Smith, George

From:	Perez Lopez, Sara <sperezlopez@scsengineers.com></sperezlopez@scsengineers.com>
Sent:	Tuesday, April 12, 2022 12:03 PM
То:	SWD_Waste; Madden, Melissa; Tafuni, Steven
Cc:	Fischer, Shane; christopher.simpron@hardeecounty.net; Ofelia.Reyna@hardeecounty.net
Subject:	Hardee County Landfill Annual Site Life Report
Attachments:	Hardee County Landfill Annual Site Life 2022.pdf

EXTERNAL MESSAGE

This email originated outside of DEP. Please use caution when opening attachments, clicking links, or responding to this email.

Good afternoon,

In accordance with Permit No. 38414-016-SO/01, please find attached the Hardee County Landfill Remaining Disposal Capacity and Site Life calculations for Reporting Year 2022.

Please let me know if you have any questions or need any additional information.

Thank you,

Sara Perez Lopez Associate Professional SCS Engineers 3922 Coconut Palm Drive, Suite 102 Tampa, FL 33619 813-804-6707 <u>SPerezLopez@scsengineers.com</u>

SCS ENGINEERS

April 12, 2022 File No. 9199033.30

Mr. James Jarmolowski, P.G. Florida Department of Environmental Protection Solid Waste Section, MS 4565 2600 Blair Stone Road Tallahassee, Florida 32399

Subject: Remaining Disposal Capacity and Site Life – Reporting Year 2022 Hardee County Landfill Permit No.: 38414-016-S0/01

Dear Mr. Jarmolowski:

On behalf of the Hardee County Solid Waste Division (County), SCS Engineers (SCS) has prepared the remaining disposal capacity and site life estimate for the Hardee County Landfill in accordance with Rule 62-701.500(13)(c) and Section 2 - Specific Condition Part C.14.b of the facility's solid waste operation permit. As required by the Specific Condition an aerial topographic survey of the landfill was conducted on February 22, 2022 by Pickett and Associates, Inc. (Pickett) and was used in the preparation of the site life calculations. Please refer to Attachment A for a copy of the Pickett Survey.

Based on the attached calculations, there is approximately 741,528 CY of remaining capacity in Phase II Section II as of the date of the Pickett survey. The anticipated closure year is mid June 2044. Please refer to Attachment B for the remaining life and capacity calculations.

If you have any questions regarding the information contained herein, please contact the undersigned at (813) 503-1044.

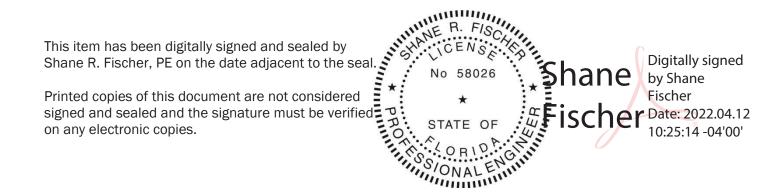
Sincerely,

Shane R. Fischer, P.E. Vice President/Office Manager SCS Engineers

SRF/SVPL

Sara Perez Lopez Associate Professional SCS Engineers

cc: Christopher Simpron, Hardee County Ofelia Reyna, Hardee County



ATTACHMENT A

PICKETT TOPOGRAPHIC SURVEY

SURVEYOR'S REPORT

HARDEE COUNTY LANDFILL PHASE II SECTIONS I & II

Prepared for:



Hardee County Solid Waste Division

Prepared by:



PICKETT AND ASSOCIATES PROJECT NO.: 22-000-1149 TITLE/TYPE OF SURVEY: Topographic Survey DATE OF SURVEY: This Map is based on LiDAR data & aerial imagery flown 02/22/22

NOTE: THIS REPORT AND ACCOMPANYING MAP TITLED HARDEE COUNTY LANDFILL, ARE NOT FULL AND COMPLETE WITHOUT THE OTHER AND ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

DATUM:

HORIZONTAL:

Coordinates are referenced to the West Zone of the Florida State Plane Coordinate System, NAD 83, 2011 adjustment.

VERTICAL:

Elevations are to the North American Vertical Datum 1988.

Control	Points	Used:

Pt#	Northing	Easting	Elevation
5102	1175859.48	726451.59	82.72
5104	1176047.37	725992.57	82.49
5107	1177264.94	725953.55	83.16
5111	1177333.36	726478.65	140.3

ACCURACY STATEMENT: The following stated plus or minus tolerances encompass a minimum of 90% of the difference between photogrammetrically measured values and any ground truth of all well-identified features. Mapped features will meet or exceed the Florida Standards of Practice.

VERTICAL:

Contours have an estimated vertical positional accuracy of 0.5'. Spot elevations have an estimated vertical positional accuracy of 0.25'.

HORIZONTAL:

Well-identified features have an estimated horizontal positional accuracy of 1.66', as per Florida Standards of Practice. All measurements are in U.S. Survey Feet.

Measurement Methods:

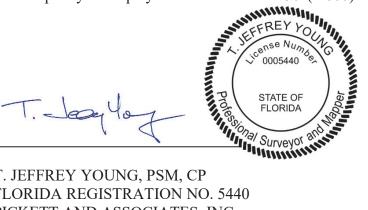
Color digital imagery was acquired at an average altitude of 2000' using a metric precision digital camera whose focal length is 70.3mm. The planimetrics shown are limited to those features visible on aerial imagery. Mapping was performed using LiDAR and softcopy photogrammetric techniques. The LiDAR data has an estimated point sample distance of 0.558 foot and a density of 3.209 points per square foot (\pm 34.541 points per square meter). For a vertical accuracy check, the LiDAR data was compared to the four (4) points set as targets for aerial imagery. The Root Mean Square Error of the Elevations (RMSEZ) is 0.055 foot, being the equivalent of 0.107' FGDC/NSSDA Vertical Accuracy. All measurements are in U.S. Survey Feet.

Limitations:

This mapping should be used for preliminary design work only and should not replace an actual field survey where the required accuracy is greater than the accuracy stated in this report. No responsibility is assumed for areas outside the contracted scope.

MAP PLOTTING:

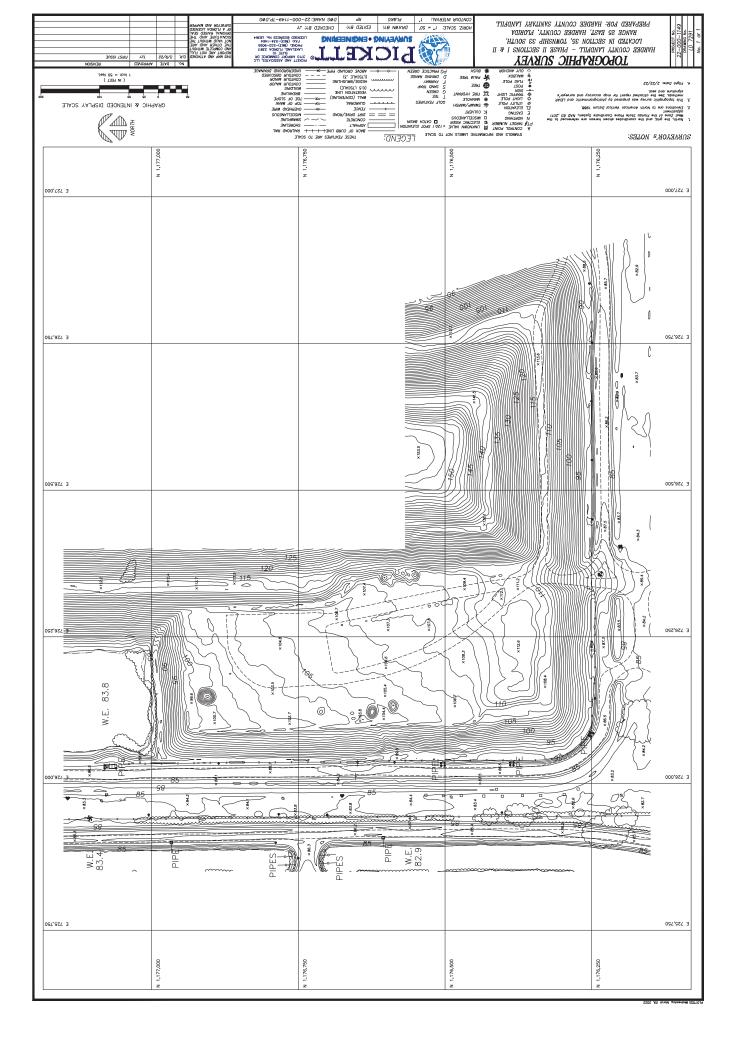
This map may be displayed at a scale of 1'' = 50' (1:600) or smaller.



2/22/22

T. JEFFREY YOUNG, PSM, CP FLORIDA REGISTRATION NO. 5440 PICKETT AND ASSOCIATES, INC. FLORIDA REGISTRATION NO. 364

SURVEY DATE



ATTACHMENT B

REMAINING LIFE AND CAPACITY CALCULATIONS

				SCS ENGINEERS				
						SHEET	1	OF
IT				PROJECT			JOB NO.	
ee County				Annual Remaining	Life Estimate Phase	II Section II	09199033.30	
ECT						BY		DATE
ee County Land	fill Annual Remair	ning Life Estimate				SVPL		3/30/2022
orting Year 2022	2					CHECKED		DATE
						SRF		4/8/2022
	1					1		REMAINING
REPORTING YEAR	MONTH	POPULATION ¹	WASTE DISPOSED (tons) ²	WASTE DISPOSED (tons/yr) ²	WASTE DISPOSED (tons/day)	WASTE DISPOSED (tons/capita/yr)	AIRSPACE CONSUMED (CY)	CAPACITY PHASE II SECTION II (CY)
2012		27,627		16,237	53.1	0.59		(01)
2013		27,682		17,243	56.3	0.62		
2014		27,712		16,981	55.5	0.61		
2015		27,645		18,200	59.5	0.66		
2016		27,637		19,379	63.3	0.70		
2017		27,426		20,562	67.2	0.75		
2018		27,425		21,387	69.9	0.78	36,465	884,021
2019		27,512		20,742	67.8	0.75	35,365	848,656
2020		27,651		21,240	69.4	0.77	36,215	812,441
2021		27,751		22,230	72.6	0.80	36,214	776,227
2022		27,807		21,404	69.9	0.77	34,699	741,528
2023		27,832		19,697	64.4	0.71	34,166	707,362
2024		27,843		19,705	64.4	0.71	34,180	673,183
2025		27,855		19,713	64.4	0.71	34,194	638,989
2026		27,879		19,730	64.5	0.71	34,224	604,765
2027		27,914		19,755	64.6	0.71	34,267	570,498
2028		27,955		19,784	64.7	0.71	34,317	536,181
2029		28,000		19,816	64.8	0.71	34,372	501,809
2030		28,043		19,846	64.9	0.71	34,425	467,384
2031		28,081		19,873	64.9	0.71	34,472	432,912
2032		28,115		19,897	65.0	0.71	34,513	398,399
2033		28,146		19,919	65.1	0.71	34,552	363,847
2034		28,175		19,939	65.2	0.71	34,587	329,260
2035		28,203		19,959	65.2	0.71	34,621	294,638
2036		28,231		19,979	65.3	0.71	34,656	259,983
2037		28,260		20,000	65.4	0.71	34,691	225,291
2038		28,288		20,019	65.4	0.71	34,726	190,565
2039		28,317		20,040	65.5	0.71	34,761	155,804
2040		28,345		20,060	65.6	0.71	34,796	121,008
2041		28,372		20,079	65.6	0.71	34,829	86,179
2042		28,399		20,098	65.7	0.71	34,862	51,317
2043		28,426		20,117	65.7	0.71	34,895	16,422
2044		28,452		20,136	65.8	0.71	34,927	-18,505
	1/1/2044						2,911	13,51
	2/1/2044						2,911	10,60
	3/1/2044						2,911	7,69
	4/1/2044						2,911	4,77
	5/1/2044						2,911	1,86
	6/1/2044						2,911	-1,04

Airspace consumed June 2044

Tons per Capita:	0.71	Average 2014 - 2021
		-
Gross Airspace Available (Design Volume) =	884,021	CY
Waste Density ³ =	1,173	lbs/CY
Waste Density =	0.58	tons/CY
2015 - 2022 average tons/day =	67.10	tons/day
Operating Days/Year =	306	days/year

SOURCES:

1. Based on the results from the Florida Demographic Estimating Conference, December 2017 and UF, BEBR, Florida Population Studies, Volume 51, Bulletin 180, January 2018 medium county projections.

2. Waste quantity disposed in landfill provided by Hardee County through February 2022.

3. In-place density assumed to be the last actual calculated value based on comparing the topographic survey conducted by Pickett dated March 22, 2013 and the topographic survey conducted by Pickett dated April 3, 2012 per the Estimate of Remaining Capacity and Life of Site report submitted by SCS dated June 28, 2013.