.21	437.33	197	3,667.97	118.32	17,225.18	555.65	3,075.85	99.22			0.00	0.00					21,282.58	686.53	4,913.84	158.51	0.23		11.73	16.33
Sep 91	12,519.74	417.32	175	3,224.85	107.50	15,744.59	524.82	2,821.20	94.04			0.00	0.00					18,560.77	618.69	5,004.74	166.82	0.27		12.33	15.76
FY 91 Total	107,861.52		920	17,139.40		125,000.92		21,536.57		0.00		32,989.27		0.00		0.00		178,786.03		42,998.87					
Avg 91	13,482.69	475.02	184	3,427.88	111.99	15,625.12	545.01	3,076.65	100.61	0.00	0.00	4,123.66	135.79	0.00	0.00	0.00	0.00	22,348.25	765.85	6,142.70	201.08	0.22	0.00	15.76	
Oct 91	13,330.25	430.01	205	3,703.70	119.47	17,033.95	549.48	3,132.10	101.04			0.00	0.00					20,166.05	650.52	5,014.97	161.77	0.25		13.02	15.42
Nov 91	12,304.70	410.16	200	3,640.34	121.34	15,945.04	531.50	3,011.60	100.39			0.00	0.00					18,958.64	631.89	4,901.05	163.37	0.26		12.75	15.12
Dec 91	13,358.52	430.92	222	4,006.46	129.24	17,364.98	560.16	3,454.76	111.44			362.46	11.69					21,182.20	683.30	5,260.35	169.69	0.25		14.40	15.05
Jan 92	12,932.55	417.18	214	3,927.84	126.70	16,860.39	543.88	2,981.51	96.18			2,184.48	70.47					22,026.38	710.53	4,338.38	139.95	0.20	85.10	12.12	14.78
Feb 92	12,319.20	424.80	217	3,972.12	136.97	16,291.32	561.77	3,118.89	107.55			9,659.64	333.09					29,069.85	1,002.41	5,250.87	181.06	0.18	319.07	16.66	14.94
Mar 92	14,249.17	459.65	244	4,552.57	146.86	18,801.74	606.51	3,276.08	105.68			5,315.29	171.46					27,393.11	883.65	7,176.99	231.52	0.26	425.94	23.19	15.83
Apr 92	13,754.38	458.48	232	4,308.04	143.60	18,062.42	602.08	3,041.60	101.39			2,686.85	89.56					23,790.67	793.02	6,972.81	232.43	0.29	466.79	22.65	15.68
May 92	12,264.89	395.64	191	3,520.80	113.57	15,785.49	509.21	2,813.53	90.76			2,313.76	74.64					20,912.78	674.61	4,830.07	155.81	0.23	361.03	14.25	15.41
Jun 92	12,967.26	432.24	211	3,958.16	131.94	16,925.42	564.18	3,067.43	102.25			0.00	0.00					19,992.85	666.43	5,387.98	179.60	0.27	378.22	15.88	15.26
Jul 92	13,892.87	448.16	211	3,911.61	126.18	17,804.48	574.34	3,071.13	99.07			836.46	26.98					21,712.07	700.39	4,855.30	156.62	0.22	348.08	13.43	15.20
Aug 92	12,885.77	415.67	296	3,633.84	117.22	16,519.61	532.89	3,097.52	99.92	1,893.63	61.08	0.00	0.00					21,510.76	693.90	5,161.20	166.49	0.24	335.59	14.10	15.40
Sep 92	14,007.54	466.92	266	3,839.77	127.99	17,847.31	594.91	2,972.44	99.08	1,205.32	40.18	0.00	0.00					22,025.07	734.17	4,768.92	158.96	0.22	311.06	14.37	15.57
FY 92 Total	158,266.90		2,709	46,979.63		205,242.15		37,038.59		3,098.95		23,358.74		0.00		0.00		268,738.43		63,918.89			3,030.88		
Avg 92	13,188.91	431.27	226	3,914.97	128.09	17,103.51	559.37	3,086.55	100.96	1,549.48	49.98	1,946.56	64.82	0.00	0.00	0.00	0.00	22,394.87	733.43	5,326.57	174.35	0.24	306.76	15.57	
Oct 92	13,820.45	445.82	307	3,963.59	127.86	17,784.04	573.68	3,086.68	99.57	1,835.99	59.23	0.00	0.00					22,706.71	732.47	5,732.29	184.91	0.25	330.65	18.19	16.00
Nov 92	12,844.65	428.16	296	3,873.59	129.12	16,718.24	557.27	2,813.61	93.79	1,675.25	55.84	0.00	0.00					21,207.10	706.90	4,744.61	158.15	0.22	327.21	15.91	16.26
Dec 92	13,952.95	450.10	340	4,524.99	145.97	18,477.94	596.06	3,172.69	102.34	1,836.21	59.23	0.00	0.00					23,486.84	757.64	6,027.57	194.44	0.26	394.49	20.61	16.78
Jan 93	14,511.09	468.10	336	4,690.22	150.97	19,191.31	619.07	3,105.46	100.18	1,717.00	55.39	0.00	0.00					24,013.77	774.64	4,582.85	147.83	0.19	403.40	15.26	17.04
Feb 93	12,860.23	459.29	329	4,400.40	157.16	17,260.63	616.45	2,812.66	100.45	1,754.95	62.68	10,365.70	370.20					32,193.94	1,149.78	6,677.80	238.49	0.21	351.45	25.21	17.75
Mar 93	20,442.55	659.44	425	5,523.22	178.17	25,965.77	837.61	3,550.74	114.54	2,383.09	76.87	2,496.71	80.54					34,396.31	1,109.56	6,917.25	223.14	0.20	388.59	22.47	17.69
Apr 93	14,350.83	478.36	398	5,385.90	179.53	19,736.73	657.89	3,029.59	100.99	2,140.29	71.34	559.56	18.65					25,466.17	848.87	6,300.48	210.02	0.25	393.39	18.14	17.32
May 93	16,555.74	534.06	314	4,051.66	130.70	20,607.40	664.75	3,243.91	104.64	1,935.93	62.45	0.00	0.00					25,787.24	831.85	8,898.99	287.06	0.35	334.93	22.83	18.03
Jun 93	17,470.90	582.36	347	4,486.14	149.54	21,957.04	731.90	3,100.41	103.35	2,119.67	70.66	0.00	0.00					27,177.12	905.90	7,408.24	246.94	0.27	300.71	21.80	18.53
Jul 93	14,812.00	477.81	338	4,416.54	142.47	19,228.54	620.28	3,300.43	106.47	1,968.54	63.50	0.00	0.00					24,497.51	790.24	7,274.59	234.66	0.30	319.01	19.76	19.05
Aug 93	18,830.70	607.44	329	4,249.85	139.57	23,157.41	747.01	3,351.78	108.12	2,012.79	64.93	0.00	0.00					28,521.98	917.58	7,098.03	228.97	0.25	293.33	16.41	19.25
Sep 93	15,044.07	501.47	330	4,286.37	142.88	19,330.44	644.35	2,951.91	98.40	1,933.21	64.44	1,965.95	65.53					26,181.51	872.72	5,587.31	186.24	0.21	334.25	14.99	19.30
FY 93 Total	185,496.16		4,089	53,842.47		239,415.49		37,519.87		23,312.92		15,387.92		0.00		0.00		315,636.20		77,250.01			4,169.40		
Avg 93	15,458.01	507.70	341	4,486.87	147.83	19,951.29	655.53	3,126.66	102.74	1,942.74	63.88	1,282.33	44.58	0.00	0.00	0.00	0.00	26,303.02	866.51	6,437.50	211.74	0.25	347.45	19.30	
Oct 93	14,000.00	451.61	326	4,298.58	138.66	18,298.58	590.28	4,235.13	136.62	1,789.09	57.71	1,813.68	58.51					26,136.48	843.11	6,887.85	222.19	0.26	315.90	23.28	19.72
Nov 93	14,574.27	470.14	352	4,617.90	148.96	19,192.17	619.10	4,561.22	147.14	1,971.55	63.60	0.00	0.00					25,724.93	829.84	5,855.62	188.89	0.23	312.81	18.00	19.90
Dec 93	13,755.38	443.72	346	4,718.35	152.20	18,473.73	595.93	4,551.29	146.82	1,761.89	56.84	1,725.87	55.67					26,512.78	855.25	7,010.32	226.14	0.26	369.30	23.85	20.17
Jan 94	14,167.95	457.03	369	6,949.93	224.19	21,117.88	681.22	4,648.73	149.96	1,921.56	61.99	0.00	0.00					27,688.17	893.17	5,577.37	179.92	0.20			

ATTACHMENT 6  
Grid Volume Calculations for Merged SW-1 and SW-2  
Cells

2019 Contours



Approximate Buildout Contours



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# Grid Volume Computations

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Wed Mar 27 13:04:11 2019

## Upper Surface

Grid File Name: C:\Users\jason\OD\Pasco\Solid Waste Facilities Compliance Assistance  
(TO 1-19)\Landfill Useful Life\SW1and2\Buildout.grd  
Grid Size: 100 rows x 72 columns

X Minimum: 1470264.85  
X Maximum: 1471188.658  
X Spacing: 13.01138028169

Y Minimum: 476067.0127  
Y Maximum: 477361.1126  
Y Spacing: 13.071716161616

Z Minimum: 48.517848349793  
Z Maximum: 104.65246986107

## Lower Surface

Grid File Name: C:\Users\jason\OD\Pasco\Solid Waste Facilities Compliance Assistance  
(TO 1-19)\Landfill Useful Life\SW1and2\SW1 and 2 bottom digitized.grd  
Grid Size: 100 rows x 72 columns

X Minimum: 1470279.551  
X Maximum: 1471159.941  
X Spacing: 12.399859154931

Y Minimum: 476102.8426  
Y Maximum: 477353.9757  
Y Spacing: 12.637708080808

Z Minimum: 40.002282092702  
Z Maximum: 61.746376197676

## Volumes

Z Scale Factor: 1

### Total Volumes by:

Trapezoidal Rule: 24372317.454845  
Simpson's Rule: 24371804.137753  
Simpson's 3/8 Rule: 24372134.682391



## Cut & Fill Volumes

Positive Volume [Cut]:	24456384.72056 (~ 900,000 cubic yards)
Negative Volume [Fill]:	84067.26571527
Net Volume [Cut-Fill]:	24372317.454845

## Areas

### Planar Areas

Positive Planar Area [Cut]:	892647.04424142
Negative Planar Area [Fill]:	23925.181380842
Blanked Planar Area:	184912.84428693
Total Planar Area:	1101485.0699092

### Surface Areas

Positive Surface Area [Cut]:	932765.6521539
Negative Surface Area [Fill]:	24447.280035483