



Agenda Report

2725 Judge Fran Jamieson
Way
Viera, FL 32940

Unfinished Business

I.1.

1/12/2021

Subject:

Request the Board of County Commissioners to provide direction to staff regarding the US Army Corp of Engineer Environmental Resource Permit signature.

Fiscal Impact:

The fiscal impacts are detailed in the Report based on available options.

Dept/Office:

Solid Waste Management Department

Requested Action:

It is requested that the Board of County Commissioners provide direction to the Solid Waste Management Department about signing the US Army Corp of Engineer ERP Permit for the US192 Project or give other direction to the Department regarding the disposal of Class III materials in the south area of the county.

Summary Explanation and Background:

The Financial Responsibility & Long-Term Care Estimates report submitted to the Florida Department of Environmental Protection in August 2020 estimates that the Sarno Road Class III landfill will run out of disposal capacity in January 2023. In March 2019 the Solid Waste Management Department received the Environmental Resource Permit from the US Army Corps of Engineers for development of a Class III solid waste management facility at the US192 site. In April 2019 the Board of County Commissioners directed staff to delay signing of the permit and bring it back to the Board in 90 days. In July 2019 the Board tabled the matter pending receipt of additional information regarding the replacement of the Sarno Road Landfill including possible acquisition of the privately-owned Melbourne Landfill. In October 2019 additional information was provided to the Board, however the information was considered insufficient to formulate a decision regarding the Sarno Landfill, and the proposed US 192 Class III landfill.

Under Board direction staff have since collected additional property appraisals, environmental assessments, financial and economic data, and other information to assist in the Board's decision making for the next course of action. A detailed report regarding the Melbourne Landfill is attached. The Board had previously scheduled a Workshop to be held on January 21, 2021 to review all available information, to discuss options and provide staff needed direction regarding future Class III disposal. Based on the costs associated with possibly acquiring the privately-owned Melbourne Landfill as outlined in the report, as well as other information in the report, the possibility exists that the Board may be able to provide the needed direction based on this agenda report and cancel the workshop as it would no longer be needed.

To that end staff has outlined below various optional direction the Board could consider at this time:

Option 1) Proceed with final permitting activity and construction of the US 192 Class III landfill including signing and returning the Environmental Resource Permit culminating in the development of the US192 site. Previous economic analyses have demonstrated that development of the US192 site gives the longest lifespan and lowest cost-per-cubic-yard-of-capacity of all analyzed alternatives. The Board has previously expressed concern regarding the appearance of a landfill as tourists enter Brevard County from Osceola County. Prior to halting design activities related to the development of the US192 site, a landscape architect provided detailed depictions of the proposed landscaping design along US192, showing how the design layout blocks visibility of the landfill from US192. The landscape rendering includes the Class III landfill at full design capacity, which is 202 acres with a height of 311 feet above sea level. The proposed Cell One to be initially constructed is 28 acres with a maximum height of 106 feet above sea level (or about 81 feet high above existing ground surface). With the site frontage landscaping installed as part of the initial site development and infrastructure construction, further construction and operation of the Class III landfill would not be visible from US192. The Board may choose to move forward on this option, placing an overall 106-foot elevation restriction (81 feet above ground surface) on the entire Class III landfill construction which, will result in a life expectancy of about 35 years. This option would eliminate the need for the January 21, 2021 Board Workshop on Solid Waste.

Option 2) Redirect all Class III solid waste to the Central Disposal Facility.

While costlier than Option 1, when the Sarno Road Class III landfill reaches full capacity in 2023, redirect all Class III waste generated in the South Service Area to be disposed in a different location (not US192). If redirecting the waste to the Central Disposal Facility Class I landfill was performed utilizing the existing Sarno Road Transfer Station, the result would be an increased cost due to more wear-and-tear on the transfer station and associated fleet and equipment, a reduction in the lifespan of the Central Disposal Facility Class I landfill, an increase in queuing time at the Central Disposal Facility, and an increase in disposal costs. Redirecting Class III traffic directly to the Central Disposal Facility (rather than the transfer station) would result in lower maintenance costs for the County but would also result in higher costs and longer haul and queue times for individual commercial customers and residents and would still cause a shorter lifespan of the Class I landfill. This option would allow for the Solid Waste Workshop to be cancelled.

Option 3) Other direction by the Board.

Clerk to the Board Instructions:



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Kimberly.Powell@brevardclerk.us

January 13, 2021

M E M O R A N D U M

TO: Euripides Rodriguez, Solid Waste Management Director

RE: Item I.1., Staff Direction Regarding the U.S. Army Corp of Engineer Environmental Resource Permit Signature

The Board of County Commissioners, in regular session on January 12, 2021, directed staff to proceed with permitting for the US 192 site to be consistent with it being used as a landfill, but not to commence any construction activity; authorized the County Manager to waive any Policy and/or make any necessary Budget Change Requests; and if staff is unable to come to agreement with Florida Recyclers on a Workshop date before an additional burden is placed on County taxpayers, and after such time as Melbourne approves the variance, staff is directed to bring this back to the Board for consideration of whether to pursue construction at that point.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
RACHEL M. SADOFF, CLERK

Kimberly Powell
Kimberly Powell, Clerk to the Board

cc: County Manager



January 13, 2021

M E M O R A N D U M

TO: Frank Abbate, County Manager

RE: Item I.1., Solid Waste Workshop

The Board of County Commissioners, in regular session on January 12, 2021, discussed the Solid Waste Workshop scheduled for January 21, 2021, and upon consensus of the Board, the Workshop has been cancelled.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS

RACHEL M. SADOFF, CLERK

Kimberly Powell, Clerk to the Board

cc: SCGTV



Solid Waste Management Department
2725 Judge Fran Jamieson Way
Building A, Room 118
Viera, Florida 32940

BOARD OF COUNTY COMMISSIONERS

Inter-Office Memo

Date: January 6, 2021

To: Board of County Commissioners

Through: Frank Abbate, County Manager *[Signature]*

Through: John Denninghoff, Assistant County Manager
Development & Environmental Services Group *[Signature]*

From: Euripides Rodriguez, C.I.A., Director

Subject: Florida Recyclers Melbourne Landfill Update

The following information is provided consistent with Board direction concerning the potential purchase of the Florida Recyclers Melbourne Landfill which is located adjacent to the County's Class III Sarno Road Landfill. The potential purchase has been suggested as a possible strategy to extend the functional life of the County's Class III Sarno Road Landfill. The information is intended to provide contextual background information and to provide the latest technical and other pertinent information for consideration by the Board of County Commissioners.

The County recently updated our Financial Responsibility Closure & Long-Term Care Estimates as of August 2020. This report, prepared by Neel Schaefer, Inc., estimates the Sarno Road Landfill will run out of capacity in January 2023. The Sarno Road Landfill receives Class III materials from the south area of the county as well as yard waste, tires and metals and is now permitted to be at the maximum height possible. This maximum height can be achieved because on August 13, 2019, the City of Melbourne granted final approval of the County's requested height variance for the Sarno Road Landfill to reach a height of 104 feet elevation over sea level.

On April 9, 2019, the Board of County Commissioners directed staff to delay signing the US Army Corp Environmental Resource Permit for the US 192 site and bring it back to the Board. Staff brought it forward on July 9, 2019, on which date after some discussion the Board tabled the matter pending receipt of additional information to facilitate deciding on alternatives to replacing the County's Sarno Road Landfill. The additional information directed by the Board included completing an appraisal report and obtain an Environmental Assessment Report for the Florida Recyclers Melbourne Landfill. The Board also directed staff to prepare a report on the possibility of purchasing the Florida Recyclers Melbourne Landfill.

Staff brought the item back to the Board for further consideration on October 22, 2019 at which time there was also a presentation by Florida Recyclers offering to sell their Melbourne facility to the County. As a result of this meeting Staff was directed to address remaining concerns associated with the mulching and cost issues regarding Florida Recyclers and also bring back more information regarding the environmental study as well as a more rigorous analysis of the

option to purchase the private landfill including more information regarding the life expectancy of the County's existing landfill on Sarno Road.

Consistent with Board direction on October 22, 2019, staff has updated the information provided to the Board on July 9, 2019, received the environmental study for the Florida Recyclers site, updated the escrow analysis with the most current information and obtained a second appraisal regarding the Florida Recyclers property. Staff has also updated the life expectancy of the Sarno Road Landfill to facilitate the Board's decision making in this regard. The updated and new information follows.

Appraisals:

Last year Florida Recyclers gave the County an "Investment Value Consulting Report"¹ prepared by Compass Real Estate Consulting, Inc., Shawn E. Wilson, MAI regarding their landfill. Investment value is defined by the Dictionary of Real Estate Appraisal, Sixth Edition, 2015, page 121 as "the value of the property to a particular investor or class of investors based on the investor's specific requirements. Investment value may be different from market value because it depends on a set of investment criteria that are not necessarily typical of the market." The Investment value set by this report is \$8,416,000. As a note on page 12 of the report, Ms. Wilson states "Note that the market value of the landfill and business which currently operate on the site is not part of this analysis."

Staff requested an independent appraisal with the firm of Clayton, Roper & Marshall, Inc.² for the Florida Recyclers property. This appraisal was completed on August 26, 2019 and appraised the property at \$5,400,000 with a forty-foot height elevation limit (City of Melbourne height restriction).

A second appraisal was requested and after several firms declined the job, staff was able to contract with Pinel & Carpenter, Inc.³ in March, 2020. The appraisal was completed on October 9, 2020 for a valuation of \$2,700,000 with a forty-foot height elevation limit (City of Melbourne height restriction).

Based on the above valuations and appraisals the value range is quite significant with the average of Brevard County funded appraisals being \$4,050,000. How the privately held trust/escrow fund is handled in any transaction is a fundamental factor affecting the Florida Recyclers Landfill value. Additional information is needed regarding the trust/escrow fund and other factors that will affect the actual cash outlay before the County could begin utilizing the private Landfill if the County were to pursue purchasing the Florida Recyclers property. Information regarding these factors is included below.

Closure Trust/Escrow Fund:

The Financial Assurance or escrow impact is discussed in detail in the attached report. The Florida Recyclers Landfill is required to have a Closure Trust Fund which is intended to provide assurance that funds will be available to properly close the landfill at its end of life. This fund is

¹ The Investment Value Report dated May 25, 2018 is attached for reference.

² The appraisal from Clayton Roper & Marshall dated November 18, 2019 is attached for reference.

³ The appraisal from Pinel & Carpenter, Inc. dated October 9, 2020 is attached for reference.

similar in nature, but not in the method of calculating the yearly deposit, to the Escrow account used by the County (as a governmental agency) to close the Sarno Landfill at its end of life. Florida Recyclers makes a \$100,000 payment to the trust fund and if their income exceeds \$1,250,000 they are required to deposit 4% of the income exceeding \$1,250,000. This method of calculation, approved in an FDEP consent order is a negotiated settlement with FDEP and bears no relationship to the standard formula as required in the FDEP regulation for this purpose. Thereby in comparison to the calculation required to be followed by the County, the current private Closure Trust Fund is under funded by approximately \$2,094,081 based on the acreage of the landfill and the typical per acres cost of closure. If the County were to purchase the private landfill the regulatory expectation is that the County would establish a properly funded Escrow Account. As such, there is a financial impact to the County since we would have to make a deposit to compensate for the shortfall (approximately \$2,094,081) if the private Trust Fund is included in the land transfer to the County. However, the required deposit amount would increase to \$3,011,654 if Florida Recyclers were to maintain possession of the existing trust fund as their proposed selling price is structured. These amounts are approximations since the capacity of a landfill changes every day in any operating landfill.

There is another major cost that could affect the monetary outlay in this potential transaction. The Florida Recyclers site contains a high quantity of mulch. This mulch holds no economic value to the Solid Waste System. The cost of removing the mulch (loading, hauling and current disposal) from the site is estimated to be \$2,196,700, subject to final survey of the quantity of mulch. Additionally, it is currently unknown how much time and cost (additional hauling and disposal) will be involved with finding a final resting place for the mulch.

Environmental Conditions

On January 29, 2020 staff received the Phase I and Phase II Environmental Site Assessment Report from PPM Consultants. These reports revealed no evidence of recognized environmental conditions in connection with the property except for the following:

- Groundwater Cleanup Target Level (GCTL) exceedances in site monitoring wells. Per the most recent Florida Department of Environmental Protection review of the groundwater data, no regulatory action was requested to address the GCTL exceedances, only continued groundwater monitoring.
- Two of the three used-oil stained ground areas.
- The current diesel fueling area (aboveground storage tank at north property line and historic fueling and vehicle maintenance area).

These conditions noted above are not an area of major concern. However, in the process of obtaining the various samples and tests referenced above, the consultant also sampled surface water for PFAS presence at the Landfill's point of discharge. The test results did find evidence of the existence of PFOA at 0.0152 ug/L and PFOS at 0.0138 ug/L at the point of stormwater discharge for Florida Recyclers, as well as for the Sarno Road Landfill. Currently, FDEP and the EPA has not established a standard for PFAS. However, such a standard is expected in the future. Current provisional surface water screening levels for PFOA and PFOS are 0.015 ug/L and 0.004 ug/L respectively. The provisional cleanup target level for PFOA in groundwater is 0.07 ug/L. It is noted that in studies conducted statewide, there was evidence of the presence of this chemical in all landfills sampled. The concern regarding PFAS is more

an area of concern for unlined landfills such as the Melbourne and Sarno Road Landfills (the Cocoa Landfill (CDF) is lined).

Landfill Height:

The height that a landfill can be built as well as the slope and base area is a major factor that contributes to the calculation that results in the airspace available for use by the landfill. Airspace is a principal factor in the values and determination of the life expectancy of a landfill. The City of Melbourne granted the County a variance through Ordinance 2019-37, that allowed the Sarno Road Landfill to increase the height of the north expansion to 104 feet above sea level. This increased the life of this landfill to January 2023. This variance was granted under various conditions that Staff did not request, but were included at the request of the City. The two that have the most bearing being:

- The County shall, no later than December 31, 2024, submit a plan for the closure of the landfill, for such closure to occur on or before December 31, 2030, on which date the landfill shall be closed unless the County has applied for and received additional approval from the City before that date.
- Once the new US Highway 192 solid waste management facility is permitted and constructed, the county will halt all non-transfer station activities at the Sarno Road Landfill site and permanently close the landfill according to FDEP permits.

Florida Recyclers is currently requesting the City of Melbourne grant a height variance to increase the potential height of the Melbourne Landfill to 104 feet elevation. The City of Melbourne conducted an on-site visit to the property on November 9, 2020 and several issues were identified. The height application to the City was expected to be heard by the City's Planning & Zoning Board on November 19, 2020 but that hearing did not take place. The current application status is not known.

Observations:

With this background information we will proceed with observations relating to the potential purchase of Florida Recyclers Melbourne Landfill facility.

1. Depending on several factors, to some extent, the acquisition of this site would extend the life of the Sarno Road Landfill by:
 - a. 3 years – Without using the valley and without a height variance from the City of Melbourne.
 - b. 7 years – Using the valley and without the height variance from the City of Melbourne.
 - c. 10 years – Without using the valley and with a height variance from the City of Melbourne.
 - d. 19 years – Using the valley and with the height variance from the City of Melbourne.
2. In comparison, the US192 site has a projected life of 66 years.
3. The existing Florida Recyclers Landfill Trust Fund for closures is underfunded in comparison to our most recent closure projects. This shortfall would have to be accounted as an additional expense for the valuation of the Florida Recyclers property to fully evaluate and determine if a purchase is advisable. Since Florida Recyclers has

requested to keep the trust fund, as a part of their proposal, the County would be responsible for funding all of the required escrow after acquiring the property.

4. Using the valley as a landfill will eliminate one County stormwater pond and necessitate the creation of a replacement pond, plus the existing ditches would have to be regraded to convey the stormwater to the new pond. It would also eliminate the Florida Recyclers Landfill stormwater ditch to the south of the property which is part of their stormwater retention system. The engineers have estimated the cost of stormwater improvements at \$2,122,275.
5. While the environmental assessment performed for the County did not find existing issues it should be understood that the sampling and testing results do not assure that either there are no contaminants now nor do they assure that the Landfill could start producing measurable contaminant levels in the future. Thusly, the environmental impact of the Florida Recyclers Landfill is not clear but the County's purchase of this facility would mean assuming whatever the environmental risks the current owners have, including future potential environmental liability from PFAS contamination should pending regulation require remediation. Further, this situation is applicable regarding any other contaminants which although not detected at this point, should they be determined to exist in the future.
6. The appraisals of the Florida Recyclers site as performed for the County do not assume that a City of Melbourne height variance has been or will be granted. Should such a variance be granted the appraised value can be expected to go up.
7. The purchase of this property without a height variance, but using the valley, from the City of Melbourne would provide an additional 7 years of capacity. This capacity would come at a cost of \$11.00⁴ a cubic yard, for a single composite liner. This compares unfavorably with the cost of building Cell 1, which has a double composite liner, at the Central Disposal Facility of \$5.01⁵ a cubic yard (the cost per cubic yard decreases as other cells are built as the landfill can be built higher and the valleys in between the cells are filled). The same is true for the cost per cubic yard of \$4.88 which is the estimate for the first cell of US 192.
8. Assuming Florida Recyclers or, if purchased, the County, is granted a height variance, the cost to use Florida Recyclers property would decrease to \$4.88 per cubic yard (see footnote 4). However, note the following additional information.
9. The cost per cubic yard for all options mentioned above does not include the cost of a leachate collection and pre-treatment system, acquiring the "new" property, stormwater ponds or ditches, existing land, or any other construction cost not strictly related to the building of the liner. These costs would have to be added to arrive at a more rigorous cost estimate. (As a side note for clarification, the Central Disposal Facility also did not include the cost of a leachate tank because one is already in place.)
10. The City of Melbourne would have to approve any option regarding this site with the exception of using it as a stand-alone landfill (see the 3-year extension in 1.a. above).
11. There is an existing berm along Sarno Road that the City of Melbourne CUP required of Florida Recyclers. This berm resides in properties that belong to the City of Melbourne and Liberty Investments of Brevard, LLC. This is a pending issue which will impact the life expectancy and the costs of all options associated with acquiring the Florida Recyclers Landfill.

⁴ Cost presented are from a Jones Edmonds report from June 2018 is attached for reference

⁵ Actual 2016 cost from the construction of Cell 1 at the Central Disposal Facility

12. Time is critical and there are no assurances that the replacement option for the Sarno Road Landfill will be in place when it runs out of space. These delays could be in the negotiations to purchase the Melbourne Landfill, required City of Melbourne permits, construction delays, hurricanes and other similar issues.
13. An Invitation to Bid for the hauling and disposal of Class III waste generated from natural disasters was advertised by the County on November 12, 2020. Bid opening on December 10, 2020 showed three statements of No Bid. The inability to dispose of disaster related Class III debris elsewhere has the potential to greatly shorten the lifespan of the Sarno Road landfill in the event of a hurricane or other disaster.
14. Any option selected that increases the demand on the Cocoa Landfill (CDF) such as using a portion of it for Class III or other non-Class I needs will reduce the capacity and life expectancy of the CDF for Class I material disposal. This use results in accelerating the long term need to replace the Class I CDF with a new facility. The relative cost of Class I disposal is always higher than Class III material disposal. In effect, such a proposal reduces the benefit of the existing CDF to the rate payors.
15. In the event the County were to use the CDF for Class III disposal the life expectancy of the CDF would be reduced by 10 years.

The Florida Department of Environmental Protection (FDEP) has issued a draft consent order dated March, 2020. On this draft Consent Order FDEP listed four issues that resulted in the draft Consent Order being issued. On July 22, 2020, Florida Recyclers responded to the same by stating that the issues be treated as minor violations. The violations with Florida Recyclers responses to the same are listed below:

1. Objectionable odors were noted off-site beyond the property boundary.
 - a. They state that they are not the source of any off-site objectionable odors. They go on to state that there are other potential odor sources such as the Sarno Road Transfer Station, the Sarno Road Landfill and the dredge spoil site, all having the potential of generating odors⁶.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
 - a. In a letter from James E. Golden, P.G. from Grove Scientific & Engineering dated March 2, 2020⁷ it is stated that the road does exist.
3. The facility failed to ensure there were 50 feet fire breaks in the piles of processed and unprocessed material. This refers to the piles of mulch and vegetative debris located in the facility.
 - a. The letter from Mr. Golden states that additional 50-foot fire breaks have been cut through the mulch piles.
4. Processed materials have been stored on site for longer than 18 months.
 - a. The response states that FDEP can authorize a longer storage period.

These matters have not been resolved to our knowledge. The appraisals did not account for these matters and the cost of resolving them has not been included in any of the cost estimates. The perimeter road can have a financial impact on the purchase if the County were required to assume the responsibility of construction of the same. Further, installation of a

⁶ Source Jack Kirchenbaum response letter to FDEP, attached for reference

⁷ Letter from James Golden to FDEP is attached for reference

perimeter road may reduce the area of actual landfill thus reducing the life expectancy benefits coming to the County if the Melbourne Landfill were to be acquired.

Mulch

Florida Recyclers runs a yard waste business that converts the green waste into a commercially viable mulch and top soil. This mulch is kept in inventory at the site and would have no value to the County. In fact, the County currently pays to have our mulch hauled away and disposed of. We are estimating the cost of disposal for this mulch at \$2,196,700 based on our current contract rates. If the County were to acquire this property, one of the conditions should be that it is free of mulch and other organic materials such as composting. Not having this condition would add the \$2,196,700 to the cash needed to be able to use this property to construct a Class III landfill.

Financial Impacts

Purchasing the Melbourne Landfill from Florida Recyclers will have a major financial impact on the disposal system. The impact will come in three phases: the purchase of the landfill, the deposit to the escrow account, and the construction needed for the county to utilize the landfill. This impact on the escrow deposit will be from \$2,094,081 (with the trust fund turned over to the County) to \$3,011,654 (no trust monies). This estimate will be adjusted once a final survey is conducted. The most recent appraisals commissioned by the County varies from \$5,400,000 to \$2,700,000. These appraisals would need to be updated and can be expected to go up should a height variance be granted by the City of Melbourne. Construction estimates vary from \$14,145,481 to \$19,421,181 (includes removal of mulch), depending on the options available such as construction as a stand-alone landfill to using the valley as a landfill (with City of Melbourne permits). These items combined will cause an outflow of between \$18,939,562 to \$27,832,835. Also, the cost of construction of an All-Weather perimeter road around the Melbourne Landfill should FDEP require one is expected to add another \$700,000 to this cost and reduce the life expectancy of the facility at any allowable height and configuration (option 1a, 1b, 1c, or 1d). The reduced life expectancy has not been evaluated thus the needed rate charged to the rate payors has not been determined but it would increase relative to if the road is not required.

The Solid Waste CIP fund 4011 contains \$4,967,496 in CIP reserves for future capital expenditures and \$5,824,557 for the US 192 project for a total available of \$10,792,053. This funding balance does not take into consideration the \$25,000,000 expected to be needed for construction of Cell 2 in the Central Disposal Facility and other CIP Projects.

When money is borrowed for a project the life of the payback should not exceed the life of the project the borrowed money is used for. As such, any funds borrowed should not exceed the life of the asset being purchased. On the Florida Recyclers stand-alone option, the life of the asset would be expected to be three (3) years and the loan would have to be paid in three years or less. Using all of the funds available would require a loan of about \$8,000,000 which just the principal payment would be \$2,666,666 plus interest and it would require floating a bond for all related Cell 2 costs at the Central Disposal Facility. The maximum use of the asset would be filling in the valley and going to an elevation of 104 feet above sea level. This option would, as stated above, need the City of Melbourne approval and would result in a 19-

year life for the asset. The life of the asset would allow us to get bonds and the payback would be longer thus requiring a lower increase in the disposal assessment.

Summary

1. Appraisals – Vary from the Florida Recyclers Investment Value Consulting Report of \$8,416,000 to our appraisals of \$5,400,000 and \$2,700,000.
2. Escrow Deposit – The deposit is estimated at \$3,011,654 without the Florida Recyclers Trust Fund which they have proposed to keep.
3. Environmental Conditions – The presence of PFAS is a concern.
4. Land Fill Height – Florida Recyclers has not obtained a height increase from the City of Melbourne which greatly reduces the utility to the Disposal System.
5. Mulch – There is mulch present at the site that has no value to Brevard County. The estimate cost of disposal of the mulch is \$2,196,700 if the County were to purchase the property with the mulch on site.
6. Financial Impacts – The financial impacts vary from a low of \$18,939,562 (for a three-year life) to \$28,132,835 (for a 19-year life).
7. Additional immediate financial impacts of \$700,000 may be realized should FDEP require the construction of an All-Weather perimeter road. In this event the life cycle and rate expense to the rate payors would increase by an amount not yet identified due to the reduced life expectancy of the facility.
8. The FDEP draft consent order has additional cost implications for either Florida Recyclers or the County in the event the County completes a purchase.

GRAY|ROBINSON
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May 25, 2018

Euripides Rodriguez
Brevard County Solid
Waste Management Department
2725 Judge Fran Jamieson Way, #A118
Melbourne, FL 32940-6605

Re: Florida Recyclers

Dear Mr. Rodriguez:

Enclosed please find two copies of the Investment Value Consulting Report prepared by Shawn E. Wilson, MAI, regarding the landfill.

My clients will accept the appraised value for this property.

I look forward to speaking with you regarding this matter.

Very truly yours,

Jack A. Kirschenbaum

JAK/kf

Enclosures



Compass Real Estate Consulting, Inc.

Real Estate Consultant Litigation Valuation
120 East Pine Street • Suite 1 • Lakeland, Florida 33801

INVESTMENT VALUE CONSULTING REPORT

**45 Acres of Land
Owned by
Florida Recyclers
of Brevard, LLC**

BREVARD COUNTY, FLORIDA

Prepared For

GrayRobinson
1795 West NASA Boulevard
Melbourne, Florida 32901

By

Shawn E. Wilson, MAI
State-Certified General Real Estate Appraiser RZ503

SUMMARY

PROPERTY: 45 acres of land owned by Florida Recyclers of Brevard, LLC, in Melbourne, Florida.

COUNTY: Brevard

TAX ID: 27-36-24-00-507
27-36-24-00-508

LAND SIZE: 45 acres, more or less

IMPROVEMENTS: Currently used as a C&D landfill and recycling center.

HIGHEST AND BEST USE: Landfill

DATE OF VALUE: April 10, 2017

SCOPE OF WORK: Estimate investment value by analyzing land value plus cost to construct a new C&D landfill on the site.

DEFINITION OF VALUE: This assignment estimates investment value. Investment value is defined as "the value of a property to a particular investor or class of investors based on the investor's specific requirements. Investment value may be different from market value because it depends on a set of investment criteria that are not necessarily typical of the market." (The Dictionary of Real Estate Appraisal, Sixth Edition, 2015, page 121)

VALUATION SUMMARY:

Investment Value

\$ 8,416,000

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ADDRESS AND LOCATION

The subject property is located at 3351 Sarno Road in Melbourne, Florida

PROPERTY OWNER NAME AND ADDRESS

Florida Recyclers of Brevard, LLC
3351 Sarno Road
Melbourne, Florida 32934

LEGAL DESCRIPTION

Lengthy; please see deeds in Addenda.

PROPERTY INSPECTION

The subject property was inspected on January 6, 2017, and April 10, 2017.

APPRAISAL REPORT FORMAT

This is an Investment Value Consulting Report which is intended to comply with the reporting requirements set forth under Standard Rule 2-2(a) of the Uniform Standards of Professional Appraisal Practice for an Appraisal Report. As such, it presents only a summary of the data, reasoning, and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraiser's file.

HISTORY OF THE PROPERTY (LAST FIVE YEARS)

The subject property has not transferred ownership during the last five years. It has operated as a landfill and recycling center since 1998.

Instrument:	Trustee's Deed
Grantor:	Joseph J. Weisenfeld, Trustee
Grantee:	Florida Recyclers of Brevard, Inc.
Transaction Date:	3/31/98
O.R. Bk/Pg:	3826 / 3814

Instrument: Trustee's Deed
Grantor: Joseph J. Weisenfeld, Trustee
Grantee: Florida Recyclers of Brevard, Inc.
Transaction Date: 9/30/99
O.R. Bk/Pg: 4087 / 1036

Instrument: Corrective Trustee's Deed
Grantor: Joseph J. Weisenfeld, Trustee
Grantee: Florida Recyclers of Brevard, Inc.
Transaction Date: 3/13/01
O.R. Bk/Pg: 4310 / 3384

I was unable to discover, during the normal course of the appraisal process, any evidence of a current Agreement of Sale, listing, or option of the subject property.

The appraiser is informed that a portion of the property is leased to Simply Organic Lawn and Garden Center.

AERIAL PHOTOGRAPH



PHOTOGRAPHS



Photo 1:
Looking south at
landfill scales.



Photo 2:
Looking north
along driveway
towards Sarno
Road.

Photographs taken by Shawn Wilson, MAI, April 10, 2017.



Photo 3:
Representative view
of soil composting
area.



Photo 4:
Looking south
toward C&D area.

Photographs taken by Shawn Wilson, MAI, April 10, 2017.



Photo 5:
Looking south toward
Sarno Landfill.



Photo 6:
Looking east
toward Brevard
County Dredge
Material
Management Area.

Photographs taken by Shawn Wilson, MAI, April 10, 2017.

AREA AND NEIGHBORHOOD ANALYSIS

Intended users of this appraisal report are very familiar with the subject property's location, neighborhood, market area, and the greater Melbourne area. For this reason, only a brief analysis is summarized here.

The subject property is generally located in an industrial area between Interstate 95 and the Orlando Melbourne International Airport, lying within the City of Melbourne. The subject's neighborhood includes a variety of industrial uses, including warehousing, manufacturing, and industrial office. The subject property is marked with a red star on the aerial map below.



The Sarno Landfill and Transfer Station is located immediately west and south of the subject property. The Brevard County Dredge Material Management Area (DMMA) for the Eau Gallie River and Elbow Creek Restoration Dredging Project is located immediately east of the subject property.

SOLID WASTE AND C&D LANDFILLS - OVERVIEW

Waste management is the collection, transport, processing, recycling or disposal and monitoring of non-hazardous waste materials. The term usually relates to materials produced by human activity and is generally undertaken to reduce their effect on health, the environment, or aesthetics. A landfill site, also known as tip, dump or rubbish dump, is a site for the disposal of waste materials by burial and is the oldest form of waste treatment. The first US landfill opened about 1937. Prior to that our

ancestors burned most of their garbage or buried it in outlying rural areas.

Modern landfills are well-engineered and managed and are located, designed, operated and monitored to ensure they comply with federal regulations. Municipal solid waste (MSW) consists of organic material, paper, plastic, glass, metals, and other refuse collected by municipal authorities. It typically does not include waste collected outside of formal municipal programs nor does it include the sewage, industrial waste, or construction and demolition waste generated by cities.

Solid waste is categorized either by material type or by product type. By material type this includes paper and paper board, yard trimmings, food scraps, plastics, metals, glass, wood, rubber, leather, textiles, and other materials. By product type this includes containers and packaging, nondurable goods (newspaper), durable goods (appliances), food scraps, and others. Although the use of landfills remains the common practice of disposal in most countries, about a quarter of the world's garbage is diverted to recycling, composting, or digestion, options that are environmentally superior to landfills and incinerators. In 2013 the US's share of recycled municipal solid waste, which was just 6.2% 50 years ago, grew to 34.4% or 1.5 pounds of garbage per person per day.

The waste industry is highly correlated with consumer spending and stems from consumer products and packaging. Thus, municipal solid waste tends to be generated in much higher quantities by wealthier nations and regions of the world. While wealthier nations produce more inorganic waste, such as plastics, paper, and aluminum, poorer and rural areas produce a higher share of organic matter. The 34 industrialized nations of the world produce about 1.6 million tons of MSW per day with the US producing 4.4 pounds per person per day or the daily equivalent of 60,000 garbage trucks.

Some interesting facts about waste management in the US include the following:

- Americans generate about 250 million tons of garbage each year in landfills
- An average American throws away around 1,200 pounds of waste each year that could be composted
- The amount of waste generated has tripled since 1960
- The average office worker uses over 500 paper cups per year
- Each year around 100.2 billion plastic bags are used by Americans
- 36% of what is thrown away in the US each year is paper or cardboard
- Aluminum can be recycled innumerable times with no loss of quality
- Each ton of paper recycled can save three cubic yards of landfill space
- About 22 billion plastic bottles are thrown out every year in landfills; shielded from sunlight they take thousands of years to decompose

In the 1970s there were 10,000 landfills in the US. Because of consolidation and more efficient use of these facilities, the number of open landfills was reduced to 1,900 by 2013 and 1,654 by 2015. In 2015 the US collected over 245.7 million tons of municipal solid waste of which over 58.4 million tons of material was recovered for recycling, and 20.6 million tons were recovered for composting. In June 2016 annual MSW collection had risen to 254 million tons but recycling increased with 87 million tons recycled or composted.

David Biderman, President of the Solid Waste Association of North America recently stated that the lack of capacity in the nation's landfills is largely overblown and he estimates that the nation overall has 62 years of capacity left. According to Mr. Biderman, seven states will run out of space in five years, one, in five to ten years, three, in 11 to 20 years, most have a significant capacity for many years, and 22 have no long-term problem at all.

Tipping fees are typically used to cover operating and maintenance costs and include personnel, equipment, fuel and anticipated capital costs such as cell expansions, cell closures, and capping. Government plays a huge role in determining rates and how the money will be spent. Often fees are used to fund local projects, solid waste management organizations, statewide waste reduction programs, or environmental efforts within the state.

In January 2016, the average tipping fee in the US was \$48.27 with a substantial variation between states noted. A list of landfill tipping fees published by Clean Energy Projects, Inc. for the 50 states indicated that, besides Hawaii, the highest tipping fees were in the northeast region of the US and included Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

Information from Dun & Bradstreet dated December 5, 2016, on their waste management services industry profile for the quarter ending in September 2016 reported that the US waste management industry includes about 24,000 companies (single-location and units of multi-location companies) with combined annual revenue of about \$85 billion. The profitability of individual companies depends on an efficient operation as the service is based on price. Big companies enjoy economies of scale in purchasing equipment and establishing networks of facilities. Small companies can compete by offering specialized services or serving local markets.

The US industry is concentrated with the 50 largest companies accounting for about half of the industry's revenue. The largest waste management companies in the US are Waste Management, which has 21,000 collection and transfer trucks and services more than 20 million customers in the US and Canada, and Republic Services, which serves over 2,800 communities throughout the US. One of the problems in the industry is preventing monopolization by big companies which may mean higher costs and subpar services for customers.

The collection process is the biggest part of the waste industry and accounts for about 55% of the industry's revenue. Waste treatment and disposal are responsible for 20% of the revenue which includes composting, incineration, landfill and recycling. About 15% of the annual revenue is remediation of waste which includes cleaning oil spills, cleaning contaminants on the ground, removal of asbestos and lead paint, restoration of strip-mined areas, and processing hazardous waste.

Landfill Classifications

As of December 2016, there were 333 permitted solid waste management facilities in Florida and five new facility applications. These include landfills, C&D disposal, C&D recycling, waste processing, and tire and soil treatment facilities. Landfills are classified as Class I and Class III.

Class I landfills are those which receive municipal solid wastes, or garbage. Class II landfills accept an average of fewer than 20 tons of solid waste per day. Class III landfills receive only yard trash, construction, and demolition debris, waste tires, asbestos, carpet, cardboard, paper, glass, plastic furniture other than appliances, or other materials which are not expected to produce leachate which poses a threat to public health or the environment. In addition to the Class I, II and III landfills, there are Construction & Demolition Debris facilities known as C&D facilities. Mixing of construction and demolition debris with other types of solid waste will cause a landfill to be classified as other than construction and demolition facilities.

Construction and Demolition Landfills

The landfill that is the subject of this report is classified as a construction and demolition debris (C&D) landfill. C&D landfills are reviewed and approved by the State Department of Environmental Protection through a state permitting process. It is reported that in December 2016 there were about 70 C&D facilities in Florida. According to the Florida Department of Environmental Protection, about 25% of all of the state's municipal solid waste was C&D debris. C&D material is defined as debris generated during the construction, renovation, and demolition of buildings, roads, and bridges, and is typically not included in the category of municipal solid waste. C&D materials often contain bulky, heavy materials that include concrete, wood from buildings, asphalt from roads and roofing shingles, gypsum the main component of drywall, metals, bricks, glass, plastics, salvaged building components (doors, windows, and plumbing fixtures), and trees, stumps, earth, and rock from clearing sites. Construction and demolition landfills are able by regulation to take most of the full complement of materials deposited into landfills, except for paint, carpet, tires, furniture, household garbage, biomedical waste and industrial or hazardous waste. Some soils are also prohibited as they may be contaminated. The Environmental Protection Agency estimates the overall percentage of debris in C&D materials falls within the ranges provided below.

MAKE-UP OF DEBRIS IN C&D LANDFILLS

Concrete & Mixed Rubble	40-50%	Metals	1-5%
Wood	20-30%	Bricks	1-5%
Drywall	5-15%	Plastics	1-5%
Asphalt Roofing	1-10%		

Reducing and recycling C&D materials conserves landfill space, reduces the environmental impact of producing new materials, creates jobs, and can reduce overall building project expenses through avoided purchase and disposal costs. Less waste can lead to fewer disposal facilities and reducing, reusing and recycling C&D materials offsets the need to extract and consume virgin resources. Deconstruction and selective demolition methods divert large amounts of materials from disposal and provide business opportunities to the local community. Recovered materials can be donated to qualified charities resulting in a tax benefit to the donator.

Industry Trends

There are several trends that may define the future of the waste industry. The first is achieving Zero Waste, a trend by cities and others to push recycling programs, to ban the use of specific products, and to increase waste to energy programs. Some refer to this as the four "R" approach: reducing waste at the source, then reusing, recovering, or recycling any waste that remains.

The second trend is for smaller waste removal companies to acquire or merge with other companies. The intent is for smaller companies to make a bigger impact on the industry, like their bigger competitors. If the merger or acquisition is not well planned, however, these activities can lead to increases in costs, invoice change issues, and even service interruptions.

The third trend is the development of advanced technology in trash and recycling containers. This trend will help companies decrease energy use, save money, and increase efficiency by using solar powered dumpsters. These containers can send a digital signal when they are near capacity, so over or under collecting by waste management companies does not occur. In another emerging disposal technique, semi-underground containers are used to reduce odor, reduce the growth of bacteria, and deter invasion by animals.

The fourth trend is for municipalities to take steps to eliminate or cut down food and organic waste by enforcing composting programs. According to the EPA, every year Americans generate around 14 million tons of food waste or about 107 pounds per person. Some cities now require sporting venues, restaurants at large hotels, large food manufacturers and wholesalers to recycle all food waste. It is noted by many in the industry that these programs may cause a significant amount of stress for businesses trying to comply with these new regulations.

Conclusion

As recently as forty years ago it was common practice in Florida, as in most parts of the United States, to either burn solid waste materials or use open dumps to alleviate solid waste problems. Back then, there were 500 open dumps in Florida. Today there are 333 solid waste management facilities permitted in Florida by the Florida Department of Environmental Protection. These facilities are located in every county and include at least one special waste materials construction and demolition disposal facility in every county.

- Sources:
- Basic Information about Landfills, Environmental Protection Agency, April 2015.
 - "Municipal Solid Waste Trends and Changing Demographics," by Nick Chiu, Seeking Alpha, December 26, 2012.
 - "20 Horrifying Waste Management Statistics and Facts About Landfills," Trash Talkin', December 10, 2013.
 - "Think Outside the Bin," Environmental Protective Agency, June 27, 2016
 - "Trash by the Numbers: Startling Statistics about US Garbage," by Melissa Breyer, Business/Environmental Policy, July 1, 2016
 - "Four Waste Management Trends Defining the Waste Industry," by Carmine Esposito, National Waste Associates, September 10, 2015.
 - Solid Waste Management Facilities List, Florida Department of Environmental Protection, December 27, 2016.
 - Landfill Tipping Fees in USA, Green Power, Inc., January 2016.
 - Landfill Statistics, Environmental Protection Agency, June 27, 2016.

DESCRIPTION OF THE CONSULTING SERVICE

The subject property is currently permitted for use as a construction and demolition debris landfill (C&D). The property owners now operate a recycling and landfill operation on the property. Recycling activities include a mulch and soil composting operation, Simply Organic Lawn and Garden Center, with wholesale and retail sales activity on-site.

In addition to the on-site recycling activity, typical C&D recycling items such as concrete, metal, and plastics are also removed from the waste stream and recycled off-site. The location of the subject property is conducive for continued use as a landfill. However, the Simply Organic Lawn and Garden Center mulch and soil operation is under separate ownership and does not require a landfill permit for operation. That business could be moved to a different location if the business owners chose to do so.

As described previously, the subject property is surrounded on three sides by Brevard County Government solid waste facilities: Sarno Transfer Station, Sarno Landfill, and a Dredge Material Management Area.

The Brevard County Board of County Commissioners is charged with providing and regulating waste collection and disposal. The Brevard Code of Ordinances sets forth annual special assessments and service fees for collection, recycling, and disposal services. Because of the manner in which tipping fees for C&D waste are assessed, privately owned landfills in Brevard County cannot operate at levels of profit which are possible in counties which have a more traditional pricing model.

The subject property is the only privately owned and operated C&D landfill in Brevard County. The subject landfill is profitable, in part, because its operating income is augmented by the on-site recycling operation.

The subject property is also unique among properties in Brevard County because it is bounded on three sides by existing government-owned solid waste facilities. By sharing common boundaries with other government solid waste facilities, the subject land can afford additional utility and horizontal expansion capacity when designed in conjunction with adjoining facilities, particularly in conjunction with the adjoining Sarno Landfill improvements.

Because of these atypical locational and market characteristics, a traditional market value analysis is not utilized in this assignment. The consulting problem is addressed by examining the investment value of the subject property's potential air space if used by the Brevard County solid waste program.

Note that the market value of the landfill and business which currently operate on the site is not part of this analysis.

ZONING AND FUTURE LAND USE

The subject property is located in Brevard County and is governed by the City of Melbourne Comprehensive Plan and Land Development Regulations.

Zoning: C-M1 (Neighborhood Commercial District / Light Industrial District)

Future Land Use Designation: Industrial

The Industrial Future Land Use designation is intended for "manufacturing, assembling, and distribution activities; assembling and distribution activities; warehousing and storage activities; general commercial activities; and other similar land uses." It is determined by the impact on existing and planned public services, utilities, water resources, and energy resources.

The C-M1 zoning is "intended to apply to an area adjacent to arterial and major collector streets and convenient to major residential areas. The types of uses permitted are intended to serve consumer needs. Lot sizes and other restrictions are intended to reduce conflicts with adjacent residential uses and to minimize the interruption of traffic along thoroughfares."

The zoning and Future Land Use designations provide for a variety of medium intensity uses. The subject property could be improved with one or more of the permitted uses, as a mixed-use development.

The capacity of the existing landfill operation is determined by the Florida Department of Environmental Protection (FDEP) permit and the subject property's City of Melbourne zoning. The permissible height of the landfill currently differs, being 80' for the FDEP permit, and a 40' height limit imposed by zoning. The appraiser is informed that a reasonable probability of obtaining a zoning variance for a height of 80' exists, primarily because neighboring Brevard County solid waste facility improvements are permitted to exceed 40' in height. This height differential is discussed further in the Extraordinary Assumption section of the report.

ASSESSED VALUE

Parcel ID Number	Assessed Value Land	Assessed Value Improvements	Assessed Value Total
27-36-24-00-507	\$844,000	\$0	\$844,000
27-36-24-00-508	\$600,660	\$0	\$600,660
Total	\$1,444,660	\$0	\$1,444,660

Note that the tax assessment for the subject property is provided for reference purposes only. Tax assessments are based upon mass appraisal techniques and are not generally reliable for market value estimates.

PROPERTY RIGHTS APPRAISED

This value estimate for the subject property is appraised as a fee simple estate. This is defined as "Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat." (The Dictionary of Real Estate Appraisal, Sixth Edition, 2015; page 90).

PUBLIC AND PRIVATE RESTRICTIONS

As described previously, the subject property holds a permit for use as a C&D landfill. This permit is administered by the FDEP, and the landfill activities on the site are governed by the restrictions related to that permit. The appraiser is informed that the permit is active, with no atypical restrictions or deficiencies noted on the effective date of value.

Other than the items described previously, I did not find evidence of any public or private restrictions that would have a significant effect on the highest and best use of the subject property. I did not find any evidence of other encumbrances that would have a negative effect on the utility or market value of the land as if vacant.

PURPOSE AND INTENDED USE OF THE APPRAISAL

The purpose of the appraisal is to estimate the investment value of the subject property as of the effective date of valuation. The client who has ordered this appraisal is GrayRobinson, attorneys for the property owners. The intended users are the client, property owners, and their authorized representatives. The appraiser has been informed that this appraisal consulting report will be used for a potential negotiated sale of the subject property to Brevard County Government.

HYPOTHETICAL CONDITION

A hypothetical condition is "that which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis." (The Dictionary of Real Estate Appraisal, Sixth Edition, 2015, page 113)

This investment value consulting assignment is based on the assumption that the subject property is vacant and available to be improved with a C&D landfill.

The use of this hypothetical condition may affect the assignment results.

EXTRAORDINARY ASSUMPTION

Extraordinary Assumption is defined as “an assumption, directly related to a specific assignment, as of the effective date of the assignment results, which, if found to be false, could alter the appraiser’s opinions or conclusions.” (Uniform Standards of Professional Appraisal Practice, 2016-2017 Edition, Page 3.)

This investment value consulting assignment is based on an extraordinary assumption that a zoning variance from the City of Melbourne to permit landfill activities to a height of 80’ is reasonably probable.

This assignment includes an estimate of waste volume, or air space, which has been consumed by the existing landfill operation. A topographic survey and consumption data provided by William Mott Land Surveying Inc. has been relied upon to estimate air space consumption as of the effective date of value. The investment value herein is based upon an extraordinary assumption that the consumption data provided therein is accurate.

James E. Golden, P.G. of Grove Scientific and Engineering has provided a cost model for the permitting and construction of a conceptual C&D landfill, similar to that on the subject property. His conceptual design results in a waste volume, or air space, of approximately 2,800,000 cubic yards. His detailed cost model and engineering report are included in the Addenda of this consulting report. The investment value estimate herein is based upon an extraordinary assumption that permitting of the conceptual design is reasonably probable and that the technical information and cost model within the Grove Scientific report are accurate.

The use of this extraordinary assumption may affect the assignment results.

TYPE AND DEFINITION OF VALUE

This assignment estimates investment value. Investment value is defined as “the value of a property to a particular investor or class of investors based on the investor’s specific requirements. Investment value may be different from market value because it depends on a set of investment criteria that are not necessarily typical of the market.” (The Dictionary of Real Estate Appraisal, Sixth Edition, 2015, page 121)

EFFECTIVE DATE OF VALUE OPINION (DATE OF VALUE)

The effective date of value is April 10, 2017, the most recent date of inspection.

DATE OF REPORT

The date of this report is June 22, 2017.

SCOPE OF WORK

This section describes the extent of the process of collecting, confirming, and reporting data.

This is an appraisal consulting service. The effective date of value is April 10, 2017.

As described previously, a traditional market value analysis is not utilized in this assignment. The consulting problem is addressed by examining the investment value of the subject property's potential air space if used by the Brevard County solid waste program.

The scope of work for this assignment results in an estimate of the investment value of the subject property when analyzed as vacant land available to provide additional C&D landfill capacity to Brevard County Government, with an adjustment for airspace which has already been consumed on the site. Note that the market value of the landfill and business which currently operate on the site is not part of this analysis.

Information on the subject property was gathered from the Florida Department of Environmental Protection, Brevard County Property Appraiser resources, other public records, published studies, various news publications, information from the property owner, the appraiser's files, and other sources.

Market data utilized in the valuation process was gathered from public records, tax assessment records, Multiple Listing Service records, other appraisers, local Realtors and licensed real estate salespersons, and through research for comparable properties. Market data gathered includes sales and listings of land similar to the subject property.

A highest and best use analysis is part of this assignment, including consideration of all the physically possible, legally permissible, financially feasible, and maximally productive uses of the subject property. The data utilized to value the subject land as if vacant is based on this highest and best use conclusion.

The appraiser reviewed documents regarding the Florida Department of Environmental Protection's landfill permitting process and Florida Recyclers' permit history.

The scope of this consulting assignment includes providing a written report in a summary format.

Professional assistance with landfill research, valuation, and report drafting was provided by John A. Gillott, MAI, SRA, State-certified general real estate appraiser RZ212. James E. Golden, P.G. of Grove Scientific and Engineering provided a conceptual plan and cost model for the construction of a C&D landfill on the subject property.

HIGHEST AND BEST USE

Definition

Highest and Best Use is defined as “the reasonably probable and legal use that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity.” (The Dictionary of Real Estate Appraisal, Sixth Edition, 2015; page 109).

Analysis – Current Condition

Legally permissible uses for the subject property are those permitted by the property’s zoning and Future Land Use (FLU) designations. A discussion of this issue is presented in this appraisal report under the heading, *Zoning and Future Land Use*. In summary, industrial uses are permitted.

Physically possible uses for the site as if vacant are governed by setback and size restrictions which are related to zoning. The property currently operates as a permitted landfill and recycling center, with appropriate site improvements to support same.

Financially feasible uses for the site include those which are legally permissible, physically possible, and would attract sufficient prospective purchasers to assure profitable development. The existing landfill is permitted and has consumed approximately 950,000 cubic yards of waste volume. It has adequate remaining capacity for continued operation over an estimated period of 23 years. FDEP requirements are in place for closure of the landfill when capacity is reached. These closure requirements are imposed regardless of whether or not maximum permissible waste volume is reached. For that reason, the most productive use of the property as improved is for the continued operation of a C&D landfill until the maximum permissible waste volume is in place, followed by closure of the landfill.

Therefore, the maximally productive use of the subject property is for continued use as a C&D landfill until the maximum permissible waste volume is in place.

Analysis – as if Vacant

Legally permissible uses for the subject property are those permitted by the property's zoning and Future Land Use (FLU) designations. A discussion of this issue is presented in this appraisal report under the heading, *Zoning and Future Land Use*. In summary, industrial uses are permitted.

Physically possible uses for the site as if vacant are governed by setback and building size restrictions which are related to zoning. The property is a permitted landfill and has an adequate land area to be improved as a C&D landfill, or with a variety of industrial building improvements.

Financially feasible uses for the site include those which are legally permissible, physically possible, and would attract sufficient prospective purchasers to assure profitable development. The subject property is located in an industrial neighborhood, just west of an airport, and proximate to Interstate 95. It is bounded on three sides by existing government-owned solid waste facilities, including the Sarno Landfill. These locational characteristics are well-suited to construction and operation of a landfill, or similar industrial uses.

The site, as if vacant, is permitted for use as a C&D landfill. Such permits are considered to have value, as they are in demand but somewhat scarce, and are generally more difficult to obtain than permits for non-landfill industrial uses.

Therefore, the maximally productive use of the subject property as if vacant is for the construction of a C&D landfill.

APPROACHES TO VALUE

The scope of work for this assignment calls for an estimate of the investment value of the subject property when analyzed as vacant land available to provide additional C&D landfill capacity to Brevard County Government. The investment value analysis includes elements of the Cost Approach, including the value of the land as if vacant and the cost to construct a conceptual new landfill on the site. The Sales Comparison Approach is used to estimate the value of the land as if vacant.

As discussed previously in this report, the manner in which tipping fees for C&D waste are assessed in Brevard County creates an economic environment where privately-owned landfills cannot operate at levels of profit which are possible in counties with a more traditional pricing model. As a result, the market value of the landfill and business which currently operate on the site is not part of this investment value analysis. For that reason, the Sales Comparison Approach and Income Approach for an improved landfill of the type which currently operates on the property was not processed.

ESTIMATE OF LAND VALUE (AS IF VACANT)

The Sales Comparison Approach is based upon the Theory of Substitution which holds that a prudent purchaser would be willing to pay no more for a particular property than the cost of acquiring an equally desirable substitute. This also implies that a willing seller would be willing to sell for no less than that value or price that would allow him to acquire a property of comparable utility and desirability.

The essence of this approach involves the researching of comparable sales, and the analysis of those sales so that they may be directly compared to the subject property to yield an appropriate range of value for the subject. Properties such as the subject are typically bought and sold based upon land area, expressed in square feet. For purposes of this analysis, the price per square foot of total land area is used as the basis for comparison.

The comparable sales selected for comparison to the subject property have several elements of similarity:

Market Conditions - The comparable sales used were transferred before the effective date of value. The sales are relatively recent in nature. Changing market conditions are considered in the analysis, but no specific adjustment is applied because insufficient sales data is available to precisely formulate such an adjustment. However, the age of each sale is considered in the correlation of a final value opinion.

Financing - All sales were cash to seller, or cash equivalent, so no financing adjustments were necessary.

Conditions of Sale - All sales were arm's-length, fair market value transactions for fee simple estates. Accordingly, no adjustments for conditions of sale were needed.

Size - Larger parcels typically sell for less on a per unit basis than smaller sites due to economies of scale and the amount of capital outlay necessary for the purchase. The comparison of each sale to the subject for this factor is considered in the reconciliation process.

Please refer to the Addenda of this appraisal report for additional information for the land sales used in comparison.

The comparable sales given primary consideration in this analysis are presented in the grid below.

	Subject	#7 Lexmar Sale	#2 Palm City Sale	#5 Dike Road Sale	#14 Digital Light Sale
Sale Price		\$300,000	\$1,100,000	\$700,000	\$430,000
Sale Date		3/24/15	7/8/16	9/25/14	10/9/15
Location	Sarno Road	1000 Clearmont Street	Robert J. Conlan Blvd NE	205 Dike Road	Digital Light Drive
Size	45 acres	4.93 acres	24.10 acres	17.28 acres	7.45 acres
Zoning / FLU	C-M1 / Industrial	L-1 / Industrial	BMU / Bayfront Mixed Use	R-3 / UD-Res INST / P-J	M-1 / Industrial
Selling Price/SF		\$1.40 / SF	\$1.05 / SF	\$0.93 / SF	\$1.33 / SF
Selling Price/AC		\$60,852 / AC	\$45,643 / AC	\$40,509 / AC	\$57,718 / AC

The unit prices for the four land sales range from \$0.93 to \$1.40 per square foot. The total land area for the comparable sales ranges from 4.93 acres to 24.10 acres, which in all cases is smaller than the subject property's land area of approximately 45 acres.

Sale #14 - Digital Light Drive, is the sale in closest proximity to the subject property. It is located approximately 0.5 miles directly to the west. Although the locational aspects of the sale are very similar, it is only 7.33 acres in size. At \$1.33 per square foot of land area, it is considered to establish an upper limit of value for the subject land when considered as vacant.

The two comparable sales which are largest in size, #5 - 205 Dike Road and #2 - Palm City Investments, have unit prices which range from \$0.93 to \$1.05 per square foot. These sales are more similar to the subject property in size and are given greatest weight in the analysis.

After careful consideration of the foregoing comparable land sales and with all data gathered and analyzed, the appraiser concluded that the market value of the subject land as if vacant is \$1.00 per square foot.

The value of the subject land as if vacant is calculated as:

$$45 \text{ acres} \times 43,560 \text{ sf / acre} \times \$1.00 \text{ per square foot} = \$1,960,200$$

Rounded to \$1,960,000

INVESTMENT VALUE ANALYSIS

James E. Golden, P.G. of Grove Scientific and Engineering has provided a cost model for the construction of a C&D landfill on the subject property. His conceptual design results in a waste volume, or air space, of approximately 2,800,000 cubic yards (similar to that of the subject landfill). His detailed cost model and engineering report are included in the Addenda of this consulting report.

Mr. Golden's cost model is summarized below:

Development Costs	
1. Mobilization & Demobilization	\$80,000.00
2. Site Work & Infrastructure	\$873,755.45
3. Disposal Cell Earthwork	\$1,590,375.00
4. Leachate Control System	\$4,508,796.96
5. Leachate Storage Facility	\$389,900.00
6. Groundwater Monitoring	\$50,500.00
7. Bidding Assistance	\$5,000.00
8. Surveying Layout & As-Built	\$50,000.00
9. CQA & Geotechnical Testing	\$227,500.00
10. Final Design, Permits, Construction Management & Certification	\$450,000.00
Subtotal	\$8,225,827.41
Contingency 10%	\$822,582.74
Total Development Costs	\$9,048,410.15
COST ESTIMATE SUMMARY	
Predevelopment Costs	\$723,500.00
Development Costs	\$9,048,410.15
Total	\$9,771,910.15
Total, Rounded	\$9,772,000.00

The estimated cost for permitting and constructing a landfill with 2,800,000 cubic yards of waste volume is \$9,772,000, or \$3.49 per cubic yard. This unit value has been compared to published resources and other materials in the workfile and is considered to be reasonable and well supported.

Recall that a portion of the waste volume, or air space, associated with the existing Florida Recyclers landfill has been consumed. A topographic survey and consumption data provided by William Mott Land Surveying Inc. has been relied upon to estimate air space consumption. Our analysis indicates that approximately 950,000 cubic yards had been consumed on the effective date of value. The available capacity is therefore 2,800,000 less 950,000 = 1,850,000 cubic yards. The cost of construction per cubic yard developed above is applied to the available capacity as follows:

$$1,850,000 \times \$3.49 / \text{cu yd} = \$6,456,500$$

Rounded \$6,456,000

The land value for the subject property was developed in an earlier section of the report and is estimated to be \$1,960,000. This land value, combined with the cost to construct the available landfill capacity, results in the investment value estimate.

Cost to construct available capacity	\$6,456,000.00
Land value	\$1,960,000.00
Investment Value Estimate	\$8,416,000.00

The subject land value results in an overall construction cost which is somewhat higher than usual because the subject land is smaller and closer to the path of development than sites which are typically purchased for construction of a C&D landfill. When considering investment value, the somewhat elevated land cost is considered to be offset by the economies of scale and potential for additional air space utility which is created by use of a 45-acre site surrounded on three sides by existing Brevard County solid waste facilities.

The scope of work for this assignment calls for an estimate of the investment value of the subject property when analyzed as vacant land available to provide additional C&D landfill capacity to Brevard County Government. That investment value is estimated to be:

\$8,416,000

SUMMARY

The total cost for acquiring the subject land as vacant, permitting the project, and constructing a landfill with a total of 2.8 million cubic yards of waste volume on the site was estimated. These costs were then adjusted for the air rights consumed on the subject property as of the date of the appraisal.

The subject site is smaller and better-located than sites which would typically be purchased in a more rural area for construction of a C&D landfill. When considering investment value, the somewhat higher land cost is considered to be off-set by the economies of scale and potential for additional air space utility which is created by sharing boundaries with existing Brevard County solid waste facilities.

Thus, based on the extraordinary assumptions and hypothetical condition stated in this report, the investment value of the subject property, as of the effective date of the appraisal of April 10, 2017, is estimated to be:

EIGHT MILLION FOUR HUNDRED SIXTEEN THOUSAND DOLLARS
\$8,416,000

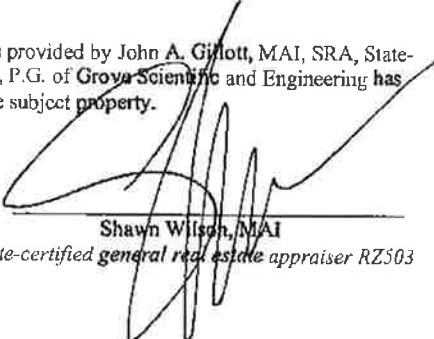
CERTIFICATION

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this appraisal report, upon which the analyses, opinions, and conclusions expressed herein are based, are true and correct, and no pertinent facts affecting value are knowingly withheld. In completing my analyses and arriving at the conclusion set forth herein, certain statements were relied upon as fact. If these statements ultimately prove untrue or misleading, my conclusions may be invalidated and warrant reconsideration.
- The reported analysis, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions. The appraisal report sets forth all the limiting conditions (imposed by the terms of this assignment or by the undersigned) affecting the analyses, conclusions, and opinions in this report.
- I have no present or contemplated future interest, nor any personal interest or bias with respect to the subject matter or real estate of this appraisal report or the parties involved in this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My engagement and compensation are not contingent upon developing or reporting a predetermined value of direction in value which favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- To the best of my knowledge and belief, this certificate, the appraisal analysis, opinions, and conclusions have been developed and this appraisal report has been prepared in conformity with, and the use of this report is subject to the minimum requirements of [a] the State of Florida for Certified Appraisers, and [b] the Uniform Standards of Professional Appraisal Practice. I further certify that, to the best of my knowledge and belief, the reported analysis, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and the Standards of Professional Appraisal Practice of the Appraisal Institute. As of the date of this report, I have completed the continuing education program for Designated Members of the Appraisal Institute.
- The preparation and use of this report are subject to the requirements of [a] the Appraisal Institute and [b] Florida Real Estate Appraisal Board inclusive of review by their duly authorized representatives. Other than those persons identified within the report, no one has provided significant professional assistance to the person signing this report.
- I have performed no other services, as an appraiser or in any other capacity, regarding the subject property within the three-year period immediately preceding acceptance of this assignment.
- I have personally inspected the property which is the subject of this appraisal report.
- A list of Assumptions and Limiting Conditions is shown elsewhere in this appraisal report and is made a part hereof by reference thereto and these "Assumptions and Limiting Conditions" are a part of the valuable consideration between appraiser and client for this report.
- Professional assistance with landfill research and valuation was provided by John A. Giffott, MAI, SRA, State-certified general real estate appraiser RZ212. James E. Golden, P.G. of Grova Scientific and Engineering has provided a cost model for construction of a C&D landfill on the subject property.

June 22, 2017

Date

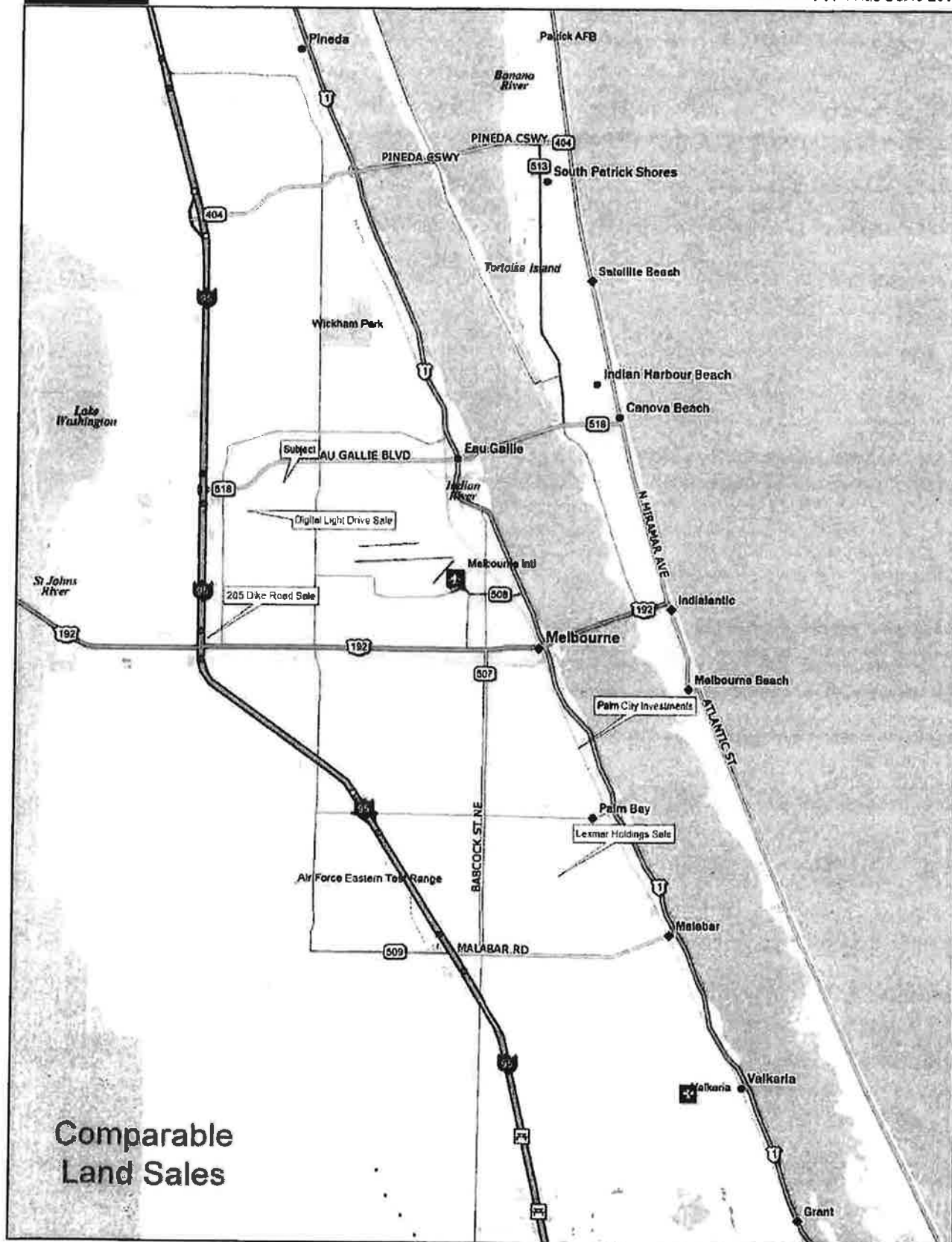

Shawn Wilson, MAI
State-certified general real estate appraiser RZ503

ASSUMPTIONS AND LIMITING CONDITIONS

1. This is an Appraisal Report which is intended to comply with the reporting requirements set forth under Section 2-2(a) of the Uniform Standards of Professional Appraisal Practice. Supporting documentation concerning the data, reasoning, and analyses utilized in this appraisal is retained in the appraiser's file. The information contained in this report is specific to the needs of the client and for the intended use stated in this report. The appraiser is not responsible for unauthorized use of this report.
2. No responsibility is assumed for legal or title considerations. Title to the property is assumed to be good and marketable unless otherwise stated in this report.
3. The property is appraised free and clear of any or all liens and encumbrances unless otherwise stated in this report.
4. Responsible ownership and competent property management are assumed unless otherwise stated in this report.
5. The information furnished by others is believed to be reliable. However, no warranty is given for its accuracy.
6. All engineering is assumed to be correct. Any plot plans and illustrative material in this report are included only to assist the reader in visualizing the property.
7. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures beyond those associated with the detrimental condition that render it more or less valuable. No responsibility is assumed for such conditions or for arranging for engineering studies that may be required to discover them.
8. It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless otherwise stated in this report.
9. It is assumed that all applicable zoning and use regulations and restrictions have been complied with, unless a nonconformity has been stated, defined, and considered in this appraisal report.
10. It is assumed that all required licenses, certificates of occupancy or other legislative or administrative authority from any local, state, or national governmental or private entity or organization have been or can be obtained or renewed for any use on which the value estimates contained in this report are based.
11. It is assumed that the utilization of the land and improvements is within the boundaries or property lines of the property described and that there is no encroachment or trespass unless otherwise stated in this report.
12. Unless otherwise stated in this report, the subject property is appraised without a specific compliance survey having been conducted to determine if the property is or is not in conformance with the requirements of the Americans with Disabilities Act. The presence of architectural and communications barriers that are structural in nature that would restrict access by disabled individuals may adversely affect the property's value, marketability, or utility.

13. Possession of this report, or a copy thereof, does not carry with it the right of publication. It may not be used for any purpose by any person other than the party to whom it is addressed without the written consent of the appraiser, and in any event, only with proper written qualification and only in its entirety.
14. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraiser, or the firm with which the appraiser is connected) shall be disseminated to the public through advertising, public relations, news sales, or other media without prior written consent and approval of the appraiser.

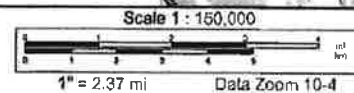
Addenda



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LAND SALES DATA SHEET

SALE NO.: #7 – Lexmar Holdings

Recording Data: Brevard County OR Book 7331 Page 2206

Grantor: Robert A. Webb

Grantee: Lexmar Holdings, LLC

Date of Sale: March 24, 2015

Dimensions/area: Land area is 4.93 acres; 214,750 square feet

Consideration: \$300,000

Price per unit: \$60,852 / per acre, \$1.40 / per square foot

Type of Instrument: Warranty Deed

Financing: Cash to the seller

Tax ID #: 2834849

Zoning / FLU: L-1 (Light Industrial and Warehousing) / Industrial, City of Palm Bay, Florida

Utilities: Public water, sewer and electric are available.

Location of Sale: The site is located at 1000 Clearmont Street, Palm Bay, Florida.

Comments: This vacant wooded parcel is located between Palm Bay Road NE and Port Malabar Boulevard NE.

Aerial of Lexmar Holdings



LAND SALES DATA SHEET

SALE NO.: #2 – Palm City Investments

Recording Data: Brevard County OR Book 7691 Page 2825

Grantor: Citizens Bank and Trust

Grantee: Palm City Investments F.H., LLC

Date of Sale: July 8, 2016

Dimensions/area: Land area is 24.10 acres; 1,049,796 square feet

Consideration: \$1,100,000

Price per unit: \$45,643 / per acre, \$1.05 / per square foot

Type of Instrument: Special Warranty Deed

Financing: Cash to the seller

Tax ID #: 2826096 and 2852961

Zoning / FLU: BMU (Bayfront Mixed Use District) / Bayfront Mixed Use, City of Palm Bay, Florida

Utilities: Public water, sewer and electric are available.

Location of Sale: The site is located on Robert J. Conlan Boulevard NE, Palm Bay, Florida.

Comments: The east boundary of the site abuts a railroad right-of-way. The property is somewhat below the grade of the adjoining roadway.

Aerial of Palm City Investments



LAND SALES DATA SHEET

SALE NO.: #5 – 205 Dike Road

Recording Data: Brevard County OR Book 7216 Page 0810

Grantor: PNC Bank, National Association

Grantee: Dike Ventures, LLC

Date of Sale: September 25, 2014

Dimensions/area: Land area is 17.28 acres; 752,717 square feet

Consideration: \$700,000

Price per unit: \$40,509 /acre, \$0.93 / square foot

Type of Instrument: Special Warranty Deed

Financing: Cash to the seller

Tax ID #: 2801294

Zoning / FLU: R-3 (Multiple Family) / UD-Res (Urban Density Residential) and INST (Institutional) / P-1 (Institutional), City of West Melbourne, Florida.

Utilities: Public water, sewer and electric are available.

Location of Sale: The site is located on 205 Dike Road, West Melbourne, Florida.

Comments: The property is located in the northeast quadrant of I-95 and U.S. Highway 192.

Aerial of 205 Dike Road



LAND SALES DATA SHEET

SALE NO.: #14 – Digital Light Drive

Recording Data: Brevard County OR Book 7474 Page 0527

Grantor: Mark J. Pieloch

Grantee: Erchonia Corporation, LLC

Date of Sale: October 9, 2015

Dimensions/area: Land area is 7.45 acres; 324,522 square feet

Consideration: \$430,000

Price per unit: \$57,718 / acre, \$1.33 / square foot

Type of Instrument: Special Warranty Deed

Financing: Cash to the seller

Tax ID #: 2742853

Zoning / FLU: M-1 (Light Industrial District) / Industrial, City of Melbourne, Florida

Utilities: Public water, sewer and electric are available.

Location of Sale: The site is located on Digital Light Drive, Melbourne, Florida.

Comments: The site is located in a platted industrial park, just west of the Sarno Landfill.

Aerial of Digital Light Drive



June 7, 2017

Jack Kirschenbaum, Shareholder
Gray Robinson
1795 West NASA Blvd.
Melbourne, Florida 32901

Subject: Development Cost Estimate For Conceptual
Construction and Demolition Debris Disposal Facility
East-Central Florida
GSE Project No. 291200

Dear Mr. Kirshenbaum:

Grove Scientific & Engineering (GSE) has completed a development cost estimate for a construction and demolition (C&D) debris disposal facility in accordance with our approved scope of work. The C&D facility is assumed to be developed in east-central Florida. Therefore, the specific land, siting, permitting, design, and operational limitations of this locale have been applied to the cost estimate. A cost model for the C&D facility was developed that reflected a typical Florida location, size, height and site life. This report first discusses the conceptual facility design, goes on to estimate the predevelopment costs, such as design and permitting, and then finishes with the estimated costs to develop the site to allow acceptance of C&D wastes.

Conceptual Site Design

The cost model used in this estimate is a 45 acre total site size, with a 35 acre disposal area footprint. Site infrastructure, such as paved entrance roadway, stormwater ditches, ponds, scale house and scale, and setbacks, make up the remaining acreage, see attached Figure 1. Minimum setbacks from the disposal footprint are assumed to be 100 feet from adjacent parcels, and 150 feet facing the front collector roadway. The C&D disposal facility is assumed to be lined with leachate controls, a stormwater control system of perimeter ditches/swales, and ponds to control the 25-year storm. C&D facilities have been required to be lined in Florida since July 2010. To provide for the required lined disposal cell base grade of a 1-2% slope to a sump at one end, and to stay above the assumed shallow water table, the disposal unit area must be filled on the upgrade top of slope of the cell, see Figure 1.

The final abovegrade design of the facility was evaluated to understand the permitting and site planning constraints. The sideslopes are assumed to be 3' horizontal : 1' vertical, with terraces and letdown pipes to prevent erosion. The height is assumed to be 80 feet above grade, with a flat top slope of 3%, see Figure 2. These basic design criteria comply with the maximum allowed C&D facility design according to the Florida Department of Environmental Protection (FDEP) Rule

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requirements, see Rule 62-701 excerpt, Attachment 1. The final cover would also be required to be impervious, like the bottom liner. This final cover would generate higher stormwater runoff than a soil covered site, thus the ditch and pond system needs to be sized accordingly. This conceptual abovegrade design results in a waste volume, or air space of approximately 2,800,000 cubic yards (CY) in-place, or at an in-place density of 1,500 lbs. per cubic yard, 2,100,000 tons of waste. At a waste input rate of 1000 cubic yards, or 250 tons per day, and a 2.5 compaction ratio, a 23 year site life would be available. Soil cover volume was not included, since C&D facilities are not required to provide waste cover, unless a temporary closure is required.

The following additional site assumptions were used for the cost model:

1. The terrain was assumed to be relatively flat.
2. Groundwater table on the site was assumed to have a seasonal high of 3 feet below grade and an average depth on 5 feet. Therefore, all disposal unit construction is to be above grade. Subsurface soils are assumed to be medium permeability sands and silts, with an intermediate aquifer at 30 feet below grade, and a clayey sand confining unit at a 75 foot depth.
3. Geology is assumed to be stable and not sinkhole prone.
4. The site is assumed to be heavily wooded with no wetlands.
5. Land use and zoning is assumed to have to be heavy industrial, with adjacent uses compatible with that use.
6. It was assumed that a 500 foot paved 2-lane access road, with a turn lane off of a collector 2-lane road would be required to access the site.
7. Soils are assumed to be stable.
8. Surrounding land uses are similar heavy industrial uses, such as landfills, recycling facilities, wastewater/sludge treatment facilities, etc. Variances have been approved by the local municipality for the surrounding land uses for setbacks and heights to 80 feet above grade.
9. Utilities , such as water, sewer, and electric are available within 500 feet of the site.
10. Land costs are not included in the cost estimate.

C&D Debris Disposal Facility Pre-Development Costs

In developing the cost estimate for this model, it was assumed that the pre-development period, from the point investigations began, to the time the construction permit is received would last three years. In our experience, this is an average time in Florida, with some contested permits lasting five or more years. Landfills, and related solid waste facilities are considered LULUs, or "locally undesirable land uses", that are always opposed by nearby land owners, environmental groups, and competitors (commonly disguised as a home owner's group). Therefore, these land uses are very difficult to get approved through the County, and/or City, Zoning and Commissioner boards because of the nuisance stigma (odors, noise, traffic, groundwater pollution, air pollution, reduced property values, etc.). Many landfill and C&D projects have failed in recent years in Florida because of opposition. In addition, in east-central Florida it is also very difficult to find 45 acres of land that is zoned heavy industrial or remote agricultural/open space land that would allow a Conditional Use permit for a C&D facility. For the cost model, we are assuming a moderate amount of difficulty to obtain local zoning/permitting approvals.

As previously described, for the cost model, we are assuming that an FDEP solid waste permit can be obtained for an 80 foot high disposal unit on the 35 acre footprint. This basically is the maximum height, at a 3:1 sideslope, that can be reached. It is also assumed that the local municipality's zoning code only allows for a 50 -foot high structure in a heavy industrial zoned land use. Therefore, to go to the 80 foot height, a variance to the code would be required. We are assuming that the surrounding heavy industrial land uses had previously received variances for heights up to 80 feet above grade, thus setting a precedent for a height variance. This is not uncommon for well buffered industrial uses.

In addition, the land that is selected must meet the landfill siting Prohibitions of the local municipal codes, and FDEP Rule 62-701.300, such as a geologically stable foundation, minimum wetlands setback, potable well setbacks, and surface water setbacks, see Attachment 1. For this cost model, we have assumed that a suitable 45 acre site can be found to develop a C&D facility. Based on GSE's experience with landfill siting, design and permitting, the following predevelopment tasks and associated estimated costs are presented in Table 1.

Table 1. East-Central Florida C&D Disposal Facility- Predevelopment Costs

1. Site Selection Study, market analysis and Phase I/II ESA	\$30,000
2. Boundary and Topographic Survey	22,500
3. Conditional Use Permit application, Public hearings, Fees*	75,000
4. Lobbying and Legal Services*	50,000
5. Environmental Assessments-Wetlands, T&E.	35,000
6. Hydrogeological Investigation	100,000
7. Geotechnical Investigation	50,000
8. Landfill/Stormwater Control System Engineering Design & Plan Sets	200,000
9. FDEP Solid Waste and Stormwater Permit Applications-Operations Plan, Groundwater Monitoring Plan, Closure Plan, Closure Cost Estimate, Fees	100,000
10. Roadway and Turnlane Design and Permitting	30,000
11. Water Supply Well design and permitting	3,500
12. Scalehouse, parking, utilities design and permitting	7,500
13. Leachate lift Station design and permitting.	20,000
Total	\$723,500

*assumes no major opposition to land use approvals. Contingency costs have been included.

Other than the engineering design, the hydrogeological and geotechnical studies are the most substantial predevelopment items, see required FDEP Solid Waste Rule scope for these studies in Attachment 1. For these studies, we assumed 13 SPT borings were completed to a depth of 50 feet to the first confining layer, and a series of 10 piezometers installed within the shallow aquifer, to a depth of 20 feet, and into the intermediate aquifer, to a depth of 45 feet, to evaluate the hydrogeology on the 35 acre disposal unit footprint. An additional 6 shallow borings to 30 feet were used to investigate stormwater pond, roadway, and scalehouse foundations. Soil laboratory testing of 25 samples for soil type characteristics, permeability, and clay content were assumed. Slope stability, foundation analysis, and slug tests were also included in the costs

estimate for these studies. A sinkhole investigation would also be included in the Geotechnical task.

Under the current FDEP Rule 62-701.730, C&D disposal units must be designed with a liner and a leachate collection system, see Attachment 1. This liner system is basically the same as those required for a class III landfill. Therefore, almost the same extensive amount of engineering design and evaluations are required to be applied to this cost model, as applied to a full class I sanitary landfill. Once the leachate is collected, it is assumed that a storage tank is designed to provide for storage capacity prior to off-site disposal or transmission to a sewer system. For the model site, we assumed the design and permitting of a secondarily contained leachate storage tank, discharging to a lift station to a sewer force main along the collector roadway, 600 feet from the facility.

We also assumed the design of typical site infrastructure improvements, such as water service, a water well to supply dust control water, 3-phase electrical service, truck scale, 500 SF office trailer/ scalehouse, customer and handicapped parking spaces, access ramps and washrooms.

Facility Construction Cost to Accept Waste

For costing purposes, it was assumed that the entire C&D disposal facility was excavated, lined, and otherwise constructed at one time, where in reality, liner construction would likely proceed in phases. Typically, each phase, or cell, is operated for about 10 years, and each phase closed as they are filled. Figure 1 depicts the conceptual C&D disposal facility model used to develop the costs to construct. Excavation and surface quantities are based on a 35 acre disposal unit size, see Figure 1.

The estimated costs to construct the 35 acre C&D facility for waste acceptance pursuant to FDEP rules are presented in attached Table 2. Unit costs are based on recent (2015) landfill construction projects in Orange County and Brevard County, Florida, FDOT 2016 average unit costs for roadway construction, and GSE's recent bidding experience on central Florida landfill projects. Specific references are listed in later sections of the report. It should be noted that the Ultimate I-4 highway project is significantly impacting regional borrow soil costs in central Florida. Because of this, soil pricing is common at \$20.00-22.00 for material, delivery and placement. For this cost model, we are using a 2015 landfill closure borrow soil bid from Brevard County at \$18.25/CY.

The following discussion explains the cost items related to the construction of the conceptual C&D facility itemized on attached Table 2

Items 1 & 2-Mobilization, Site Work and Infrastructure

Items 1 and 2 on Table 2 present the costs of the initial mobilization of contractor's heavy equipment and personnel to the site (typically 1% of the total project), and the basic earthwork to construct the access roadways, stormwater control system, fencing, and utilities. Assuming that the 45 acre site is wooded, clearing and grubbing would be required. Excavation is based on in-bank volume, with 15% swell and losses. The 32,000 cubic yards of excavated fill from the stormwater ponds and ditches is assumed to be used on-site for fill under the lined disposal units.

Typical waste disposal site improvements have been assumed, such as a 500 SF office trailer, or scalehouse with entrance ramps, truck scale, lighting, signage, office furniture, and office software. The office trailer cost is estimated at \$15,000, the scale, foundation and installation is \$70,000, and the remainder of the costs are area lighting, security and scale cameras, signage and access ramps.

A 375 foot turnlane, and a 375 foot deceleration lane are assumed to be required at the entrance from the local 2-lane collector roadway. The site access road is an 800-foot paved 2-lane road from the entrance into the truck scale, paved scalehouse parking area, and then up to the disposal cells. Pavement assumes a limerock base and a 2-inch asphalt surface. A 1200 foot long landscape berm, along the frontage with the collector street is assumed, with trees at 20 feet on center and shrubs to create a visual buffer, a common requirement of a local land use permit. Utilities, such as 3-phase electric (leachate pumps), sanitary sewer, and potable water service, are assumed to be installed approximately 600 feet to the operations area from the utilities on the frontage roadway right of way. An irrigation well is typically used to provide irrigation and dust control water. If municipal water is available, as assumed, it is common for a fire hydrant to be required by the local Fire Marshall. A 6-foot galvanized steel perimeter security fence and locking gates are required by the FDEP, and most local codes. The total estimated cost for items 1 and 2 is \$953,755.45.

Item 3-Disposal Cell Earthwork

The abovegrade disposal facility design, and the shallow water table assumed for the site, requires that significant earthwork be completed prior to constructing the lining the disposal facility cells. The cost model design has two 17 acre cells sloped to leachate collection sumps, see Figure 1. This design requires raising the elevation of the upgrade end of the cell liner some 6 feet above the sump level to obtain the minimum cell center conduit slope of 1.0 %, and the side flow slopes at 2 %. It was assumed that the sump is excavated 2 feet below grade. Soil from that cut, and the stormwater cut, is used to add fill to build up the site. Even with this fill, borrow soils of an estimated 75,000 CY are required to be imported to construct the cells base. In addition, an intercell berm separates the cells, a common design to allow a partial closure of a filled cell. The total estimated cost of the earthwork to construct the 35 acres of lined C&D cells is \$1,590,375. Again, the current high costs of imported fill greatly impacts this cost.

Item 4-Leachate Control System

As discussed previously, C&D disposal cells are required to be lined with leachate controls, as described in Attachment 1. A geosynthetic clay liner is required to be installed underneath all leachate collection trenches and the sumps. The 60-mil smooth liner is used on the floor of the cell, and the 60-mil textured liner is used along the sideslopes and berm surrounding the cell base. A geocomposite drainage net is used to convey the leachate along the base of the cell liner to the central conduit and onto the sump. Per the FDEP design, a 24-inch drainage/protective sand layer overlies the liner. This sand is also assumed to be imported from off-site. The pipe, pumps and gravel materials make up the central leachate conduit and sump construction in each cell. A 6-inch force main conveys leachate to the storage tank near the scalehouse, and then on to the lift station, see Figure 1. The total estimated cost of item 4, leachate control system is \$4,508,796.96.

Item 5-Leachate Storage Facility

A leachate storage facility consisting of an aboveground steel tank with secondary containment was assumed for the cost model. A typical rule of thumb in Florida for leachate generation is 2500 gallons per day per open landfill acre, as an average annual rate. Therefore, if it is assumed that one cell is open, or 17.5 acres x 2500 GPD x 2 days storage, equals an estimated 87,500 gallon storage tank. Because of needed extra capacity, a 100,000 gallon storage tank was assumed. A 110 % impervious concrete containment structure is also required for a leachate tank. Leachate transfer pumps and controls would also be required. A lift station would be required to transfer the leachate to the municipal sewer force main assumed to be along the collector roadway, for disposal at the local wastewater treatment plant. This is the preferred disposal method for leachate in Florida. Leachate disposal costs have not been considered in this cost model, but can reach \$0.25 per gallon. The estimated cost of this item is \$389,900.

Item 6-Groundwater Monitoring

A groundwater monitoring system of wells is required for all C&D facilities in Florida, with a minimum of one upgradient well, and two downgradient wells. However, in our experience, the FDEP would require shallow aquifer and intermediate aquifer monitoring well clusters and additional downgradient well locations to provide adequate coverage. Therefore, a system of 5 well clusters, or 10 wells is assumed, as depicted on Figure 1. Prior to the facility receiving waste, the wells would require background parameter sampling, laboratory analysis and well completion reports. Installation, sampling and reporting are included in the lump sum cost estimate in Table 2. It is also assumed that one surface water sample location would require a background sample. The total estimated cost for this item is \$50,500.

Item 7-Bidding Assistance

It is assumed that the landfill developer will need some technical assistance with bidding the specialty construction trades required for the leachate control and storage systems, at an estimated cost of \$5,000.

Item 8-Surveying

Surveying services over the 12-month construction period are critical to accurate construction grades, liner and pipe installation and as-built reporting required for the FDEP construction certifications. This item has been estimated at cost of \$50,000.

Item 9-Construction Quality Assurance

Construction Quality Assurance (CQA) is strictly regulated and must be followed for C&D facility lined disposal unit projects. FDEP Rules specify fulltime engineer's supervision and testing of all

soil and liner materials per Rule 62-701.400. The cost per acre is an average of similar GSE projects and local landfill bids. The estimated unit cost includes professionals, technicians, soil and liner laboratory tests. A final CQA report is also included. The estimated cost of soils and liner CQA services is \$227,500.

Item 10-Final Permits and Construction Management and Certifications

Item 10a. includes all final construction engineering design, final State/local permitting, and construction management for items such as access roadways, turnlanes, utilities, lift station, scalehouse and scale building permits, local impact fees, irrigation well, and engineer certification reports. It is estimated that to construct the 35 acre facility, with associated support facilities, would take 12 months. The estimated cost of this item is \$150,000.

Item 10b.-Financial Assurance is the estimated cost of a guarantee performance bond required by the FDEP in case an owner/operator abandons the facility before it is closed, see Rule excerpt 62-701.630 in Attachment 1. It is estimated that the subject cost model disposal facility would require \$3,000,000 in closure and long term care costs. This amount of financial assurance would need to be provided through one of the FDEP approved instruments prior to waste acceptance. For this cost estimate, we have assumed that a bond could be obtained, and that a 10% fee payment is required for the facility owner to get coverage. Therefore, the estimated cost of the bond is \$300,000, which makes the total for item 10 \$450,000.

As presented in Table 2, the total estimated cost of construction of the 35 acre C&D facility is to get approval to accept C&D waste is \$8,225,827.41.

Item 11-Contingency

A 10% contingency has been added to all construction items, which is a typical amount for similar projects. This contingency is available to provide funding for material and labor increases in the interim period from bidding to construction, and any unforeseen site problems, such as dewatering, impact fees and insurance. The estimated cost for this item is \$822,582.74.

Therefore, the total estimated cost of the facility construction is \$9,048,410.15.

Limitations and Related Cost Issues

GSE's C&D disposal facility cost model was limited to the assumptions presented, unit costs referenced, and our experience with similar projects. The construction costing of a specific location and facility design would vary. The conceptual facility design is indicative of an average east-central Florida site. GSE's sources of material and services costs included our professional experience on similar construction projects, recent contractor bids, FDOT 2015-2016 average roadway project costs, and:

1. Financial Responsibility Cost Estimates- Brevard County Solid Waste Management System, FY 2015- Neel-Schaffer, Inc.; July 2015;
2. Financial Responsibility Cost Estimates- Brevard County Solid Waste Management System, FY 2016- Neel-Schaffer, Inc.; August 2016;

3. Brevard County Central Disposal Facility Phase V Closure, August, 2015 (Approximate 28 acre Closure). Neal-Schaffer, Inc.;
4. Orange County Cell 9-12 Phase I closure bid, October 2015 (Approximate 38 acre closure) CH2MHill/ Neal-Schaffer, Inc.

Typically, C&D facilities are valued on the air space, or waste volume provided by their approved permits and designs and the current market C&D disposal rates, or tipping fees. This cost model did not consider air space or market tipping fees. To realize the value of that waste volume, a facility must be operated with the appropriate heavy equipment, such as compactors, trained operators, soil cover, and final closure cover. This cost model did not consider operational or closure costs.

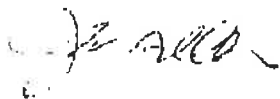
Conclusions

GSE has completed a cost model for the design, permitting and construction of a 45 acre site, with a 35 acre C&D debris disposal facility. The cost model was based on typical site predevelopment siting, design and permitting costs, regulatory requirements, and site improvements and construction common to existing Florida C&D facilities. GSE's cost model concluded that the 45 acre facility would have: 1) predevelopment costs of \$723,500 (Table 1.); and 2) construction costs of \$9,048,410 (Table 2.) to accept C&D waste, resulting in an estimated project total of \$9,771,910.

We trust that this report meets with your scope of work expectations. Please contact us with any questions.

Sincerely,

Grove Scientific and Engineering



James E. Golden, P.G.
Vice President, Sr. Project Scientist



James T. Show, P.E.
Vice President, Engineering

Attachments

cc: Shawn Wilson, Compass; John Gillott

Tables

GROVE
SCIENTIFIC & ENGINEERING

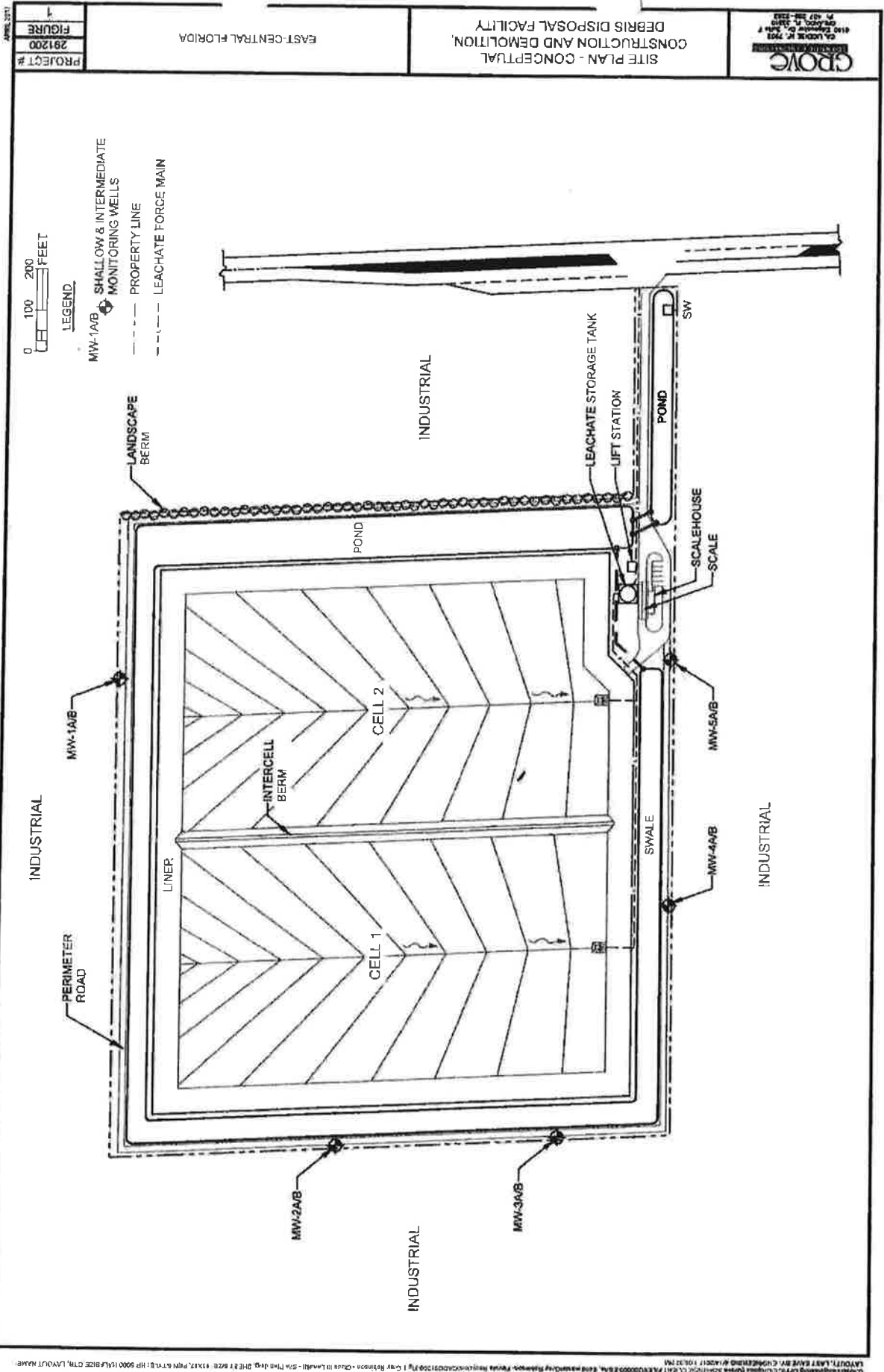
**Table 2. East - Central Florida Construction and Demolition Debris Disposal Facility
ENGINEER'S COST ESTIMATE- Disposal Units and Infrastructure Construction**

ITEM	UNITS	UNIT COST	QUANTITY	ITEM COST	ITEM	UNITS	UNIT COST	QUANTITY	ITEM COST
1. MOBILIZATION & DEMOBILIZATION		\$ 80,000.00	1	\$ 80,000.00	5. LEACHATE STORAGE FACILITY				
2. SITE WORK AND INFRASTRUCTURE					a. COMPACT MASS GRADING FILL AREAS	Yd ²	\$ 1.00	1,200	\$ 1,200.00
a. CLEAR AND GRUB	Yd ³	\$ 0.50	21,780	\$ 10,890.00	b. FINE GRADE CONCRETE SUBGRADE	Yd ²	\$ 1.00	1,200	\$ 1,200.00
b. STORMWATER PONDS, DITCHES AND PIPING	Yd ³	\$ 5.24	32,266	\$ 169,073.84	c. LEACHATE TANK BASE PAD	Yd ²	\$ 100.00	160	\$ 16,000.00
c. SOD POND AND DITCH SLOPES	Yd ²	\$ 2.25	22,666	\$ 50,998.50	d. CONCRETE FLOOR SLAB	Yd ²	\$ 100.00	300	\$ 30,000.00
d. PERIMETER FENCING AND GATES	LF	\$ 8.68	6,500	\$ 56,420.00	e. CONCRETE TRUCK RAMP	FT ²	\$ 35.00	100	\$ 3,500.00
e. SCALEHOUSE / TRAILER, TRUCK SCALE, LIGHTING, SIGNAGE	LS	\$ 100,000.00	1	\$ 100,000.00	f. CONCRETE CONTAINMENT WALLS	Yd ²	\$ 35.00	1,600	\$ 56,000.00
f. TURNLANE AND PAVED ACCESS ROAD	Yd ³	\$ 47.19	5,369	\$ 253,363.11	g. TYPE C INLETS	Each	\$ 3,500.00	2	\$ 7,000.00
g. LANDSCAPE BERM	LF	\$ 50.00	12,000	\$ 600,000.00	h. LEACHATE STORAGE TANK (100K GAL)	LS	\$ 150,000.00	1	\$ 150,000.00
h. UTILITIES-ELECTRIC, SEWER, WATER TO SITE	LF	\$ 45.00	800	\$ 36,000.00	i. TANK CONTROLS AND LEAK DETECTION	LS	\$ 20,000.00	1	\$ 20,000.00
i. IRRIGATION WELL	LS	\$ 15,000.00	1	\$ 15,000.00	j. LEACHATE TRANSFER PUMP	LS	\$ 12,000.00	1	\$ 12,000.00
j. FIRE HYDRANT AND LINE	LF	\$ 30.00	800	\$ 24,000.00	k. 6" FORCE MAIN TO SEWER CONNECTION	LF	\$ 30.00	600	\$ 18,000.00
			SUBTOTAL	\$ 873,755.45	k. LIFT STATION TO MUNICIPAL SEWER	LS	\$ 75,000.00	1	\$ 75,000.00
3. DISPOSAL CELL EARTHWORK						SUBTOTAL		\$ 389,900.00	
a. MASS GRADING (OUT/FILL)	Yd ³	\$ 2.00	28,000	\$ 56,000.00	6. GROUNDWATER MONITORING				
b. COMPACT MASS GRADING FILL AREAS	Yd ³	\$ 1.00	100,000	\$ 100,000.00	a. INSTALL & INITIAL SAMPLE MONITORING WELL	Each	\$ 5,000.00	10	\$ 50,000.00
c. INTERCELL BERM	Yd ³	\$ 18.25	2,500	\$ 45,625.00	b. SURFACEWATER SAMPLE	Each	\$ 500.00	1	\$ 500.00
d. FILL CELL-BASE GRADE	Yd ³	\$ 18.25	75,000	\$ 1,368,750.00		SUBTOTAL		\$ 50,500.00	
e. PERIMETER ROAD-PLACE 6" SHELL ROCK ROAD BASE	Yd ³	\$ 20.00	1,000	\$ 20,000.00	7. BIDDING ASSISTANCE				
			SUBTOTAL	\$ 1,590,375.00	a. ONE JOB LUMP SUM	LS	\$ 5,000.00	1	\$ 5,000.00
4. LEACHATE CONTROL SYSTEM						SUBTOTAL		\$ 5,000.00	
a. FINE GRADE LINER SUBGRADE	Yd ²	\$ 1.00	100,000	\$ 100,000.00	8. SURVEYING LAYOUT & AS-BUILT				
b. GEOSYNTHETIC CLAY LINER	FT ²	\$ 0.61	11,000	\$ 6,710.00	a. SUBGRADE & FINISH GRADE CERT.,	LS	\$ 50,000.00	1	\$ 50,000.00
c. 60 MIL SMOOTH HDPE LINER	FT ²	\$ 0.57	1,180,000	\$ 672,600.00	b. LCS PIPE SLOPE CERT., AS-BUILTS				
d. 60 MIL TEXTURED HDPE LINER	FT ²	\$ 0.62	314,108	\$ 194,746.96	9. COA & GEOTECHNICAL TESTING				
e. GEOCOMPOSITE DRAINAGE NET	FT ²	\$ 0.73	1,300,000	\$ 949,000.00	a. SITE OBS., SAMPLE COLLECTIONS,	ACRE	\$ 6,500.00	35	\$ 227,500.00
f. 8 OZ./YD3 NON-WOVEN GEOTEXTILE	FT ²	\$ 2.31	15,000	\$ 34,650.00	LABORATORY TESTING, COA REPORT,				
g. 8" DIA. PERFORATED SDR11 HDPE PIPE	LF	\$ 10.60	2,400	\$ 25,440.00	10. FINAL DESIGN, PERMITS, CONST. MANAGEMENT AND CERTIFICATION (1)				
h. LCS GRAVEL - FDOT 57 & 4 STONE	Yd ³	\$ 18.00	9,100	\$ 163,800.00	a. ONE JOB LUMP SUM	LS	150,000	1	\$ 150,000.00
i. 24" SAND DRAINAGE LAYER	Yd ³	\$ 18.25	125,000	\$ 2,281,250.00	b. FINANCIAL ASSURANCE-BOND	LS	\$ 300,000.00	1	\$ 300,000.00
j. 48" DIAMETER SCR 32.5 HDPE SUMP	Each	\$ 3,450.00	2	\$ 6,900.00		SUBTOTAL		\$ 450,000.00	
k. 10 HORSEPOWER SUMP PUMP & CP	Each	\$ 20,000.00	2	\$ 40,000.00		ITEMS 1-10 TOTAL		\$ 8,225,827.41	
l. 6" LEACHATE FORCE MAIN TO STORAGE TANK	LF	\$ 22.00	1,600	\$ 35,200.00					
			SUBTOTAL	\$ 4,508,796.96	11. CONTINGENCY (10% OF ITEMS 1-10)	LS	\$ 822,582.74	1	\$ 822,582.74
					TOTAL				\$ 9,048,410.15

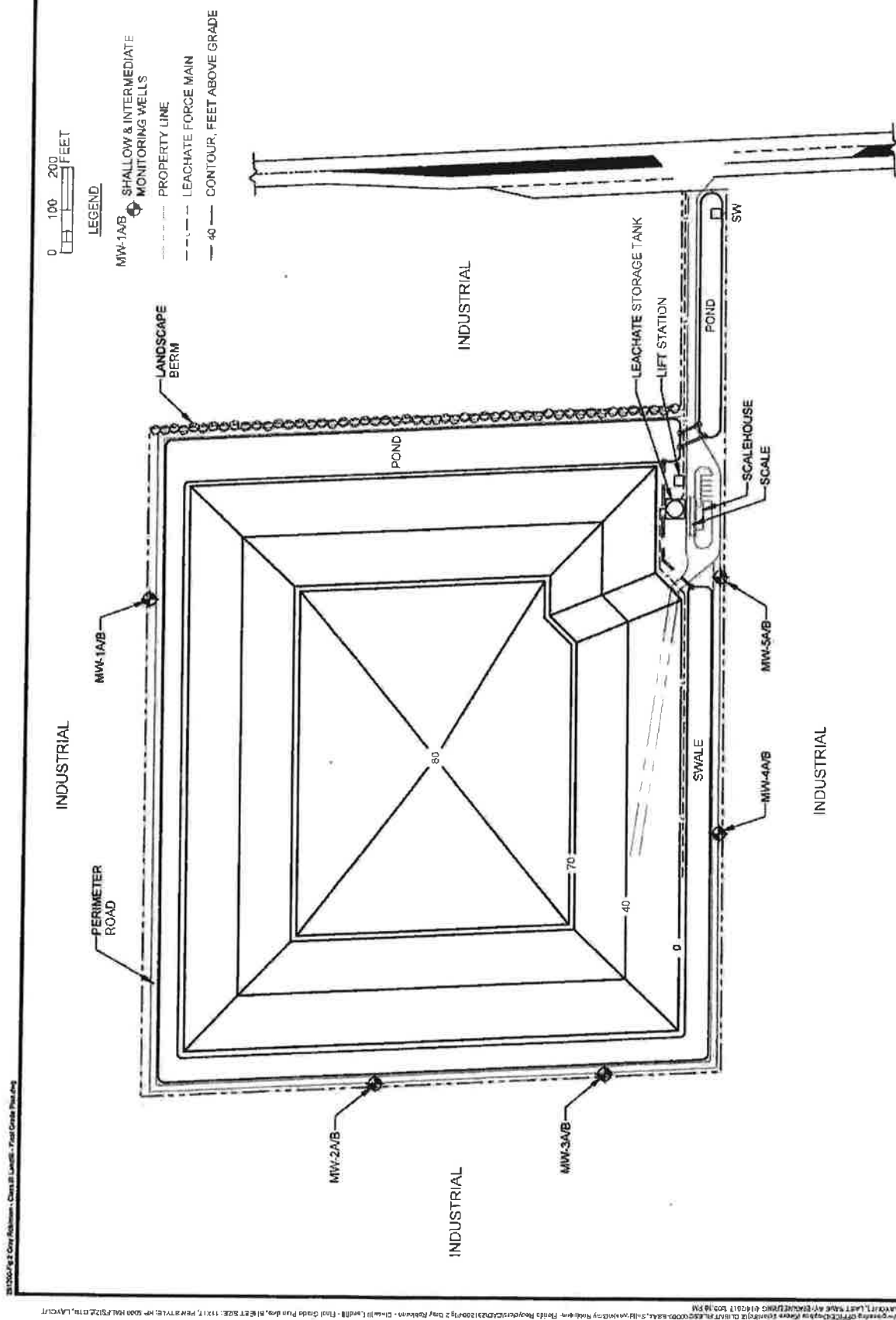
Note: (1) Predevelopment permitting costs are not included, see Table 1.

Figures





DATE: 03/11/2011
 DRAWN BY: J. L. B. (JLB)
 CHECKED BY: J. L. B. (JLB)
 PROJECT # 291200
 FIGURE 1
 DATE 03/11/2011



Attachment 1



Florida Department of Environmental Regulation- Rule 62-701 Solid Waste Management Facilities, FAC.-Excerpts

Construction and Demolition Debris Definition:

(24) "Construction and demolition debris" means discarded materials generally considered to be not water soluble and non-hazardous in nature, including but not limited to steel, glass, brick, concrete, asphalt material, pipe, gypsum wallboard, and lumber, from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure, including such debris from construction of structures at a site remote from the construction or demolition project site. The term includes rocks, soils, tree remains, trees, and other vegetative matter that normally results from land clearing or land development operations for a construction project; clean cardboard, paper, plastic, wood, and metal scraps from a construction project; except as provided in Section 403.707(9)(j), F.S., yard trash and unpainted, non-treated wood scraps from sources other than construction or demolition projects; scrap from manufacturing facilities that is the type of material generally used in construction projects and that would meet the definition of construction and demolition debris if it were generated as part of a construction or demolition project, including debris from the construction of manufactured homes and scrap shingles, wallboard, siding concrete, and similar materials from industrial or commercial facilities and de minimis amounts of other non-hazardous wastes that are generated at construction or demolition projects, provided such amounts are consistent with best management practices of the construction and demolition industries. Mixing of construction and demolition debris with other types of solid waste will cause it to be classified as other than construction and demolition debris

Siting Prohibitions:

(2) Siting. Unless authorized by a Department permit or site certification in effect on May 27, 2001, or unless specifically authorized by another Department rule or a Department license or site certification based upon site-specific geological, hydrogeological, design, or operational features, no person shall store or dispose of solid waste:

(a) In an area where geological formations or other subsurface features will not provide support for the solid waste;

(b) Within 500 feet of an existing or approved potable water well unless storage or disposal takes place at a facility for which a complete permit application was filed or which was originally permitted before the potable water well was in existence. This prohibition shall not apply to any renewal of an existing permit that does not involve lateral expansion, nor to any vertical expansion at a permitted facility;

(c) In a dewatered pit unless the pit is lined and permanent leachate containment and special design techniques are used to ensure the integrity of the liner;

(d) In any natural or artificial body of water including ground water and wetlands within the jurisdiction of the Department. This prohibition also applies to areas where waste may settle into ground water as a result of the maximum expected loads over the waste. This prohibition does not apply to areas of standing water that exist only after storm events, provided that the storage or disposal does not result in objectionable odors or sanitary nuisances;

(e) Within 200 feet of any natural or artificial body of water unless storage or disposal takes place at a facility for which a complete permit application was filed or which was originally permitted before the water body was in existence. This prohibition shall not apply to any renewal of an existing permit that does not involve lateral expansion, nor to any vertical expansion at a permitted facility. For purposes of this paragraph, a "body of water" includes wetlands within the jurisdiction of the Department, but does not include impoundments or conveyances which are part of an on-site, permitted stormwater management system, or bodies of water contained completely within the property boundaries of the disposal site which do not discharge from the site to surface waters. A person may store or dispose of solid waste within the 200 foot setback area upon demonstration to the Department that permanent leachate control methods will result in compliance with water quality standards and

criteria. However, nothing contained herein shall prohibit the Department from imposing conditions necessary to assure that solid waste stored or disposed of within the 200 foot setback area will not cause pollution from the site in contravention of Department rules; and

(f) On the right of way of any public highway, road, or alley.

Permit Application:

All applications shall include the information in paragraphs (b) through (f) of this subsection, and applications to construct or laterally expand a disposal unit shall also include the information in paragraph (a) of this subsection.

(a) An engineering report, signed and sealed by a professional engineer, that includes:

1. A site plan, of a scale not greater than 200 feet to the inch, which shows the project location and identifies the proposed disposal units, total acreage of the site and of the proposed disposal units, and any other relevant features such as water bodies or wetlands on or within 200 feet of the site, and potable water wells on or within 500 feet of the site;

2. A geotechnical investigation which meets the criteria of Rule 62-701.410, F.A.C.

3. A hydrogeological investigation which meets the criteria of paragraphs 62-701.410(2)(a), (c) and (d), F.A.C.;

4. An estimate of the planned active life of the facility, the design of the disposal areas, the final design height of the facility, and the maximum height of the facility during its operation;

5. Documentation that the facility location will comply with the requirements of paragraphs 62-701.730(4)(c) and (d), F.A.C.

(b) A boundary survey, legal description, and topographic survey of the property;

(c) An operation plan which describes how the applicant will comply with subsection 62-701.730(7), F.A.C., which must include procedures for emergency preparedness and response as required in subsection 62-701.320(16), F.A.C.;

(d) A closure plan that describes how the applicant will comply with subsections 62-701.730(9) and (10), F.A.C.;

(e) The financial assurance documentation required by subsection 62-701.730(11), F.A.C.; and

(f) The CCA treated wood management plan as required in subsection 62-701.730(20), F.A.C.

(3) Certification. Certification of construction completion shall be done in accordance with paragraph 62-701.320(9)(b), F.A.C.

Hydrogeological and Geotechnical Studies:

(2) Hydrogeological investigation and site report. The hydrogeological investigation and site report required by subsection 62-701.330(3), F.A.C., shall be site specific, shall be conducted by or under the supervision of a professional geologist or professional engineer with experience in hydrogeologic investigations, and shall:

(a) Define the geology and hydrology of the disposal facility site and its relationship to the local and regional hydrogeologic patterns including:

1. Direction and rate of ground water and surface water flow, including seasonal variations;

2. Background quality of ground water and surface water;

3. Any on-site hydraulic connections between aquifers;

4. For all confining layers, semi-confining layers, and all aquifers below the site that may be affected by the disposal facility, the porosity or effective porosity, horizontal and vertical permeabilities, and the depth to and lithology of the layers and aquifers; and

5. Topography, soil types and characteristics, and surface water drainage systems of the site and surrounding the site.

(b) Include an inventory of all the public and private water wells within a one-mile radius of the site. The inventory shall include, where available:

1. The approximate elevation of the top of the well casing and the depth of each well;

2. The name of the owner, the age and usage of each well, and the estimated daily pumpage; and

3. The stratigraphic unit screened, well construction technique, and static water levels of each well.

(c) Identify and locate any existing contaminated areas on the site.

(d) Include a map showing the locations of all potable wells within 500 feet of the waste storage and disposal areas to demonstrate compliance with paragraph 62-701.300(2)(b), F.A.C.

(3) Geotechnical site investigation. The geotechnical site investigation required by subsection 62-701.330(3), F.A.C., shall be conducted by or under the supervision of a professional engineer with experience in geotechnical engineering. Investigations required in paragraphs (a) through (d) of this subsection may be conducted by a professional geologist. Prior to any construction on the site, the engineer shall define the engineering properties of the site that are necessary for the design, construction, and support of the disposal facility and all installations of the facility and shall:

(a) Explore and describe subsurface conditions including soil stratigraphy and ground water table conditions;

(b) Explore and address the presence of muck, previously filled areas, soft ground, and lineaments;

(c) Evaluate and address fault areas, and seismic impact zones, as described in 40 C.F.R. 258.13, hereby adopted and incorporated by reference (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05041>), and 258.14, hereby adopted and incorporated by reference (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05041>). To obtain these documents see subsections 62-701.210(6) and 62-701.210(7), F.A.C., respectively;

(d) Include estimates of the average and maximum high ground water table across the site;

(e) Include a foundation analysis to determine the ability of the foundation to support the expected maximum loads and stresses imposed by the disposal facility. It may include geotechnical measures necessary to modify the foundation to accommodate the imposed loads and stresses. The foundation shall be analyzed for short-term, end of construction, and long-term stability and settlement conditions. Considering the existing or proposed subgrade conditions and the disposal facility geometry, the analysis shall include but not be limited to:

1. Foundation bearing capacity;

2. Subgrade settlements, both total and differential;

3. Subgrade slope stability;

(f) Evaluate the potential for sinkholes and sinkhole activity as those terms are defined in Section 627.706(2), F.S., and unstable areas as described in 40 C.F.R. 258.15, hereby adopted and incorporated by reference (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05041>). To obtain this document see subsection 62-

701.210(8), F.A.C. The Initial site investigation phase shall include, at a minimum, an evaluation of the following for the proposed site:

1. Historical aerial photography;
2. Site topographic survey to indicate potential depressional areas;
3. Lineament features that transverse the site;
4. General information indicating the potential for sinkhole formation such as the Floridan Aquifer Vulnerability Assessment (FAVA) map at <http://www.dep.state.fl.us/geology/programs/hydrogeology/FAVA>, and sinkhole or subsidence occurrence maps; and,
5. Results of borings and/or geophysical work performed to describe the nature of the subsurface geology and hydrogeology for the proposed landfill site, including the potential for unstable areas as described in 40 C.F.R. 258.15; and,

(g) If the investigations required above indicate that portions of subsurface below the disposal facility show signs of past sinkhole activity, or are reasonably expected to develop sinkholes or sinkhole activity in the future, additional geotechnical investigations shall be included to further characterize the subsurface below the disposal facility for the purpose of assessing potentially unstable areas and for evaluating the effectiveness and design for any engineering measures proposed for any potentially unstable areas. The investigation shall also include an evaluation of any engineering measures needed to provide reasonable assurance that the subsurface of the site in those areas will be adequate to support the disposal facility without adversely affecting the performance of the liner or leachate collection system.

(4) Geotechnical report. The geotechnical site investigation report shall describe the site subsurface conditions and shall include, at a minimum, the methods used in the investigation, including but not limited to, all soil boring logs and laboratory results, analytical calculations, cross sections, interpretations and conclusions. The report shall also include a description of any engineering measures proposed for the site.

(5) Report verification. The site reports and supporting information, including detailed description of the methods, calculations, and interpretations used, shall be signed and sealed by the appropriate professional. The hydrogeological report shall be signed and sealed by a professional geologist or professional engineer with experience in hydrogeological investigations. The geotechnical report shall be signed and sealed by a professional engineer with experience in geotechnical engineering. Any portion of the geotechnical report conducted or prepared by a professional geologist shall be signed and sealed by the professional geologist who performed the work.

(6) C&D Facility Design requirements.

(a) Each new disposal unit, as well as each lateral expansion of an existing disposal unit, that has not received a Department permit authorizing construction or operation prior to July 1, 2010, shall be constructed with a liner and leachate collection system, unless the applicant demonstrates, based upon the types of waste received, methods for controlling the types of waste disposed of, the proximity of ground water and surface water, and the results of the hydrogeological and geotechnical investigations including any ground water monitoring analyses, the operation of the facility is not expected to result in violations of ground water standards and criteria otherwise.

(b) The liner system shall consist of at least a single 60-mil minimum average thickness HDPE geomembrane. In the sumps located inside the disposal facility footprint and in the leachate collection trenches, the geomembrane shall be placed on a GCL with a saturated hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec, or on a compacted clay liner which is a minimum six inches thick with a saturated hydraulic conductivity of less than or equal to 1×10^{-7} cm/sec. The liner shall be placed on a prepared subgrade that will not damage the geomembrane liner or

the GCL. A primary leachate collection and removal system and a drainage layer shall be installed above the geomembrane liner. Except in sumps and leachate collection trenches, the system shall be designed to limit leachate head above the liner during routine facility operation after placement of initial cover to no greater than 12 inches. The liner system and leachate collection system must be constructed in accordance with the requirements of paragraphs 701.400(3)(a), (d), (e), and (f), and subsections 62-701.400(4), (7), and (8), F.A.C. Any alternative liner system shall be approved only in accordance with the provisions of Rule 62-701.310, F.A.C.

(c) Leachate shall be managed in accordance with subsection 62-701.500(8), F.A.C. Any leachate storage tanks or surface impoundments constructed or operated at the facility shall comply with the requirements of subsection 62-701.400(6), F.A.C.

(11) Financial assurance.

(a) Closure cost estimates, estimate updates and financial mechanisms shall comply with the provisions of subsections 62-701.630(1) through (4), F.A.C., except that the cost of long-term care shall be based upon a five-year period, and the costs shall be based upon compliance with this section. Landfill shall mean facility.

.630(1)(b) As a condition for the issuance of a landfill permit, or permit modification authorizing expansion, the owner or operator shall provide the Department with closure cost estimates for the permitted portions of the landfill as part of the application. Proof of financial assurance issued in favor of the Florida Department of Environmental Protection in the amount of the approved current dollar closing and long-term care cost estimates for each permitted disposal unit as determined pursuant to subsection 62-701.630(3), F.A.C., shall be provided at least 60 days prior to the planned initial receipt of waste at such unit. The owner or operator shall maintain financial assurance through the design period of the landfill and through any corrective action period.

(3) Cost estimates for closure.

(a) For the purpose of determining the amount of proof of financial assurance that is required for closure by this section, the owner or operator shall estimate the total cost of closure in current dollars for the time period in the landfill operation when the extent and manner of its operation make closing most expensive. The owner or operator shall submit the estimates, together with all necessary justification, to the Department as part of the permit application. Except as allowed in paragraph 62-701.630(3)(d), F.A.C., the costs shall be estimated and certified by a professional engineer for a third party performing the work, on a per unit basis, with the source of estimates indicated.

(b) Closing costs shall be based on the nature and characteristics of the wastes disposed of at the site and shall include estimated costs of cover material, topsoil, seeding, fertilizing, mulching, labor, and any other costs of compliance with Rules 62-701.600-.610, F.A.C.

(c) Long-term care costs shall include land surface care; gas monitoring; leachate pumping, transportation, management and treatment; water quality monitoring, collection and analysis; and any other costs of compliance with Rule 62-701.620, F.A.C. The annual cost of long-term care shall be estimated, listed separately, and multiplied by the number of years required in the long-term care period.

.630. Proof of financial assurance under this subsection shall include surety bonds, certificates of deposit, securities, letters of credit, trust fund agreements, closure insurance (excluding independent procurement), or financial tests and corporate guarantees, showing that the owner or operator has sufficient financial resources to cover, at a minimum, the costs of complying with all state landfill closing and long-term care requirements, and, if applicable, costs for corrective action.



**WILLIAM MOTT
LAND SURVEYING INC.**
2718 NORTH WINDYBAY ROAD, SUITE 3
MILWAUKEE, FLORIDA 33225-2338
PHONE (321) 751-4444 FAX (321) 751-4445
E-MAIL: WMSURV@AOL.COM

PHONE (321) 751-4444 FAX (321) 751-4445
 12000 E. 20th AVE. SUITE 100, WEST PALM BEACH, FL 33411

WILLIAM MOTT LAND SURVEYING INC.

THE

RECEIVED

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice" and "The Hon. Mr. Justice".

100-443887-100

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Acquiring Deeds

Prepared by and recorded copies
should be sent to:
Mildred S. Crowder, Esq.
Weisenfeld & Associates, P.A.
550 Biltmore Way, Suite 1100
Coral Gables, Florida 33134

Gray, Harris



CFN 98068703 04-14-98 08:51 am
OR Book/Page: 3826 / 3814

Sandy Crawford

Clerk Of Courts, Brevard County

#Pgs: 3 #Names: 2
Trust: 2.00 Rec: 13.00 Serv: 0.00
Deed: 3,320.10 Excise: 0.00
Mtg: 0.00 nt Tax: 0.00

Reserved

TRUSTEE'S DEED

THIS INDENTURE, made this 31st day of March, 1998, between JOSEPH J. WEISENFELD, TRUSTEE under an unrecorded Land Trust Agreement dated January 10, 1979, whose post office address is c/o Weisenfeld & Associates, P.A., 550 Biltmore Way, Suite 1120, Coral Gables, Florida 33134 (hereinafter referred to as "Grantor") and FLORIDA RECYCLERS OF BREVARD, INC., a Florida corporation, whose post office address is c/o Evans-Butler Realty, Inc., 1688 W. Hibiscus Avenue, Melbourne, Florida 32901 (hereinafter referred to as "Grantee").

Folio Number: 27-36-24-00-501

WITNESSETH:

That the said Grantor, for and in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, to it in hand paid by the said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee, its heirs, executors, administrators, successors and assigns forever, the following described land, situate and being in the County of Brevard, State of Florida, to-wit:

See Exhibit "A" attached hereto and made a part hereof (hereinafter referred to as the "Property").

SUBJECT TO:

1. Taxes and assessments for the year 1998 and all subsequent years.

TOGETHER with all of the tenements, hereditaments, privileges and appurtenances thereunto belonging or in any way appertaining.

And the Grantor hereby covenants with the Grantee that it is lawfully seized of said land in fee simple; that it has good right and lawful authority to sell and convey said land; that it hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under Grantor.

This instrument is executed solely in the exercise of powers conferred upon Trustee by the Trust and no personal liability or obligation for performance is undertaken or assumed by Trustee. No claim may be enforced or personal judgment obtained against Trustee individually on account of any covenant or warranty of Trustee set forth herein.

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed in its name the day and year first above written.

Signed, sealed and delivered
in the presence of:

M. S. Crowder

M. S. Crowder
Print or Type Name

[Signature]

Patricia C. Perera
Print or Type Name

[Signature], Trustee
JOSEPH J. WEISENFELD, Trustee under
an unrecorded Land Trust Agreement dated
January 10, 1979

STATE OF FLORIDA)
COUNTY OF DADE)

The foregoing instrument was acknowledged before me this 31 day of March, 1998, by JOSEPH J. WEISENFELD, as Trustee under an unrecorded Land Trust Agreement dated January 10, 1979.



[NOTARIAL SEAL]

M. S. Crowder
NOTARY PUBLIC, State of Florida
at Large

Type or Stamp Name of Notary

My Commission Expires:

Personally Known X OR Produced Identification _____

Type of Identification Produced _____

\\8159-VL-RECYCLERS\DEED.TRS



CFN 98068703

OR Book/Page: 3826 / 3815

Exhibit "A"

DESCRIPTION: (BY SURVEYOR) PARCEL "C"

PART OF LANDS DESCRIBED IN OFFICIAL RECORD BOOK 2816, PAGE 0783, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 24, TOWNSHIP 27 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA AND RUN S 87°20'37" W ALONG THE SOUTH LINE OF SAID SECTION 24 A DISTANCE OF 53.06 FEET TO THE WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE N 00°01'53" E ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 600.66 FEET TO THE POINT-OF-BEGINNING OF THE HEREIN DESCRIBED PARCEL; THENCE LEAVING SAID WEST RIGHT-OF-WAY LINE RUN S 87°20'37" W ALONG THE NORTH LINE OF THE SOUTH 600 FEET OF THE SOUTHWEST 1/4 OF SAID SECTION 24 A DISTANCE OF 1269.26 FEET TO THE WEST LINE OF THE EAST 1/2 HALF OF THE SOUTHWEST 1/4 OF SECTION 24; THENCE N 00°09'41" E ALONG SAID WEST LINE A DISTANCE OF 761.70 FEET; THENCE N 87°18'10" E A DISTANCE OF 1267.57 FEET TO THE SAID WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE S 00°01'53" W ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 762.53 FEET TO THE POINT-OF-BEGINNING.

TOGETHER WITH THE FOLLOWING :

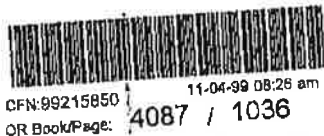
COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 24, TOWNSHIP 27 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA AND RUN S 87°20'37" W ALONG THE SOUTH LINE OF SAID SECTION 24 A DISTANCE OF 53.06 FEET TO THE WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE N 00°01'53" E ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 1363.19 FEET TO THE POINT-OF-BEGINNING OF THE HEREIN DESCRIBED EASEMENT; THENCE LEAVING SAID WEST RIGHT-OF-WAY LINE RUN S 87°18'10" W A DISTANCE OF 100.11; THENCE N 00°01'53" E A DISTANCE OF 1252.40 FEET TO THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 24 AND THE SOUTH RIGHT-OF-WAY LINE OF SARNO ROAD; THENCE N 87°18'10" E ALONG SAID NORTH LINE AND SOUTH RIGHT-OF-WAY A DISTANCE OF 100.11 FEET TO THE SAID WEST RIGHT-OF-WAY OF CRANE CREEK; THENCE S 00°01'53" W ALONG SAID WEST LINE A DISTANCE OF 1252.40 FEET TO THE POINT-OF-BEGINNING.



CFN 98068703

OR Book/Page: 3826 / 3816

Prepared by a. corded copies
should be sent to:
Mildred S. Crowder, Esq.
Weisenfeld & Associates, P.A.
550 Biltmore Way, Suite 1100
Coral Gables, Florida 33134



FILED IN OFFICE
VIERA BRANCH
1999 OCT 27 P 2:06
SANDY CRAWFORD
CLERK OF CIR. CT.
BREVARD CO. FLA

TRUSTEE'S DEED

THIS INDENTURE, made this 30th day of September, 1999, between JOSEPH J. WEISENFELD, TRUSTEE under an unrecorded Land Trust Agreement dated January 10, 1979, whose post office address is c/o Weisenfeld & Associates, P.A., 550 Biltmore Way, Suite 1120, Coral Gables, Florida 33134 (hereinafter referred to as "Grantor") and FLORIDA RECYCLERS OF BREVARD, INC., a Florida corporation, whose post office address is c/o Evans-Butler Realty, Inc., 1888 W. Hibiscus Avenue, Melbourne, Florida 32901 (hereinafter referred to as "Grantee").

Folio Number: 27-36-24-00-501

Sandy Crawford

Clerk Of Courts, Brevard County

#Pgs: 3	#Names: 2	
Trust: 2.00	Rec: 13.00	Serv: 0.00
Deed: 1,036.70		Excise: 0.00
Mfg: 0.00		Int Tax: 0.00

WITNESSETH:

That the said Grantor, for and in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, to it in hand paid by the said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained and sold to the said Grantee, its heirs, executors, administrators, successors and assigns forever, the following described land, situate and being in the County of Brevard, State of Florida, to-wit:

See Exhibit "A" attached hereto and made a part hereof (hereinafter referred to as the "Property").

SUBJECT TO:

1. Taxes and assessments for the year 1999 and all subsequent years.

TOGETHER with all of the tenements, hereditaments, privileges and appurtenances thereunto belonging or in any way appertaining.

And the Grantor hereby covenants with the Grantee that it is lawfully seized of said land in fee simple; that it has good right and lawful authority to sell and convey said land; that it hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under Grantor.

This instrument is executed solely in the exercise of powers conferred upon Trustee by the Trust and no personal liability or obligation for performance is undertaken or assumed by Trustee. No claim may be enforced or personal judgment obtained against Trustee individually on account of any covenant or warranty of Trustee set forth herein.

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed in its name the day and year first above written.

Signed, sealed and delivered
in the presence of:

Patricia C. Dumas
Print or Type Name

JOSEPH J. WEISENFELD, Trustee under
an unrecorded Land Trust Agreement
dated January 10, 1979

[CONTINUED ON NEXT PAGE]

[CONTINUATION OF TRUSTEE'S DEED FROM JOSEPH J. WEISENFELD, TRUSTEE
UNDER AN UNRECORDED LAND TRUST AGREEMENT DATED JANUARY 10, 1979
TO FLORIDA RECYCLERS OF BREVARD]

Lourdes M. Harero

[As To Signature of Joseph J. Weisenfeld,
Trustee]

Lourdes M. Harero

Print or Type Name

STATE OF FLORIDA)
COUNTY OF MIAMI-DADE)

The foregoing instrument was acknowledged before me this 30th day of September,
1999, by JOSEPH J. WEISENFELD, as Trustee under an unrecorded Land Trust
Agreement dated January 10, 1979.



[Signature]
NOTARY PUBLIC

Personally Known ☒ OR Produced Identification ☐

Type of Identification Produced _____

\\8159-VFL-RECYCLERS\2ND-CLOS\DEED.TRS



CFN:88215850

OR Book/Page: 4087 / 1037

EXHIBIT

"A"

PARCEL B

DESCRIPTION: (BY SURVEYOR)

PART OF LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2816, PAGE 0783, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 24, TOWNSHIP 27 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA AND RUN S 87°20'37"W ALONG THE SOUTH LINE OF SAID SECTION 24 A DISTANCE OF 53.06 FEET TO THE WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE N 00°01'53"E ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 1363.19 FEET; THENCE S 87°18'10"W A DISTANCE OF 100.11 FEET TO THE POINT-OF-BEGINNING OF THE HEREIN DESCRIBED PARCEL; THENCE CONTINUE S 87°18'10"W A DISTANCE OF 1167.46 FEET TO THE WEST LINE OF THE EAST 1/2 OF THE SOUTHWEST 1/4 OF SAID SECTION 24; THENCE N 00°09'41"E ALONG SAID WEST LINE A DISTANCE OF 625.92 FEET; THENCE N 87°18'10"E A DISTANCE OF 1166.04 FEET; THENCE S 00°01'53"W A DISTANCE OF 625.85 FEET TO THE POINT-OF-BEGINNING, CONTAINING 16.74 ACRES OF LAND MORE OR LESS.



PREPARED BY AND RETURN TO:
ROBERT W. WATTWOOD, ESQ.
O'BRIEN, RIEMENSCHNEIDER & KANCILIA, P.A.
1686 W. Hibiscus Blvd.
Melbourne, FL 32901

CFN:2001056802 03-28-2001 08:41 am
OR Book/Page: 4310 / 3384

CORRECTIVE TRUSTEE'S DEED

THIS INDENTURE, made this 13th day of March, 2001, between JOSEPH J. WEISENFELD, TRUSTEE under an unrecorded Land Trust Agreement dated January 10, 1979, whose post office address is c/o Weisenfeld & Associates, P.A., 550 Biltmore Way, Suite 1120, Coral Gables, Florida 33134 (hereinafter referred to as "Grantor"), and FLORIDA RECYCLERS OF BREVARD, INC., a Florida corporation, whose mailing address is c/o Evans-Butler Realty, Inc., 1688 W. Hibiscus Avenue, Melbourne, Florida 32901 (hereinafter referred to as "Grantee").

Folio Number: 27-36-24-00-501

WITNESSETH:

That the said Grantor, for and in consideration of the sum of TEN DOLLARS (\$10.00), and other good and valuable considerations, to it in hand paid by the said Grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold, to the said Grantee, its heirs, executors, administrators, successors and assigns forever, the following described land, situate and being in the County of Brevard, State of Florida, to-wit:

See Exhibit "A" attached hereto and made a part hereof
(hereinafter referred to as the "Property").

SUBJECT TO:

1. Taxes and assessments for the year 1998 and all subsequent years.

TOGETHER with all of the tenements, hereditaments, privileges and appurtenances thereunto belonging or in any way appertaining.

AND the Grantor hereby covenants with said Grantee that it is lawfully seized of said land in fee simple; that it has good right and lawful authority to sell and convey said land; that it hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons claiming by, through or under Grantor.

This instrument is executed solely in the exercise of powers conferred upon Trustee by the Trust and no personal liability or obligation for performance is undertaken or assumed by Trustee. No claim may be enforced or personal judgment obtained against Trustee individually on account or any covenant or warranty of Trustee set forth herein.

This Corrective Trustees Deed is being executed, delivered and recorded for the purpose of correcting the legal description of the second parcel referenced on Exhibit "A" attached hereto.

Scott Ellis

Clerk Of Courts, Brevard County

#Pgs: 3	#Names: 2	
Trust: 2.00	Rec: 13.00	Serv: 0.00
Deed: 0.70		Excise: 0.00
Mtg: 0.00		Int Tax: 0.00

o:\drive\recycle\corr trust deed -- 9/18/00

IN WITNESS WHEREOF, the Grantor has caused these presents to be executed in its name the day and year first above written.

Signed, sealed and delivered in the presence of:

Witness

Print Name:

Patricia G. Pereira

Witness

Print Name:

Melbis Cecilia
Melbis Arila

JOSEPH J. WEISENFELD, Trustee under an unrecorded
Land Trust Agreement dated January 10, 1979,

STATE OF FLORIDA
COUNTY OF DADE

The foregoing instrument was acknowledged before me this 13th day of March, 2000, by
JOSEPH J. WEISENFELD, as Trustee under an unrecorded Land Trust Agreement dated January 10, 1979, ☒ who
is/are personally known to me, or ☐ who has/ have produced _____ as identification.



Notary Public

Print Name:

My commission expires:



CFN:2001056802

OR Book/Page: 4310 / 3385

Exhibit "A"



CFN:2001058802

OR Book/Page: 4310 / 3386

DESCRIPTION: (BY SURVEYOR) PARCEL "C"

PART OF LANDS DESCRIBED IN OFFICIAL RECORD BOOK 2816, PAGE 0783, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 24, TOWNSHIP 27 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA AND RUN S 87°20'37" W ALONG THE SOUTH LINE OF SAID SECTION 24 A DISTANCE OF 53.06 FEET TO THE WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE N 00°01'53" E ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 500.56 FEET TO THE POINT-OF-BEGINNING OF THE HEREIN DESCRIBED PARCEL; THENCE LEAVING SAID WEST RIGHT-OF-WAY LINE RUN S 87°20'37" W ALONG THE NORTH LINE OF THE SOUTH 600 FEET OF THE SOUTHWEST 1/4 OF SAID SECTION 24 A DISTANCE OF 1289.28 FEET TO THE WEST LINE OF THE EAST 1/2 HALF OF THE SOUTHWEST 1/4 OF SECTION 24; THENCE N 00°09'41" E ALONG SAID WEST LINE A DISTANCE OF 761.70 FEET; THENCE N 87°18'10" E A DISTANCE OF 1267.57 FEET TO THE SAID WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE S 00°01'53" W ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 762.53 FEET TO THE POINT-OF-BEGINNING.

TOGETHER WITH THE FOLLOWING:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 24, TOWNSHIP 27 SOUTH, RANGE 36 EAST, BREVARD COUNTY, FLORIDA AND RUN S 87°20'37" W ALONG THE SOUTH LINE OF SAID SECTION 24 A DISTANCE OF 53.06 FEET TO THE WEST RIGHT-OF-WAY LINE OF CRANE CREEK DRAINAGE DISTRICT CANAL L-16; THENCE N 00°01'53" E ALONG SAID WEST RIGHT-OF-WAY LINE A DISTANCE OF 1363.19 FEET TO THE POINT-OF-BEGINNING OF THE HEREIN DESCRIBED PARCEL; THENCE LEAVING SAID WEST RIGHT-OF-WAY LINE RUN S 87°18'10" W A DISTANCE OF 100.11; THENCE N 00°01'53" E A DISTANCE OF 1252.40 FEET TO THE NORTH LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 24 AND THE SOUTH RIGHT-OF-WAY LINE OF SARNO ROAD; THENCE N 87°18'10" E ALONG SAID NORTH LINE AND SOUTH RIGHT-OF-WAY A DISTANCE OF 100.11 FEET TO THE SAID WEST RIGHT-OF-WAY OF CRANE CREEK; THENCE S 00°01'53" W ALONG SAID WEST LINE A DISTANCE OF 1252.40 FEET TO THE POINT-OF-BEGINNING.



Compass Real Estate Consulting, Inc.

120 East Pine Street • Suite 1 • Lakeland, Florida 33801

Shawn Wilson, MAI

CURRICULUM VITAE

LICENSURE AND CERTIFICATION

Florida State Certified General Real Estate Appraiser RZ503 (1990 to Present)
Guam Certified Non-Resident General Real Estate Appraiser CA-16-047 (2012 to Present)
Tennessee State Certified General Real Estate Appraiser 5165 (2014 to Present)

PROFESSIONAL AFFILIATIONS

Chair, The Appraisal Foundation Appraisal Practices Board (July 2016 to Present)
Member of The Appraisal Foundation Appraisal Practices Board (July 2014 to Present)
MAI Member of the Appraisal Institute (1993 to present)
National Board of Directors of the Appraisal Institute (2011 to 2014)
Region X Third Regional Director (2009, 2010)
Region X Representative (2001, 2002, 2007, 2008)
West Coast Fl. Chapter, Member Board of Directors (1998, 1999, 2000)
West Coast Fl. Chapter Government Relations Committee Chairperson (1996)
Association of Eminent Domain Professionals
Executive Board 1992 through 1998, 2002, 2003; Vice-President 2004; President 2005
International Right of Way Association - Member
Florida Department of Environmental Protection - Approved Appraiser List

EXPERT TESTIMONY

Has been qualified and presented testimony as an expert witness in the Circuit Courts of Orange, Sarasota, Manatee, Polk, DeSoto, Pasco, Lee, Volusia, Seminole, Hillsborough, Charlotte, Clay, and Marion Counties in the state of Florida, and in U.S. Bankruptcy Courts (Tampa and Jacksonville). Has been qualified and presented testimony as an expert witness for the Value Adjustment Board, Sarasota County, Florida, and for binding arbitration. Has provided consultation services in numerous settlement conferences and court-ordered mediation sessions. Served as Special Magistrate for the Manatee, Sarasota, Highlands, Charlotte, Hillsborough, and Polk County Valuation Adjustment Boards.

GEOGRAPHIC EXPERIENCE

Has provided real estate appraisal services in the following Florida counties:

Alachua	Brevard	Broward	Charlotte
Citrus	Clay	DeSoto	Duval
Glades	Hardee	Hendry	Hernando
Highlands	Hillsborough	Indian River	Lake
Lee	Manatee	Marion	Martin
Nassau	Okcechobee	Orange	Osceola
Palm Beach	Pasco	Pinellas	Polk
Sarasota	Seminole	St. Lucie	Volusia

Has appraised properties in Tennessee and Guam.

PARTIAL LIST OF PROPERTY TYPES APPRAISED

Vacant urban land including commercial, multi-family, industrial, office park, planned development, residential.

Vacant rural land including agricultural, residential, planned development, and mixed use.

Improved properties including residential, commercial, industrial, multi-family, shopping centers, planned developments, restaurants, professional office buildings, medical office complexes, service stations, convenience stores, parking garage, senior Healthcare Facilities, branch banking facilities, ranches, citrus groves and waterfront residential property.

Special use properties including utility systems, plant nurseries, retention ponds, railroad rights-of-way, billboards, dairy, sod farm, citrus nurseries, golf course, blueberry farms.

Partial interests including leasehold/leased fee, utility easements, drainage easements, construction easements, and land leases.

PARTIAL LIST OF VALUATION ISSUE EXPERIENCE

Diminution in value claims related to:

Environmental contamination	Bert Harris claims	Title defects	Contractual disputes
NIMBY issues	Construction defects	Sinkholes	Leasing disputes

Eminent Domain takings resulting in:

Loss of, or change in, access	Curable damages (cost to cure analysis)
Business damages	Loss of parking
Incurable damages	Changes in Highest and Best Use
Partial taking of improvements	Total taking of improvements
Changes in drainage patterns	Change in site circulation

Inverse condemnation	Maps of Reservation
Changes in grade and/or elevation	Spoil banks and spoil easements
Jurisdictional wetlands	Electrical transmission facilities
Drainage canals and drainage easements	Special governmental districts (i.e. hospital)
Elevated passenger expressways	Airport noise and aviation/aviation easements
Electrical substations	Spray effluent fields
Development entry features and signage	Class I and III landfills
Mangroves and wetland vegetation	Prescriptive easements
Developments of Regional Impact	Pipeline easements
Wastewater treatment facilities	Muck and unstable soils
Probability of Rezoning	Severance damages

APPRAISAL EXPERIENCE

Owner, COMPASS REAL ESTATE CONSULTING, INC., 5/96 to present

Self-Employed Fee Appraiser, 7/92 to present

Affiliated with Sewell, Valentich, Tillis & Associates, 7/92 to 9/94

Appraiser and Project Manager, Kluza & Associates, 7/87 to 7/92



Clayton, Roper & Marshall, Inc., a Florida Corporation
CRAIG H. CLAYTON, MAI
State-Certified General Appraiser RZ 118

PAUL M. ROPER, MAI, SRPA, SRA
State-Certified General Appraiser RZ 141

STEVEN L. MARSHALL, MAI, SRA, AI-GRS
State-Certified General Appraiser RZ 155

November 14, 2019

Ms. Lucy Hamelers, Land Acquisition Supervisor
Brevard County Public Works Department
2725 Judge Fran Jamieson Way
Building A, Suite 204
Viera, Florida 32940

Re: Florida Recyclers of Brevard, LLC
Property: 44.73± Gross Acre Improved C&D Landfill and Recycling Center, Located Along the South Side
of Sarno Road, at 3351 Sarno Road, Melbourne FL 32934.
County: Brevard

Dear Ms. Hamelers:

As requested, we have conducted the necessary analyses and incidental inspections of the above-referenced property in order to provide a current market value estimate based upon the income stream attributable to the operation of the subject property. The subject income stream results from the operation of the Florida Recyclers of Brevard, LLC's C&D landfill operations and from the Simply Organic Lawn and Garden operations which consist of the manufacture of mulch and soil for retail sales.

At the direction of the client we have analyzed the subject under two different scenarios. The first scenario involved an as is evaluation of the property based on the current height restriction from the City of Melbourne of 40 feet above grade, which equates to an elevation of 64 feet NGVD. Under this scenario, the subject has an estimated total capacity of 1,620,000 Cubic Yards per the Jones, Edmunds & Associates, Inc. report provided by the client.

The second valuation scenario required the use of an *Extraordinary Assumption*. For this value scenario, we have assumed that the subject could be built out to a height limitation of 81 feet, which equates to an elevation of 104 feet NGVD. Under this scenario, we believe that (subject to current engineering calculations) the subject has a capacity of approximately 2,600,000 Cubic Yards, also per the Jones, Edmunds & Associates, Inc. report. As such, the second valuation is made subject to the following *Extraordinary Assumption*:

The Florida Recyclers of Brevard Landfill would be granted a variance by the City of Melbourne to allow for buildout above their current CUP to match their FDEP permitted height of 81 feet which equates to an elevation of 104 feet NGVD.

Please note, we have appraised the fee simple interest in the subject real estate. The subject is a special use property that requires specific knowledge and equipment to operate and maintain. As such, separation of the real estate and business interests is difficult to impossible. Therefore, we recognize that the reported values contained herein most likely are comprised of both business and real estate interests.

Real Estate Appraisers • Consultants • Since 1982

Orlando Headquarters: 246 North Westmonte Drive, Altamonte Springs, Florida 32714
Telephone: (407) 772-2200 / Facsimile: (407) 772-1340

November 14, 2019

Page 2

Ms. Lucy Hamelers
Brevard County Public Works Department

We were provided with the subject's financial operating history for the time frame of 2014-2018. We have been asked by the property owner to keep their financial data confidential. As such, we have only provided summary statistics in the body of this report, while retaining the original statements in our work files. In evaluating the subject, we have utilized a Discounted Cash Flow model in order to estimate the present value of the ongoing operation of the subject property up to full build out and closure. This was considered the best method for valuing the subject, as the Cost Approach and the Sales Comparison Approach were not considered applicable.

The subject property is more specifically described by both legal and narrative descriptions within the text of the accompanying Appraisal Report. The effective date of this appraisal report is June 3, 2019.

This is an Appraisal Report which is intended to comply with the reporting requirements set forth under the Uniform Standards of Professional Appraisal Practice for an Appraisal Report. As such, it presents only summary discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraisers' opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraisers' file.

Scenario 1 - Current Value at Height of 40 feet Above Grade:

Based upon our investigation into those matters that affect market value, and by virtue of our experience and training, we have estimated the "As Is" market value of the fee simple interest in the subject property, effective June 3, 2019, to be:

FIVE MILLION FOUR HUNDRED THOUSAND DOLLARS

(\$5,400,000).

Scenario 2 - Current Value at Height of 81 feet Above Grade (*Extraordinary Assumption*):

Based upon our investigation into those matters that affect market value, and by virtue of our experience and training, we have estimated the "As Is" market value of the fee simple interest in the subject property, effective June 3, 2019, to be:

ELEVEN MILLION FOUR HUNDRED SEVENTY THOUSAND DOLLARS

(\$11,470,000).

We have considered an appropriate marketing period and exposure period for the subject property at the market value estimates reported above. Our estimates are based upon interviews with active real estate market participants within the subject's marketing area. Assuming the utilization of an organized and coordinated marketing effort, we have estimated a reasonable marketing period for the subject property of approximately one year to eighteen months. In addition, we have estimated a reasonable exposure period for the subject property of approximately one year to eighteen months. This exposure period will allow for exposure to a greater pool of buyers, as well as provide for an extended due diligence period.

November 14, 2019

Page 3

Ms. Lucy Hamelers
Brevard County Public Works Department

This letter of transmittal precedes and is hereby made a part of the Appraisal Report which follows, setting forth the most pertinent data and reasoning which was used in order to reach the final value estimate. The appraisal is subject to the *General Assumptions* and *General Limiting Conditions* which have been included within the text of this report. The assumptions and conditions are considered usual for this type of assignment.

To the best of the appraisers' ability, the analysis, opinions, and conclusions were developed, and the report was prepared in accordance with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, which include the Uniform Standards of Professional Appraisal Practice (USPAP).

We have not performed real estate services, as an appraiser or in any other capacity, regarding the property that is the subject of this report at any time preceding acceptance of this assignment.

The intended user of this appraisal report is Brevard County. This report was prepared for the sole use and benefit of Brevard County and their assigned representatives. In keeping with our agreement with Brevard County, only Brevard County, its employees, agent, successors and/or assigns, shall have the right or use of this appraisal report. This appraisal report may not be used for any purpose by any person other than the intended user without the prior written consent of Clayton, Roper & Marshall. Possession of the report, or a copy thereof, does not carry with it the right of publication. No other party is entitled to rely on the information, conclusions, or opinions contained herein. The intended use of this appraisal is for internal decision making.

We hereby certify that to the best of our knowledge and belief the statements of fact contained in this report are true and correct; the reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions; we have no present or prospective interest in the property that is the subject of this report, and no personal interest with respect to the parties involved; we have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment; our engagement in this assignment was not contingent upon developing or reporting predetermined results; our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal; I, the supervisory appraiser of the registered trainee who contributed to the development or communication of this appraisal, hereby accept full and complete responsibility for any work performed by the registered appraisal trainee named herein as my own; my analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP); and we have made a personal inspection of the property that is the subject of this report. Joseph W. Machovina, State Registered Trainee Appraiser, License Number: RI 23550, provided professional assistance in the functions of data research, analysis, report writing, preparation of exhibits, and preparation of this Appraisal Report.

The Appraisal Institute maintains a voluntary continuing education program for its members. As of the date of this report, the undersigned MAI has completed the requirements of the continuing education program of the Appraisal Institute. We do not authorize the out of context quoting from or partial reprinting of this appraisal report. Further, neither all nor any part of this appraisal shall be disseminated to the general public by the use of media for public communication without the prior written consent of the appraisers signing this appraisal report.

November 14, 2019
Page 4

Ms. Lucy Hamelers
Brevard County Public Works Department

The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives and to the requirements of the State of Florida relating to review by its Real Estate Appraisal Board.

Respectfully submitted,
CLAYTON, ROPER & MARSHALL

A handwritten signature in dark ink, appearing to read "Paul M. Roper", is written over the printed name.

Paul M. Roper, MAI, SRA
State-Certified General Real Estate Appraiser
License Number: RZ 141

PMR/JWM/sas

SUMMARY OF SALIENT FACTS AND CONCLUSIONS

PROPERTY OWNER NAME, ADDRESS

Florida Recyclers of Brevard.
c/o Jack A. Kirschenbaum, Esq.
1795 West NASA Boulevard
Melbourne, FL 32901
321-727-8100

SUBJECT LOCATION

The physical address is 3351 Sarno Road, Melbourne, FL 32901

EFFECTIVE DATE OF THE APPRAISAL

June 3, 2019

DATE OF APPRAISAL REPORT

August 26, 2019

TYPE OF PROPERTY

The subject property is comprised of a flag shaped, 44.73± gross acre improved parcel of land. The area of the site permitted for use as a disposal area is approximately 35 acres. The balance of the acreage is perimeter buffer.

ZONING AND LAND USE

The subject parcel is under the jurisdiction of the city of Melbourne and has a zoning designation of C-M1, Neighborhood Commercial/Light Industrial and the C&D landfill operates as a Conditional Use. The future land use designation is Industrial.

HIGHEST AND BEST USE

AS VACANT

The highest and best use of the subject property as vacant is for industrial development.

AS IMPROVED

Continued use of the existing improvements represents the highest and best use of the site as improved.

PROPERTY INSPECTION

Paul M. Roper, MAI, SRA and Joseph W. Machovina of Clayton, Roper and Marshall, Inc, among others, inspected the subject on May 2, 2019. Cursory inspections were conducted on June 3, 2019 and November 14, 2019.

PROFESSIONAL ASSISTANCE

Joseph W. Machovina, State Registered Trainee Appraiser, License No.: RI 23550 provided professional assistance in the preparation of this appraisal by conducting market and data research, exhibit preparation and report writing.

Craig H. Clayton, MAI, provided professional assistance in the development of the discounted cash flow model and provided advice concerning appraisal methodology and procedures for this property classification.

CLAYTON, ROPER & MARSHALL

SITE AND IMPROVEMENTS

The subject property is improved with a C&D landfill and recycling center. The facility has been in operation since 1998. The facility started operations in 1998 as an unlined C&D debris disposal facility. In 1999, the facility converted to a Class III landfill and, in 2014, the facility filed a permit application requesting classification as a C&D debris and recycling facility. FDEP granted the facility a 10-year operation permit as a C&D facility, but required the site continue to monitor groundwater, surface water, and landfill gas in accordance with Class III landfill guidelines.

According to the permit drawings, the approximate natural grade on the site is at elevation 25 feet NGVD. The bottom of waste is at approximately elevation 24.4 feet. The setback requirements of 100 feet from the property boundary for Class III landfills was reduced to 50 feet because of the adjacent county owned and operated Sarno Road Class III Landfill and Sarno Road Transfer Station. The majority of the Florida Recyclers waste appears to be landfilled on the south portion of the site, and there are piles of mulched material placed on the north half of the site. Based on the current recycling and processing operations at the site, it is unclear if the entire permitted footprint area has landfilled waste.

Waste is monitored and recorded at the facility scale house. The site's 2014 Operation Plan states that recyclable materials from construction waste and vegetative waste are recycled and that non-recyclable construction debris is landfilled. The site does not currently accept CCA pressure-treated wood for disposal. However, CCA treated wood was likely accepted for disposal in the past before FDEP's prohibition regarding disposal of this waste in unlined landfills. The facility is also authorized to process yard trash. Residential yard waste is processed into landscaping mulch and topsoil. The facility has 10 groundwater monitoring wells and one surface water sampling point; monitoring and sampling are performed semi-annually. The facility also monitors landfill gas migration quarterly at the perimeter landfill gas probes and within structures on the property.

CAPACITY AND LIFESPAN

We have based the remaining capacity and lifespan on the June 2018 report prepared by Jones, Edmunds & Associates, Inc. This was a Landfill Evaluation report of Florida Recyclers C&D Landfill prepared for Brevard County. This information was used, in conjunction with a current Topographic survey, to estimate the total and remaining capacity for the subject.

Scenario 1:

Per the Jones Edmunds report, the subject has a total capacity of 1,620,000 CY (assuming a height of 40 feet and an elevation of 64' NGVD). As of June 21, 2019, use of the property had consumed approximately 1,049,585 CY. Therefore, the remaining capacity is estimated to be 570,415 CY (1,620,000 CY - 1,049,585 CY = 570,415 CY).

The remaining lifespan has been estimated at about 15 years. This was based on an extension of the subject's historical fill rate of approximately 40,000 CY per year.

Scenario 2 (*Extraordinary Assumption*):

Per the Jones Edmunds report, the subject has a total capacity of 2,600,000 CY (assuming a height of 81 feet and an elevation of 104' NGVD). As of June 21, 2019, use of the property had consumed approximately 1,049,585 CY. Therefore, the remaining capacity is estimated to be 1,550,415 CY (2,600,000 CY - 1,049,585 CY = 1,550,415 CY).

The remaining lifespan has been estimated at about 39 years. This was based on an extension of the subject's historical fill rate of approximately 40,000 CY per year.

PROPERTY INTEREST APPRAISED

Fee Simple

SUBJECT PROPERTY TAX MAP/AERIAL

CLAYTON, ROPER & MARSHALL

QUALIFICATIONS OF PAUL M. ROPER, MAI, SRPA, SRA

BUSINESS ADDRESS

Clayton, Roper & Marshall, Inc.
246 North Westmonte Drive
Altamonte Springs, Florida 32714

Telephone: (407) 772-2200, Ext. 316
Fax: (407) 772-1340
E-mail: proper@crmre.com

EDUCATION

BSBA Degree (Finance), University of Central Florida, Orlando, Florida..... 1979
AS Degree, Daytona State College, Daytona Beach, Florida 1974

REAL ESTATE APPRAISAL COURSES AND SEMINARS

COMPLETED UNDER DIRECTION OF THE APPRAISAL INSTITUTE

2019 Central Florida Real Estate Forum.....	2019
2018 Central Florida Real Estate Forum.....	2018
2017 Central Florida Real Estate Forum.....	2017
2016 Central Florida Real Estate Forum.....	2016
Online Cool Tools Course.....	2016
National USPAP Update Course.....	2016
Florida Law Update.....	2016
Central Florida Real Estate Forum.....	2015
Evaluating Residential Construction.....	2014
2014 Central Florida Real Estate Forum – Unity of the Community	2014
Business Practice and Ethics	2014
National USPAP Update Course.....	2014
Florida Law	2014
Litigation Assignments for Residential Appraisers: Doing Expert Work on Atypical Cases.....	2014
Central Florida Real Estate – 2012 Valuation Forum.....	2012
Fundamentals of Separating Real, Personal Property, and Intangible Business Assets.....	2012
The Uniform Appraisal Dataset from Fannie Mae and Freddie Mac.....	2011
Appraisal Curriculum Overview	2010
Florida Supervisor/Trainee Roles & Rules	2010
Valuation by Comparison: Residential Analysis	2010
Analyzing the Effects of Environmental Contamination on Real Property	2010
Condemnation Appraising: Principles and Applications	2010
10-Hour USPAP Update & Core Law	2010
Property Tax Assessment.....	2010
Business Practices and Ethics	2010
Value by Comparison: Residential Analysis and Logic.....	2009
Florida Appraisal Law.....	2009
National USPAP Update Course, Florida Association of Realtors.....	2006
Florida Law Update for Real Estate Appraisers, Florida Association of Realtors.....	2006/2010
South Florida Water Management District Seminar	2005
Course 420: Business Practices and Ethics (formerly Standards of Professional Practice, Part B).....	2005/2010
National USPAP Update Course, University of Phoenix.....	2004
Florida Law Update for Real Estate Appraisers.....	2004
FDOT – Advanced Appraisal Review Course	2004
South Florida Water Management District Course	2004
Uniform Standards for Federal Land Acquisitions, “The Yellow Book” Tallahassee, Florida	2004
South Florida Water Management District Appraisal Seminar.....	2003
South Florida Water Management District Appraisal Seminar.....	2002
Florida State Law Update for Real Estate Appraisers.....	2002
Standards of Professional Practice, Part C	2002
When Good Houses Go Bad (FREAB Course 01-03)	2001
Litigation Skills for the Appraiser.....	2001

CLAYTON, ROPER & MARSHALL

**REAL ESTATE APPRAISAL COURSES AND SEMINARS
COMPLETED UNDER DIRECTION OF THE APPRAISAL INSTITUTE (CONTINUED)**

Capital Gains in Like-Kind Exchanges	2001
Appraising from Blueprints.....	2000
Partial Interest Valuation.....	2000
USPAP/Law	2000
St. Johns River Water Management Appraisal Seminar	2000
Business Enterprise Valuation - Course No. 701	1999
Alternative Dispute Resolution (ADR) - Course No. 706.....	1999
Improving Your Business, Management and Bottom Line Profit.....	1999
Valuing Your Business	1999
Appraisal Considerations for Rural Properties.....	1998
USPAP - Part C	1997
Fannie Mae Guidelines Update	1996
USPAP (Update/Core Law)	1996
Agriculture and the Internet Computer Workshop.....	1995
How to Appraise FHA-Insured Property	1995
Appraisal Institute Faculty Workshop.....	1995
Technology Video Conference.....	1995
Understanding Limited Appraisals & Reporting Options - General	1994
Powerline Easements & Electro Magnetic Fields' Effect on People & Value.....	1994
USPAP Core Law for Appraisers.....	1994
Standards of Professional Practice, Parts A & B	1992
Interim Use Properties.....	1992
SREA 201 Instructor's Clinic	1988
Course IV - Condemnation Appraisal Practice	1988
Uniform Residential Appraisal Report.....	1987
Valuation and Evaluation of Proposed Projects.....	1987
R-41c - Overview and Analysis	1987
R-41b - Overview and Analysis	1986
Capitalization Theory and Techniques.....	1986
Federal Income Taxes Affecting Real Estate	1985
R-41b - Federal Home Loan Bank Board Regulations	1985
Condemnation and the Appraiser	1984
Development of Business Centers and Office Showrooms.....	1984
Overview - Apartment Development Process	1984
Adjusting for Financing Differences in Residential Properties.....	1983
SREA 201 Instructor's Clinic	1982
Report Writing Seminar	1981
Construction Facts/Inspections	1981
Course VII, Industrial Valuation.....	1981
Hotel/Motel Valuation and Analysis Seminar	1981
Golf Course Valuation and Analysis Seminar	1981
R-2 Single-Family Residential Examination.....	1978
Course II, Urban Case Studies	1977
Narrative Report Writing Workshop.....	1976
Course 201 - University of Central Florida.....	1976
Applied Capitalization Techniques Workshop	1975
Course 101 - Stetson University.....	1975

INDEPENDENT SEMINARS (OTHER THAN APPRAISAL INSTITUTE)

FDOT – 7-Hour USPAP Update.....	2018
FDOT – Florida Law Update	2018
Orlando Regional Realtors Ethics Course for Continuing Education	2018
Real Estate Continuing Education State Brokers Course and Exam.....	2018

CLAYTON, ROPER & MARSHALL

INDEPENDENT SEMINARS (OTHER THAN APPRAISAL INSTITUTE) (CONTINUED)

Conservation Trust for Florida - Conservation Easements from All Angles	2013
Orlando Regional Realtor Association – 3rd Cycle Quad Code of Ethics	2012
Florida Department of Revenue – 2010 Value Adjustment Board Training.....	2010
FDOT – 7-Hour USPAP Update.....	2010
FDOT – Florida Law Update	2010
FDOT – Advanced Appraisal Review	2010
University of Florida – Florida Water Law and Sustainability	2010
Supervisor & Trainee Appraiser Rules & Roles	2008
Advanced Appraisal Review	2008
Sovereignty Submerged Land Easements	2008
Florida Department of Transportation- Advanced Appraisal Review	2004
SFWMD-Current Appraisal Issues in Florida.....	2004
SFWMD-Current Appraisal Issues in Florida.....	2002
Real Estate Continuing Ed Course	2002
SFWMD-Uniform Appraisal Standards for Federal Land Acquisitions.....	2001
SFWMD-Current Appraisal Issues in Florida.....	2000
Less Than Fee Interest Workshop.....	1999
The Internet and Appraising.....	1997
Risk Reduction for Brokers.....	1996
Contracts, Collectibles, Crimes, Copy & More	1996
Agriculture and the Internet II Workshop.....	1996
Marshall & Swift Square Foot Method Use & Application.....	1996
Real Estate Law Symposium.....	1995
Concurrency Management Seminar - City of Orlando	1992
Citrus Groves - Evaluation and Analysis	1991
Appraisal Review of Commercial Real Estate and Federal Home Loan Bank Board Memorandum R-41c	1986

The Appraisal Institute conducts a voluntary program of continuing education for its designated members. MAI's who meet the minimum standards of this program are awarded periodic educational certification. Paul M. Roper is currently certified under this program.

Mr. Roper has also attended various seminars under the direction of the Orlando Area Association of Realtors and the American Society of Appraisers.

PROFESSIONAL DESIGNATIONS

MAI Designation - Appraisal Institute, Certificate #6442

SRPA and SRA Designations - Appraisal Institute

(Past President of Chapter No. 100; Past Education Committee Chairman)

Licensed Real Estate Broker, State of Florida

State-Certified General Real Estate Appraiser, State of Florida, License Number RZ 141

FNMA Approved - #1108588

EXPERIENCE

Special Magistrate for Valuation Adjustment Board Hearings

Orange County 1984, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 2005, 2006, 2007, 2008, 2015, 2016, 2017

Special Magistrate for Valuation Adjustment Board Hearings

(sole member) for Osceola County

Instructor: Less Than Fee Interest Workshop for Northwest Florida Water Management District

Appraisal Institute (Appraising Interim Use Properties)

Society of Real Estate Appraisers (SREA Course 201)

Society of Real Estate Appraisers (Uniform Residential Appraisal Reports)

CLAYTON, ROPER & MARSHALL

EXPERIENCE (CONTINUED)

Instructor: Continuing Education Instructor Valencia College, Orlando, Florida 1984
American Institute of Real Estate Appraisers..... 1984
Author: Coursework for Teaching "Less Than Fee Interest" 1999
Author: Coursework and Appraisal Articles for Teaching and Publication, such as:
"Appraising Interim Use Properties" 1992, 1991
Vice-President of Clayton, Roper & Marshall, Inc. (formerly Clayton & Roper Appraisal Services) Since 1982
Associate with Pardue, Heid, Church, Smith & Waller 1975 to 1982

ASSOCIATIONS

Member: The Appraisal Institute
Altamonte Springs Chamber of Commerce
Kissimmee Chamber of Commerce
Orlando Regional Realtor Association
Better Business Bureau
International Right-of-Way Association (IRWA)

Paul M. Roper has completed appraisal reports and lease negotiations throughout the United States for individuals, attorneys, mortgage brokers, mortgage bankers, credit unions, banks, savings and loan associations and various Federal, State, and local governmental agencies for valuation, evaluation and analysis assignments that include:

- Ranch Lands, Citrus Groves and Crop Farms, Florida Springs and Conservation Easements
- Airport Land Acquisitions and Avigation Easements
- Business Valuations
- Cemeteries and Mortuaries
- Commercial Properties of most Classifications
- Condemnation (Eminent Domain) and Expert Witness Testimony
- Hotel/Motel Valuation
- Industrial Properties
- Office Buildings
- Litigation/Consultation Assignments
- Market/Feasibility Studies
- Mobile Home Sales and Rental Parks
- Personal Property Appraisals
- Roadside Advertising Signs
- Single-Family and Multi-Family Residential Properties
- Restaurants
- Special Purpose Properties such as Citrus and Tomato Packing Plants and a US Naval Training Center
- Appraisal Reviews



Paul Roper presently owns interests in office buildings, land investments and detached residential housing. He has testified as an expert witness for various litigation involving real estate in Federal Courts and the Circuit Courts of Brevard, Escambia, Lake, Marion, Orange, Osceola, Pasco, Polk, Seminole, and Volusia Counties in the State of Florida.

OTHER

Member: U.S. Marine Corps (Vietnam Veteran) Honorable Discharge - 1969-1972
Disabled American Veterans (DAV)
Veterans of Foreign Wars (VFW)

CLAYTON, ROPER & MARSHALL

STATE OF FLORIDA CERTIFICATION

	RICK SCOTT, GOVERNOR	JONATHAN ZACHEM, SECRETARY
		
<p>STATE OF FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION FLORIDA REAL ESTATE APPRAISAL BD</p>		
<p>THE CERTIFIED GENERAL APPRAISER HEREIN IS CERTIFIED UNDER THE PROVISIONS OF CHAPTER 475, FLORIDA STATUTES</p>		
<p>ROPER, PAUL M 246 N WESTMONTE DRIVE ALTAMONTE SPRINGS FL 32714</p>		
<p>LICENSE NUMBER: RZ141</p>		
<p>EXPIRATION DATE: NOVEMBER 30, 2020</p>		
<p>Always verify licenses online at MyFloridaLicense.com</p>		
	<p>Do not alter this document in any form.</p> <p>This is your license. It is unlawful for anyone other than the licensee to use this document.</p>	

QUALIFICATIONS OF JOSEPH W. MACHOVINA

BUSINESS ADDRESS

Clayton, Roper & Marshall, Inc.
246 North Westmonte Drive
Altamonte Springs, Florida 32714

Telephone: (407) 772-2200, Ext. 320
Fax: (407) 772-1340
E-mail: jmachovina@crmre.com

EDUCATION

University of Florida – Gainesville, Florida
Bachelor of Science in Business Administration degree awarded December 2009
- Major in Finance

RELEVANT COURSES/SEMINARS

Business Finance – University of Florida	2007
Real Estate Analysis – University of Florida	2008
Legal Environment of Business – University of Florida	2008
Debt and Money Markets – University of Florida	2009
Equity and Capital Markets – University of Florida	2009
Financial Management– University of Florida	2009
15-Hour National Uniform Standards of Professional Appraisal Practice (USPAP)	2010
Steve Williamson's Real Estate Education Specialists, Inc. – 3-Hour Florida State Law	2010
Steve Williamson's Real Estate Education Specialists, Inc. – Basic Appraisal Principles	2010
Steve Williamson's Real Estate Education Specialists, Inc. – Basic Appraisal Procedures	2010
Steve Williamson's Real Estate Education Specialists, Inc. – Residential Report Writing	2010
Steve Williamson's Real Estate Education Specialists, Inc. – Florida Law and Rules	2010
Steve Williamson's Real Estate Education Specialists, Inc. – Supervisor Trainee Roles & Relationships	2010
Steve Williamson's Real Estate Education Specialists, Inc. – Statistics, Modeling, & Finance	2011
Cooke Real Estate School - General Site Valuation and Cost Approach	2012
The Appraisal Institute – General Sales Comparison Approach	2014
Institute of Florida Real Estate Careers – 3-Hour Florida State Law	2014
Institute of Florida Real Estate Careers – 7-Hour National USPAP Update	2014
Florida Real Estate Appraisal Laws and Rules	2016
2016-2017 7-Hour Equivalent USPAP Update Course	2016
Methodology and Application of Sales Comparison	2016
Better to be Safe Than Sorry	2016
The Appraisal Institute - General Appraiser Income Approach / Part 1	2018
The Appraisal Institute - General Appraiser Income Approach / Part 2	2018

PROFESSIONAL DESIGNATIONS AND AFFILIATIONS

Registered Trainee Appraiser - State of Florida - License Number: RI 23550

EXPERIENCE

Trainee Real Estate Appraiser - Clayton, Roper & Marshall, Orlando, Florida

2010 to Present

Joseph Machovina has testified as an expert witness in Federal Bankruptcy Court, as well as provided testimony in Seminole County Value Adjustment Board (VAB) Hearings in the State of Florida.




CLIENTS SERVED

- Financial Institutions
- County Government: Orange, Seminole, Osceola, Polk, among others
- Private Attorneys
- City Government
- Property Owners
- FDOT

TYPES OF PROPERTIES APPRAISED

- Vacant Residential, Commercial and Industrial Land
- Existing Office Buildings
- Proposed Office Buildings
- Existing Warehouse and Industrial Buildings
- Proposed and Existing Retail Buildings
- Easements: Drainage, Conservation, Mineral Rights, Supplemental Communications
- Condemnation Appraisals: LAIs, Before and Afters, TCEs, Storm Sewer Easements
- Partial Interests
- Property Tax Appeal

STATE OF FLORIDA CERTIFICATION

	RICK SCOTT, GOVERNOR	JONATHAN ZACHEM, SECRETARY
		
<p>STATE OF FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION FLORIDA REAL ESTATE APPRAISAL BD</p>		
<p>THE REGISTERED TRAINEE APPRAISER HEREIN HAS REGISTERED UNDER THE PROVISIONS OF CHAPTER 475, FLORIDA STATUTES</p>		
<p>MACHOVINA, JOSEPH W 246 NORTH WESTMONTE DRIVE ALTAMONTE SPRINGS FL 32714</p>		
<p>LICENSE NUMBER: RI23550</p>		
<p>EXPIRATION DATE: NOVEMBER 30, 2020</p>		
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APPRAISAL OF

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
FDEP (WACS) ID NO.: 18444
FDEP DISTRICT: CENTRAL
COUNTY: BREVARD

ESTIMATE OF MARKET VALUE
OF THE MELBOURNE LANDFILL
AND RECYCLE CENTER
CONTAINING 45± GROSS ACRES
LOCATED AT 3351 SARNO ROAD,
IN THE CITY OF MELBOURNE,
BREVARD COUNTY, FLORIDA

PREPARED FOR

BREVARD COUNTY
C/O MS. LUCY HAMELERS
PUBLIC WORKS DEPARTMENT
2725 JUDGE FRAN JAMIESON WAY
BLDG A-204
VIERA, FL 32940

DATE OF VALUATION: JUNE 17, 2020
DATE OF INSPECTION: JUNE 17, 2020
DATE OF REPORT: OCTOBER 9, 2020

PREPARED BY

PINEL & CARPENTER, INC.

WALTER N. CARPENTER, JR., MAI, CRE
PRESIDENT
CERT GEN RZ 1231

&

KEVIN M. EATON
STAFF APPRAISER
CERT GEN RZ 3677



WALTER N. CARPENTER, JR., MAI
Cert. Gen. RZ1231
MARK G. CARPENTER, MAI
Cert. Gen. RZ935

October 9, 2020

Brevard County
c/o Ms. Lucy Hamelers
Public Works Department
Land Acquisition Supervisor
2725 Judge Fran Jamieson Way, Building A-204
Viera, FL 32940

RE: **Property:** **Melbourne Landfill and Recycle Center**
Owner: **Florida Recyclers of Brevard, LLC**
FDEP (WACS) ID: **18444**
County: **Brevard**

Dear Ms. Hamelers:

Per your request, we have personally inspected and appraised the above referenced real estate property. The subject property is identified as the Melbourne Landfill and Recycle Center owned by Florida Recyclers of Brevard, Inc. The property totals 45± gross acres, with the 36± acres permitted as disposal area by Florida Department of Environmental Protection (FDEP). The real property is located along the south side of Sarno Road, approximately 4,700± feet east of W. Eau Gallie Boulevard and 2,600± feet west of N. Wickham Road within the city limits of Melbourne in Brevard County, Florida. The subject property is both legally and physically described in the attached real estate appraisal report.

The purpose of this appraisal report is to estimate the market value of the fee simple interest in the subject property real estate, as of the date of valuation, June 17, 2020, assuming the continued operation of the subject as a C & D landfill.

As of the date of valuation, the subject property consisted of an operating construction and demolition debris (C&D) landfill. As such, the components of market value consisted of the land and permanent improvements (real estate), as well as permit rights as an operating landfill under the General Use Permit for a Construction and Demolition Debris Facility, FDEP Facility ID (WACS) No. 18444, issued in 2014 by Florida Department of Environmental Protection (FDEP). This appraisal does not consider any value to certain machinery, earth-moving or excavating equipment that may have been a part of the landfill operation.

This is an Appraisal Report, which is intended to comply with the reporting requirements set forth under Standards Rule 2-2(a) of the Uniform Standards of Professional Appraisal Practice for an Appraisal Report. As such, it presents discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the appraisers' opinion of value. Supporting documentation concerning the data, reasoning, and analyses is retained in the appraisers' file. The depth of discussion contained in this report is specific to the needs of the client and for the intended use stated above. The appraisers are not responsible for unauthorized use of this report.

Melbourne Landfill and Recycle Center
Brevard County
October 9, 2020
Page Two

Currently, the landfill is restricted to a height of 40 feet above the natural elevation (24 feet) for a total height of 64 feet by the City of Melbourne under a conditional use (Ordinance No. 2010-53). According to the owner, a request to increase the height to 80 feet above natural elevation has been made to the city, but as of the date of valuation has not been granted. Therefore, our client has requested this valuation be completed based on the existing approved 40-foot height.

In accordance with a prior agreement between the client and the appraisers, this is appraisal report providing a narrative summary of the analysis and value conclusion. The report is for use by persons familiar with the subject, its market area, and real estate valuation procedures. It is intended to comply with the reporting requirements set forth under Standards Rule 2-2(a) of the Uniform Standards of Professional Appraisal Practice (USPAP) for an appraisal report.

This report is intended solely for the use by Brevard County as it pertains to internal decision making and potential acquisition of the subject property. The distribution to those other than the intended users identified in the appraisal report requires specific authorization from the appraisers. The appraisers are not responsible for unauthorized distribution of this report.

In addition to the inspection and research conducted by Pinel & Carpenter, Inc., this report was prepared with additional information consisting of diagrams, expert reports and summary data provided by the client. The owner of the property also provided historical financial information on the operation of the landfill. The additional information considered that is not included within this report is contained in the appraisers' work file.

The United States is in the midst of a national health pandemic caused by COVID-19 (coronavirus). In the short-term, financial markets and global economy have experienced significant volatility and turmoil. The Federal Reserve's response to the pandemic has been significant reductions to interest rates to combat the market uncertainty. The full impact to the real estate market is not yet fully understood.

Currently, there appears to be a high demand of mortgage refinancing due to historically low interest rates that may be a short-term phenomenon. Conversely, in an effort to avoid face-to-face contact which could fuel the spread of the virus, transaction volume will likely be temporarily minimal or halted.

Based on other areas of the world that have experienced the pandemic and have since trended positively in seeing a reduced number of new cases, there is optimism the current market disruption could be short-term.

The situation is unprecedented and there is no empirical evidence to support or extrapolate what the impact to market values may or may not be as a result of this pandemic. The following analysis relies on a prolonged marketing / exposure period relative to prior norms, to account for the uncertainty in the near term, with the assumption that the market will revert to prior conditions after the public health risk has been contained.

It is important to note that the definition of market value is predicated on certain components, including that buyers and sellers are typically motivated, are generally well-informed, are acting in their own best interests, and that the property has been exposed on the market for a reasonable length of time, among others.

The impact of uncertainty in a property's market area may be difficult to measure; risk affects both property owners and investors, sellers and buyers, and may be reflected in potentially changing capitalization rates, discount rates and prices. Transactions that occurred prior to an event which affects the current real estate market may not necessarily reflect the same market conditions as those occurring during or after. However, the availability of comparable sales and data that take place within the same conditions as the date of value, which the appraiser might take into consideration for a current valuation, may be limited in situations such as the current market, where a period of time has not yet passed which would allow market participants to determine the measurable impact such a rapidly evolving event has or will have on the fundamental appraisal principles of supply and demand, anticipation, change, substitution, contribution, externalities and balance which influence property values. Therefore, it is prudent to note that the values herein represent an opinion of the current market value of the subject property based upon historical data available as of the date of the appraisal report.

The global outbreak of the "novel coronavirus" known as COVID-19 was officially declared a pandemic by the World Health Organization (WHO). The reader is cautioned and reminded that the conclusions presented in this appraisal report apply only as of the effective date(s) indicated. The appraiser makes no representation as to the effect on the subject property of any unforeseen event, subsequent to the effective date of the appraisal.

Melbourne Landfill and Recycle Center
 Brevard County
 October 9, 2020
 Page Four

Based upon the following appraisal report, certifications, property specific conditions, contingencies, and assumptions, as well as the general underlying assumptions and limiting conditions, it is our opinion and conclusion the market value of the fee simple interest in the subject property real estate, assuming a continued operation of the C & D landfill, as of June 17, 2020 was:


TWO MILLION SEVEN HUNDRED THOUSAND DOLLARS

\$2,700,000

Please refer to the attached appraisal report, including exhibits for documentation of the above-cited value estimates.

Respectfully submitted,

PINEL & CARPENTER, INC.

 10-9-2020

 Walter N. Carpenter, Jr., MAI, CRE Date
 President
 Cert Gen Appraiser RZ1231

 10/9/2020

 Kevin M. Eaton Date
 Staff Appraiser
 Cert Gen Appraiser RZ3677

WNC/KME
 Attachments

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ADDENDUM

"LANDFILL EVALUATION REPORT" JONES, EDMUNDS & ASSOCIATES, INC.
CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES
OWNERS RESPONSE LETTER TO CONSENT ORDER FROM FDEP
TOPOGRAPHY MAP
SOIL MAP WITH DESCRIPTIONS
FLOOD PLAIN MAP
QUALIFICATIONS OF APPRAISERS

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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CERTIFICATE OF VALUE

We certify to the best of my knowledge and belief, that:

1. The statements of fact contained in this report are true and correct.
2. The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, unbiased, professional analyses, opinions, and conclusions.
3. We have no present or prospective interest in the property or bias with respect to the property that is the subject of this report, and we have no personal interest or bias with respect to the parties involved. Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
4. We have not performed services, as appraisers, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
5. Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
6. Our analyses, opinions, or conclusions were developed, and this report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice, and the provisions of Chapter 475, Part II, Florida Statutes.
7. We have made a personal inspection of the property that is the subject of this report.
8. No persons other than those named within the Certificate provided significant real property appraisal assistance to the persons signing this certification.
9. We understand that this appraisal is to be used for internal decision making by the client for possible acquisition of the subject property.
10. The reported analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
11. We have not revealed the findings or results of this appraisal to anyone other than the client and will not do so until so authorized by the client, or until required by due process of law, or until we are released from this obligation by having publicly testified as to such findings.

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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CERTIFICATE OF VALUE (Contd.)

12. Regardless of any stated limiting condition or assumption, we acknowledge that this appraisal report and all maps, data, summaries, charts and other exhibits collected or prepared under this agreement shall become the property of the client without restriction or limitation on their use.

13. Statements supplemental to this certification required by membership or candidacy in a professional appraisal organization, are described on an addendum to this certificate and, by reference, are made a part hereof.

As of the date of this report, Kevin M. Eaton has completed the Standards and Ethics Education Requirements for Candidates of the Appraisal Institute.

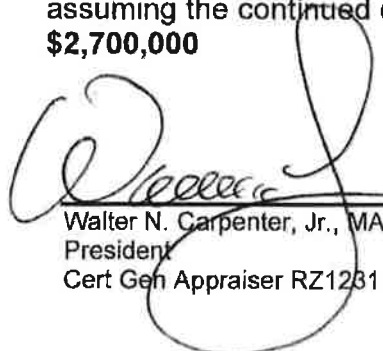
As of the date of this report, Walter N. Carpenter, Jr., has completed the Standards and Ethics Education Requirement of the Appraiser Institute for Associate Members.

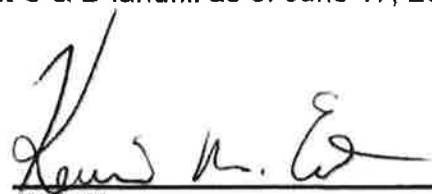
That as of the date of this report, Walter N. Carpenter, Jr., MAI, CRE, and Kevin M. Eaton have completed the requirements of the Continuing Education Program for the State of Florida.

That, Walter N. Carpenter, Jr., MAI, CRE, State-Certified General Real Estate Appraiser and Kevin M. Eaton, State-Certified General Real Estate Appraiser have the knowledge and experience on the type of property appraised in this geographic area to meet the USPAP competency requirements.

Others within the office provided assistance to the persons signing this report. This assistance included sales research and analysis and subject research and analysis. However, the analyses and value conclusions presented within this report are our own opinion.

Based upon our independent appraisal and the exercise of our professional judgment, our opinion of the market value of the fee simple interest in the subject property real estate, assuming the continued operation of the subject C & D landfill as of June 17, 2020, was **\$2,700,000**

 10-9-2020
Walter N. Carpenter, Jr., MAI, CRE Date
President
Cert Gen Appraiser RZ1231

 10/9/2020
Kevin M. Eaton Date
Staff Appraiser
Cert Gen Appraiser RZ3677

GENERAL UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal report has been made with the following general assumptions:

1. No responsibility is assumed for the legal description or for matters including legal or title considerations. Title to the property is assumed to be good and marketable unless otherwise stated.
2. The property is appraised as if free and clear of any or all liens or encumbrances unless otherwise stated.
3. Responsible ownership and competent property management are assumed.
4. The information furnished by others is believed to be reliable. However, no warranty is given for its accuracy.
5. All engineering is assumed to be correct. Any diagrams or illustrative material in this report are included only to assist the reader in visualizing the property. If new information or documentation is available after the valuation date, it will subject this appraisal to review, possible modification and/or updating.
6. It is assumed that there are no hidden or unapparent conditions of the property, subsoil, or structures that render it more or less valuable unless stated within the appraisal report. No responsibility is assumed for such conditions or for arranging for engineering studies that may be required to discover them.
7. The appraisers were not provided with a soil/subsoil analysis of the subject property. Since the discovery of any abnormal soil or subsoil conditions is beyond my area of expertise, I have assumed the site will support the existing improvements. Any indications to the contrary will subject this appraisal to review and possible modification.
8. It is assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in the appraisal report.
9. It is assumed that all applicable zoning and use regulations and restrictions have been complied with, unless nonconformity has been stated, defined, and considered in the appraisal report.
10. It is assumed that all required licenses, permits, certificates of occupancy, consents, or other legislative or administrative authority from any local, state, or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimates contained in this report are based.
11. Any sketch or diagrams in this report may show approximate dimensions and is included to assist the reader in visualizing the property. Maps and exhibits found in this report are provided for reader reference purposes only. No guarantee as to accuracy is expressed or implied unless otherwise stated in this report.
12. It is assumed that the utilization of the land is within the boundaries or property lines of the property described and that there is no encroachment or trespass unless noted in the report.

GENERAL UNDERLYING ASSUMPTIONS AND LIMITING CONDITIONS
(Contd.)

13. The appraisers are not qualified to detect hazardous waste and/or toxic materials. Any comment by the appraiser(s) that might suggest the possibility of the presence of such substances should not be taken as confirmation of the presence of hazardous waste and/or toxic materials. Such determination would require investigation by a qualified expert in the field of environmental assessment. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. The appraisers' value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value unless otherwise stated in this report. No responsibility is assumed for any environmental conditions or for any expertise or engineering knowledge required to discover them. The appraisers' descriptions and resulting comments are the result of the routine observations made during the appraisal process.
14. Sales data and information regarding sales, if any, were abstracted from public records, from sales services, and from other sources. This information is assumed to be accurate and correct.
15. Any flood zone information provided within this report was based upon a review of the National Flood Insurance Maps. We assume no responsibility for their accuracy.

This appraisal report has been made with the following general limiting conditions:

1. The distribution, if any, of the total valuation in this report between land and improvements applies only under the stated program of utilization. The separate allocations for land and buildings must not be used in conjunction with any other appraisal and are invalid if so used.
2. Possession of this report, or a copy thereof, does not carry with it the right of publication. It may not be used for any purpose by any person other than the party to whom it is addressed without the written consent of the appraiser, and in any event only with proper written qualification and only in its entirety.
3. The appraiser herein by reason of this appraisal is not required to give further information consultation, testimony, or be in attendance in court with reference to the property in question unless arrangements have been previously made.
4. Neither all nor any part of the contents of this report (especially any conclusions as to value, the identity of the appraiser(s), or the firm with which the appraiser(s) is connected) shall be disseminated to the public through advertising, public relations, news, sales, or other media without the prior written consent and approval of the appraiser.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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PROPERTY SPECIFIC ASSUMPTIONS AND LIMITING CONDITIONS

1. As of the date of value, a Consent Order from FDEP regarding several possible violations were open pending resolution. Based on our review of the correspondence between the owner and FDEP, the property owners permit history; we are currently unable to quantify/consider these open violations as part of the current valuation of the landfill. If new information or documentation is available after the valuation date, may subject this appraisal to review and possible modification.

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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SUMMARY OF IMPORTANT CONCLUSIONS

PROPERTY

NAME: Melbourne Landfill and Recycle Center

LANDFILL TYPE: Construction and Demolition Debris (C & D)

**FDEP (WACS)
FACILITY ID NO:** 14888

**FDEP
GENERAL USE
PERMIT NO:** 05-0133456-010-SO-22

PROPERTY

LOCATION: The subject property has access from the south side of Sarno Road, approx. 4,700± feet east of W. Eau Gallie Blvd and 2,600± feet west of N. Wickham Road, in the City of Melbourne, Brevard County, Florida, 32934. The access is from a 100'± strip with the main parcel lying approx. 500 feet south of Sarno Road. The physical address of the property is 3351 Sarno Road, Melbourne, FL 32934

**PROPERTY
OWNERSHIP:**

Based on the Public Records for Brevard County, Florida, the subject property consists of two tax parcels which are identified by Brevard County Property Appraiser as Tax I.D. Nos. 27-36-24-507 & 27-36-24-508. The ownership as of the date of valuation was as follows:

FLORIDA RECYCLERS OF BREVARD, INC.
3351 Sarno Road
Melbourne, FL 32934

**DATE OF
VALUATION:** June 17, 2020

**DATE OF
INSPECTION:** June 17, 2020

**PROPERTY
RIGHTS
APPRAISED:** Fee Simple Estate

**SITE
DESCRIPTION:** The subject property consists of 45± gross acres, of which 36± acres are permitted as the disposal area by FDEP. The site is a flag shaped with 100± feet of frontage along the south side of Sarno Road.

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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SUMMARY OF IMPORTANT CONCLUSIONS (Contd.)

IMPROVEMENTS: The subject property building improvements consists of a single wide manufactured home that serves as the onsite office. Additionally, there is an open pole barn that is used for storage of bagged mulch.

SITE

IMPROVEMENTS: Site improvements include asphalt driveway/parking area, weight station, concrete walkways and concrete curbs.

ZONING: C-M-1, Light Industrial District with a condition use, by the City of Melbourne, FL.

FUTURE LAND USE:

Industrial by the City of Melbourne.

HIGHEST AND BEST USE:

"As Vacant" – Industrial uses that would maximize the highest return to the land based on current demand.

"As Improved" – The existing, continued use as an operating C & D landfill facility, subject to the 40-foot height restriction above the natural elevation imposed by the City of Melbourne.

PROPERTY NAME:
OWNER/PERMITTEE:
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MELBOURNE LANDFILL AND RECYCLE CENTER
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SUMMARY OF IMPORTANT CONCLUSIONS (Cont'd)

MARKET VALUE INDICATION:

Cost Approach	N/A
Sales Comparison Approach	N/A
Income Approach	\$2,331,000 to \$2,766,000 ¹

¹Utilizing the discounted cash flow analysis or yield capitulation technique within the Income Approach to value; the value range above represents the net present value for the subject property after making reasonable assumptions based on the historical operation of the landfill.

RECONCILIATION & FINAL ESTIMATE OF VALUE:

The final estimate of market value for the subject property, assuming a continued operation of the landfill as of the date of valuation, as of June 17, 2020, is **\$2,700,000**

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DeLorme

DeLorme Street Atlas USA © 2011

Map showing the area around Melbourne, Florida, including major roads (US 1, US 192, US 507) and local streets (W Sarno Rd, W NASA Blvd, E Bay Gate Rd). The map also shows Lake Washington, Indian River, and the St. Johns River. A 'SUBJECT' label is placed on W Sarno Rd.

Data use subject to license.

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www.delorme.com

MN (7.0° W)

0 1/2 1 1 1/2 2 2 1/2 mi

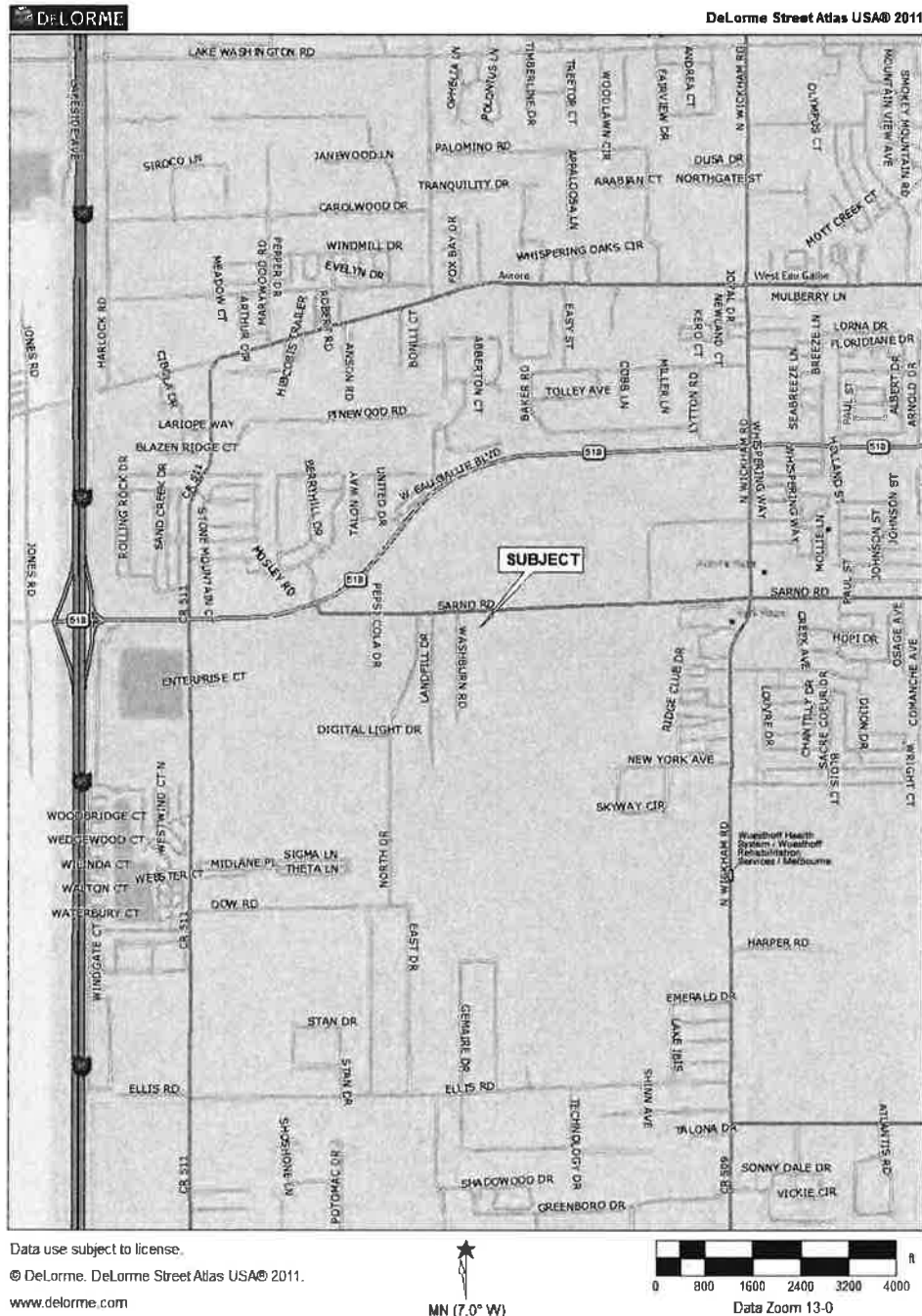
Data Zoom 11-2

PROPERTY NAME:
OWNER/PERMITEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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LOCATION MAP



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PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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AERIAL PHOTOGRAPH



*Approximate Representation
Source: Brevard County Property Appraiser*

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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SUBJECT PHOTOGRAPHS



View looking south from Sarno Road, down Cortez Street, at the entrance to the subject landfill.



View of looking west from the entrance to the subject landfill along the south side of Sarno Road.

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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SUBJECT PHOTOGRAPHS (CONTD.)



View of looking east from the entrance to the subject landfill along the south side of Sarno Road.



View of looking south at the manufactured building serving as the onsite office and adjoining weight station.

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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SUBJECT PHOTOGRAPHS (CONTD.)



View of the pole barn, which houses the bagged mulch products for sale.



View looking west at the organic material sorting, processing and storage area.

PROPERTY NAME:
OWNER/PERMITTEE:
COUNTY:

MELBOURNE LANDFILL AND RECYCLE CENTER
FLORIDA RECYCLERS OF BREVARD, LLC
BREVARD

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SUBJECT PHOTOGRAPHS (CONTD.)



View of look at the organic material dump location.



View looking south at the working face of the landfill, Brevard County's Sarno Landfill is in the background.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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PROPERTY DETERMINATION

The subject property analyzed within this report consists of 45± gross acres improved with a construction and demolition debris (C & D) landfill, under the ownership of Florida Recyclers of Brevard, Inc. The subject property is located within the city limits of Melbourne, Brevard County, Florida, approximately 4,700± feet east of W. Eau Gallie Blvd and 2,600± feet west of N. Wickham Road. The property's physical address is 3351 Sarno Road, Melbourne, FL 32934.

OWNERSHIP AND TITLE HISTORY

As of the date of valuation, Florida Recyclers of Brevard, Inc. owned the subject property. According to Brevard County Public Records, Florida Recyclers of Brevard, Inc. acquired ownership in the subject property from Joseph J. Weisenfeld Trustee, on March 31st, 1998, via a Trustee's Deed, recorded in O.R. Book 3926, Page 3814. The documentary stamps on the recorded deed indicate a purchase price of \$474,300. Subsequent to the last deed of transfer, there was a Corrective Trustee's Deed between both parties on March 13th, 2001.

DATE OF PROPERTY INSPECTION

June 17, 2020, Walter N. Carpenter and Kevin M. Eaton (of Pinel & Carpenter, Inc.) performed an inspection of the subject property. At the time of the inspection, Mr. David Smith, provided information as to the property and a walking tour of the various areas of the landfill and recycling operations.

APPRAISERS

Walter N. Carpenter, Jr., MAI, CRE
President
Cert Gen RZ1231

Kevin M. Eaton
Staff Appraiser
Cert Gen RZ3677

PURPOSE OF APPRAISAL

The purpose of this appraisal report is to estimate the market value of the fee simple interest in the subject property real estate, as of the date of valuation, June 17, 2020 assuming the continued operation of the subject as a C & D landfill, subject to the City of Melbourne maximum height restriction.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
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FUNCTION OF APPRAISAL

The function of this report is to establish the market value of the subject real estate to assist the client internal decision making and possible acquisition of the property.

LEGAL DESCRIPTION

The legal description for the subject landfill was obtained from the Settlement Agreement dated October 25, 2010, recorded on December 30th, 2010, recorded in O.R. Book 6307, Page 2651 in Public Records of Brevard County, Florida, as follows:

A portion of lands described in Official Records Book 4306, Page 0969 and all of lands described in Official Records Book 4087, Page 1036 and Official Records Book 4310, Page 3384, inclusive of the Public Records of Brevard County, Florida, lying in the Southwest $\frac{1}{4}$ of Section 24, Township 27 South, Range 36 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northeast corner of the said Southwest $\frac{1}{4}$ of Section 24 and run S87°18'10"W along the north line of said Southwest $\frac{1}{4}$ and the South right-of-way of Sarno Road a distance of 53.06 feet to the Point of Beginning; thence S00°01'53"W, along the west right-of-way line of Crane Creek Drainage District Canal No. L-18, a distance of 2,014.93 feet; thence S87°20'37"W, a distance of 1,269.26 feet to the west line of the East $\frac{1}{4}$ of the Southwest $\frac{1}{4}$ of said Section 24; thence N00°09'41"E along said west line, a distance of 1,497.76 feet, thence leaving said west line run N87°18'10"E, a distance 1,165.79 feet; thence N00°01'53"E, a distance of 516.43 feet to a point on the said north line of the Southwest $\frac{1}{4}$ of the Section 24 and the south right-of-way line of Sarno Road; thence N87°18'10"E along the north line of said Southwest $\frac{1}{4}$ and said south right-of-way line, a distance of 100.11 feet to the Point of Beginning.

Containing 44.72 acres of land more or less (referred to herein as the "Landfill Property").

SCOPE OF APPRAISAL

This appraisal report consists of an analysis of the subject property and the methodology used to arrive at an estimate of value. This type of property is generally developed and operated as an owner/operator business. The Cost and Sales Comparison Approaches to value were not utilized due to the age and specialized operation of the subject property as well as a lack of sales of landfill properties considered similar to the subject. Therefore, only the Income Approach to value was utilized in this analysis, due to the unique nature of the improvements and their use.

The scope of appraisal is the process of collecting, confirming, and reporting the data utilized to value the subject property. In this case, the subject property consists of a 45± gross acre site, of which 36± acres of land is the permitted disposal area improved with a construction and demolition debris landfill facility. According to Florida Department of Environmental Protection records, the subject landfill has been in existence since 1998, originally permitted as a C & D landfill but was subsequently re-permitted as a Class III landfill until 2014.

In 2014, the property was re-permitted as a construction and demolition debris facility. The general use permit is good for ten years and is set to expire on June 1st, 2024. FDEP requires the owner to use an escrow account for financial assurance of the closure costs of the facility.

In the process of completing this appraisal, we have consulted with other experts, as well as reviewed studies/reports, as well as historical financial and operational data provided by the client and the owner. The scope of the appraisal also included, but was not limited to subject and data inspections, a general and market area analysis, evaluation of the property's physical attributes, a review of planning/zoning issues, determining utility availability, highest and best use analyses, and the valuations.

Based upon our investigation and historical usage, the estimated remaining capacity in the landfill would allow continued use until approximately the year 2029, given the recycling operations in place.

Typically, in order to estimate the value of the real property, three standard approaches are generally considered. However, in order to value the subject property real estate as part of an operating landfill, the only approach deemed appropriate for this assignment was the Income approach to value.

Again, this is an appraisal report, with summary discussions of the data, analyses, and conclusions. Supporting documentation is retained in the files of Pinel & Carpenter, Inc. Additionally, documentation from the various expert reports supporting the data considered in arriving to the option of value indicated by the Income Approach to value are referenced herein and made apart hereof, with additional supporting data contained within the appraisers work file.

DEFINITION OF MARKET VALUE

The current definition of market value can be stated as follows:

The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- 1) Buyer and seller are typically motivated;
- 2) Both parties are well informed or well advised, and each acting in what he or she considers his or her own best interest;
- 3) A reasonable time is allowed for exposure in the open market;
- 4) Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- 5) The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Source: The Interagency Appraisal and Evaluation Guidelines, Federal Register, Volume 75, No. 237, December 10, 2010.

DEFINITION OF HIGHEST AND BEST USE

Highest and best use may be defined as:

The reasonably probable and legal use of vacant land or an improved property that is legally permissible, physically possible, appropriately supported, financially feasible, and that results in the highest value.

The definition immediately above applies specifically to the highest and best use of land. It is to be recognized that in cases where a site has existing improvements on it, the highest and best use may very well be determined to be different from the existing use. The existing use will continue, however, unless and until land value in its highest and best use exceeds the total value of the property in its existing use.

Source: The Appraisal of Real Estate, Fourteenth Edition, by the Appraisal Institute, 2013, Page 333.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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DEFINITION OF PROPERTY RIGHTS APPRAISED - FEE SIMPLE ESTATE

Property rights appraised are those of the unencumbered fee simple interest of ownership. According to *The Dictionary of Real Estate Appraisal*, Fifth Edition, 2010, by the Appraisal Institute,

Fee simple estate - Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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MARKET AREA

The subject property is located, approximately 4,700± feet east of W. Eau Gallie Blvd (County Road 518) and 2,600± feet west of N. Wickham Road, within the city limits of Melbourne, Brevard County, Florida. The subject market area is defined by the land use patterns and road system, as of the date of valuation. Based on the physical characteristics and land uses surrounding the subject property, which consisted primarily of industrial tracts to the west and south, the county's landfill, undeveloped uplands to the east, and commercial and residential development to the east and north. Immediately adjacent to the subject property's east and southern boundaries is Brevard County's Class III landfill known as the Sarno Landfill. The immediate area is defined as the Sarno Road corridor between W. Eau Gallie Blvd to the west and N Wickham Road to the east.

The majority of the described market area was generally a mix of industrial uses in the immediate area, with commercial and residential uses characterized as established communities and infill in nature. Overall, the market area was approximately 80% to 90% built-up with limited development activity as of the date of valuation. As indicated, commercial endeavors to the west along W. Eau Gallie Blvd and east along N Wickham Rd were the most prominent uses within the market area, consisting of commercial tracts. Residential development is largely of established subdivisions built in the mid 1950's.

Access

Accessibility throughout the described market area was considered good, with interchange access to Interstate 95 to the west via W. Eau Gallie Blvd, a four-lane, median divided highway and N. Wickham Road, a four-laned north-south connector roadway. Immediate access to the subject property is via Sarno Road, a two-lane asphalt paved local roadway stretching between those two roads.

Conclusion

In conclusion, the subject market area was considered generally infill in character with a significant amount development surrounding. Development was expected to remain oriented towards industrial / commercial uses in speculation of more intense land uses as development expanded along the major roadways in the area.

SITE DESCRIPTION

General

As of the date of valuation, the existing use of the subject real property consisted of a construction and demolition debris (C&D) landfill with accessory site improvements. The subject site represents a flag-shaped tract of land, comprised of two tax parcels containing 45± gross acres, with about 36± acres permitted as disposal area. (see subject exhibits in *Addendum*). The main site dimensions are approximately 1,270 feet by 1,500 feet.

The subject as a landfill has been in operation for twenty-two years, most recently re-permitted as a C & D landfill in July 2014. The subject has upward trending total revenue with an established location in a growing market.

Access

The subject property is a flag-shaped tract of land, with the "pole" portion of the property providing 100± feet of access along the south side of Sarno Road. This "pole" portion of the property extends north/south approximately 500 feet to the main portion of the property encompassing the landfill operation.

Topography/Drainage

Due to the landfill operation, the topography of the subject land had been altered. Generally, the natural elevation of the surrounding area lies at approximately 24± feet above mean sea level. The exception to this consists of the land and adjacent operation of the County owned Sarno Landfill, immediately to the west and south of the subject.

The actual landfill disposal area is surrounded on all sides by existing stormwater retention areas and the county's landfill. Drainage in the area of subject property flows naturally in a northwesterly direction towards Sarno Road as the elevation of the site drops to its natural topography.

Flood Hazard Data

As per a copy of the Flood Insurance Rate Map, Community Panel No. 12009C0581G, effective March 17, 2014 (a copy of which is included in the *Addendum*), the entirety of the subject property is located outside of the 100-year flood zone.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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Soil Characteristics

As of the date of valuation, the majority of the subject site consisted of an operating (22 years) landfill. However, in its natural state, the Soil Survey of Brevard County, a copy of which is displayed in the *Addendum* along with the respective, corresponding soil codes, identifies three primary soil types for the subject property. The soils include Anclothe sand, Eau Gallie sand, and Myakka sand, depressional. The majority of the subject property consists of the very poorly drained soils.

Environmental Hazards

As indicated, as of the date of valuation, the majority of the subject site consisted of an historically operated landfill that includes the potential for groundwater contamination.

Utilities

Electric and telephone service were available to the subject property as of the date of valuation. However, water and sewage disposal were provided by on-site well and septic tank systems.

Easements

As best determined by public records, the property is encumbered by a power line easement and a public utility (water) easement. The power line easement is a 10-foot F.P.L (Florida Power and Light) easement recorded in O.R. Book 4698, Page 0694, Public Records of Brevard County, Florida. The public utility water easement is recorded in O.R. Book 4977, Page 3070, Public Records of Brevard County, Florida.

Improvements

Building improvements on the property consist of a single-wide manufactured building which serves as the onsite management office adjacent to the weight station and a pole barn which houses the bagged mulch products. According to Public Records of Brevard County, the manufactured structure was built in 1986. Site improvements consisted of asphalt paving, concrete walkways, wood decking and fencing. Other ancillary site improvements consisted of items utilized in the landfill operation.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
 OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
 COUNTY: BREVARD

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FDEP Permit History

Melbourne Landfill and Recycling Center (AKA Florida Recyclers of Brevard, Inc.) was originally permitted in 1998 as a C&D disposal facility. From 2000 to 2014, the facility had been permitted as a Class III landfill but always operated as a C&D disposal facility. Throughout that time, almost all of the waste received had been yard trash and construction and demolition debris. On March 24, 2014, a Construction and Demolition Debris (C&D) Disposal Permit Application was submitted to limit the operations at the facility to construction and demolition debris recycling & disposal and yard trash processing. The facility is required to monitor for landfill gas migration and water quality monitoring. Below is the summary chart of the permit history of the subject landfill.

Permit Type	Permit Facility Number	Permit Project	Facility Type	Issued Date	Expiration Date	Comments
Operation	133456	001	C&D	6/8/1998	5/11/2003	20 acres of disposal area for C&D
Construction	133456	002	LF III	11/12/1999	9/15/2004	40 acres of disposal area for Class III
Operation	133456	003	LF III	11/12/1999	9/15/2004	40 acres of disposal area for Class III
Construction	133456	004	MRF	11/12/1999	9/15/2004	Applied for Material Recovery Facility (MRF)
Operation	133456	005	MRF	11/12/1999	9/15/2004	Applied for MRF
Renewal	133456	006	Class III	3/17/2005	1/7/2010	To operate Class III
Renewal	133456	007	MRF	3/17/2005	1/7/2010	To operate MRF
Renewal	133456	008	Class III	10/8/2010	8/12/2015	To operate Class III
Renewal	133456	009	MRF	10/8/2010	8/12/2015	To operate MRF
Operation	133456	010	C&D	7/28 /2014	6/1/2024	<ul style="list-style-type: none"> • Change to C&D Landfill. • Accept only C&D. • 5-yrs LTC requirement. • Class III GWMP & top cap requirements
Operation	133456	011	C&D	5/22/2015	05/22/2020	Variance from 403 Escrow Account Requirements – processed by Division of Waste Management.
Operation	133456	012	C&D		6/1/2024	Incorporates relevant actions from Item 6 of Consent Order 16-1272 into the permit. The permit is issued in its entirety.

Discussion of Subject Landfill Height and Capacity

The final (maximum) elevation of the Melbourne Landfill and Recycling Center per FDEP shall not exceed 80 feet above natural elevation or 104 feet; however, as previously discussed, the City of Melbourne's conditional use (Ordinance No. 2010-53) restricts the landfill height to 40 feet above natural elevation or 64 feet maximum height.

Based on the conditional use permit maximum height of 64 feet, JEA's estimated the total airspace capacity of the subject landfill, as calculated using CAD, to be 1,620,000 cubic yards. A topographical survey was conducted on the subject landfill, dated June 21, 2019, which estimated the airspace capacity used up to be 1,049,585 cubic yards.

Discussion of the Landfill Operation of the Subject Property

The subject landfill known as Melbourne Landfill and Recycling Center AKA Florida Recyclers of Brevard, Inc. which is the entity tied to the FDEP general use permit and ownership of the land is held under. After our discussion with the owner and reviewing the financial statements provided by the owner; the property is operated as two distinct yet connected businesses.

Florida Recyclers of Brevard, LLC is the landfill operations entity which facilitates the acceptance, processing and disposal of all waste received at the landfill. The waste includes yard trash, construction, and demolition debris. All the income associated with landfill revenue derived from tipping fees is run through this entity. Additional, income and expenses associated with the gridding of material was observed on the P & L statements, however, since this operation appears to breakeven and serves to primarily reduce the overall amount of waste that makes its way in to the landfill thereby extending the life of the landfill.

Simply Organic Lawn and Garden Center, LLC is the separate business entity which facilitates the recycling and ultimately the sale of soils, mulch and other organic material.

After our discussion with the owner, a review of the operation of the landfill, and financial statements, we have only considered the income and expenses associated with the landfill operations entity or Florida Recyclers of Brevard, LLC in our analysis.

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
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ZONING/LAND USE

The subject property is zoned C-M-1, Light Industrial with a conditional use, by the City of Melbourne. Light Industrial District are intended to apply to an area located in close proximity to rail, air or major roadway facilities and which can serve intensive commercial uses and light manufacturing, warehousing, distribution, wholesaling and other industrial functions of the city and the region. Restrictions herein are intended to minimize adverse influences of the industrial activities on nearby non-industrial areas and to eliminate unnecessary industrial traffic through non-industrial areas.

The future land use of the subject property is Industrial, which is generally consistent with the surrounding immediate area. The industrial land use category may be considered for sites accessible to airport facilities, rail facilities, and/or major thoroughfares such as I-95. Uses allowed include: manufacturing, assembling and distribution activities; warehousing and storage activities; general commercial activities; and other similar land uses.

REAL ESTATE ASSESSMENTS AND TAXES

The property was subject to real estate assessments and taxes by Brevard County and, the subject property did not qualify for tax exemptions. A summary of the real estate assessments and taxes in 2019 for the subject property as follows:

Parcel ID #	Assessed Value	Exemption Amount	Total Assessed Value	Millage Rate	Gross Taxes
27-36-24-00-507	\$950,210	\$0	\$950,210	18.8194	\$17,882.39
27-36-24-00-508	\$676,790	\$0	\$676,790	18.8194	\$12,736.78

HIGHEST AND BEST USE

In order to estimate the highest and best use of the subject property, I have considered those uses, which are physically possible, legally permissible, financially feasible, and maximally productive (see *Addendum* for definition).

"As Vacant"

The subject site is flag-shaped, consisting of two tax parcels, when combined total 45± gross acres. Access is provided by a 100-foot wide strip of land that extends 500'± north/south from the south side of Sarno Road to the subject's landfill. Based on the available data, the easterly portion of the subject site is located within a 100-year flood zone and the drainage and soil conditions appear to be poor. Finally, public services are available to the subject site. Thus, physically, the site's access, location adjacent to the County's landfill and the poor drainage and soil conditions limit the redevelopment potential of the subject property.

As noted, the subject property is zoned C-M-1, Light Industrial with a conditional use (Ordinance No. 2010-53), by the City of Melbourne. This zoning classification is

designated for industrial uses for the subject property such as light manufacturing, warehousing, distribution, wholesaling and other industrial functions of the city and the region.

The Industrial future land use designation is consistent with the subject's current zoning. This designation would allow a portion of the subject property to be developed with a more intense use.

Thus, considering the physical characteristics of the subject property, as well as the zoning and future land use designations, the most likely legal and physical use of the subject property would be for a continued industrial use, a passive recreational use, a conservation use, or an assemblage with an adjacent property owner.

The financially feasible use of the subject property is that use which produces a positive return to the land. As noted, the subject's market area is predominantly industrial and with the greater surrounding area being commercial and residential development. In our opinion the physical constraints of being located directly adjacent to the county's landfill, limits potential uses to industrial, conservation, passive recreation, or assemblage.

"As Improved"

As of the date of valuation, the subject site was improved with a construction and demolition debris landfill. Site improvements associated with the landfill included a manufactured home that also served as the office for the C & D landfill operation, interior access roads, and a retention pond. Ancillary site improvements included the items necessary for the operation of the landfill.

As of the date of inspection, the site improvements were operational and in average condition as of the valuation date. The existing improvements were considered a legal use and a value contribution to the land as an operating landfill. Thus, the highest and best use of the subject property, "as improved", was for the continued use as a C & D landfill operation, including a proper closure as required under FDEP Regulations.

Furthermore, subsequent to a proper closure, we would anticipate limited uses for the subject land based on the unstable soil conditions due to the fill, the potential for ground water contamination and environmental concerns due to the landfill, as well as the long-term care for the property after closure.

VALUATION METHODOLOGY

Real estate appraisal practice ordinarily requires the use of three basic approaches to value. These approaches are commonly referred to as the Cost, Sales Comparison, and Income approaches, providing the basis for arriving at a final value estimate. Each approach is briefly discussed, including an explanation of the relevance of each approach to this valuation assignment.

The Cost Approach is the sum of the land value and the depreciated cost new of the improvements. The Cost Approach is based on the principle of substitution, which holds that an informed purchaser would pay no more for the subject property than it would cost him to produce a substitute property with the same utility and without undue delay.

The Sales Comparison Approach, or Market Approach, is a valuation method whereby the subject property is compared with other properties that have recently sold. Data is gathered from similar use properties and comparisons are made to demonstrate a probable unit price at which the subject property would be sold if offered on the market. The Sales Comparison Approach is also based on the principle of substitution, which holds that an informed purchaser would pay no more for the subject property than it would cost to buy a comparable property with the same utility and without undue delay.

The Income Approach is based on the premise that a prudent investor would pay no more for the subject property than another investment property with similar risk and return characteristics. Since the value of an investment can be considered equal to the present worth of anticipated future benefits (dollar income or amenities), this approach first estimates the net income that the property is capable of producing and then applies the appropriate capitalization or discounting to this income at market-derived rates which reflects the risk and return characteristics of the investment.

Typically, there are three approaches utilized in the valuation of real property being the Cost Approach, Sales Comparison Approach, and the Income Approach. This property is an existing C & D landfill facility, which is considered a **special-purpose property** and seldom is traded on the open market. The lack of comparable, current market rent and comparable expense data for landfills could make the Income Approach unreliable. However, we were provided with tax returns and financial statements for the past several years, operational data from FDEP and expert engineering report on the subject that we could analyze and compare to industry standards to arrive to a value Melbourne Landfill and Recycle Center. Therefore, we utilized the Income Approach to value to determine the value of the subject property.

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Reconciliation

The final step in the appraisal process is known as the Reconciliation, wherein the approaches to value are reconciled judgmentally to achieve a final estimate of market value for the subject property. In this case, to value the subject property as a landfill operation, only the income approach, more specifically, a discounted cash flow analysis (yield capitalization) to value the subject landfill has been utilized and reconciled into an estimate of market value.

After the closure of the landfill operation, the subject site will be available for an alternative or residual use. As discussed in the *Highest and Best Use* section to this report, an alternative use would be for possible passive recreation or an assemblage with adjoining properties for possible open space requirements. In either case, the subject landfill will have little or no development potential and it will continue to be monitored for environmental concerns.

INCOME APPROACH

The Income Approach to value converts the anticipated future benefits of property ownership to an estimate of present value. The Income Approach typically is the most reliable for income-producing properties because it reflects the investment demands and strategies of potential purchasers. This approach to value assumes a positive relationship between a property's current market value and the expected net cash flow that the property will provide, and a reciprocal relationship between a property's current market value and the relative risk involved in achieving the expected cash flow.

Investment properties, such as the subject, are typically valued in relation to their ability to produce income. Therefore, an analysis of the property in terms of its ability to provide a sufficient net annual return on invested capital is an important means of valuing an asset.

Two common techniques of converting net income into value are direct capitalization and discounted cash flow analysis (yield capitalization). In direct capitalization, net operating income is divided by an overall rate extracted directly from market sales to indicate a value. In the discounted cash flow analysis, anticipated future net income streams and a reversionary value, if any, are discounted to an estimated present value.

In order to value the subject property's anticipated economic benefits i.e. future cash flow associated with the continued operation the subject property as a C & D landfill; the discounted cash flow analysis technique has been utilized as the most appropriate capitalization technique selected.

Based on our experience with similar facilities and discussion with market participants, landfill properties are seldom, if ever, leased. When properties are leased, the lease arrangement is often a financing tool, not a market-driven agreement. Seldom will an appraiser find an adequate number of truly leased properties on which to base the Income Approach. Further, landfills facilities are rarely, if ever, sold; however, this does not mean that the Income Approach cannot be applied. The framework of the Income Approach thus must parallel the way industry participants view the real estate, the operation of a landfill and value of the remaining capacity of the landfill. The real estate, remaining capacity within the landfill, site improvements, equipment and operational permit, like all other assets, is considered in the context of its contributed earnings.

In this appraisal, the return to the real estate will be derived from the historical income, expenses and operation of the landfill. The gross sales are affected by the location and the quality of improvements, while the operating expenses are affected by the management and condition of improvements. Therefore, the property's financial operation becomes a proxy for estimating the property's underlying value of the real estate.

In order to apply the Income Approach to a landfill operation, the appraiser must accomplish the following items:

- 1) Project the potential gross income;
- 2) Estimate the appropriate expenses to arrive at a net operating income;
- 3) Apply the appropriate discount rate to the net operating income stream over the holding period; and
- 4) Deduct the cost of closure, if any, after the property reaches capacity.

Gross Potential Income

In the application of the Income Approach, the first step is to estimate the subject's gross potential income. Typically, C&D landfills such as the subject property generate income by receiving construction and demolition debris material and charging a tipping fee. This fee is based on a price per ton or a price per cubic yard (uncompacted). The following table illustrates the tipping fees of other C&D landfill operations throughout the Central Florida area, as of the date of valuation.

2019 Tipping Fees Charged by C & D Facilities by County			
County	C & D Tipping Fee	Ton to CY conversion factor	\$ per CY
Brevard	\$23.66	3.2999	\$7.17
Orange	\$26.50	3.2999	\$8.03
Lake	\$27.50	3.2999	\$8.33
Volusia	\$28.00	3.2999	\$8.49
Indian River	\$31.80	3.2999	\$9.64
St. Lucie	\$32.00	3.2999	\$9.70
Seminole	\$33.17	3.2999	\$10.05
Polk	\$38.05	3.2999	\$11.53
Marion	\$42.00	3.2999	\$12.73
Martin	\$42.00	3.2999	\$12.73

The subject property is a privately owned C&D landfill and as of 2020, the operator charged a tipping fee of \$23.66 per ton of uncompacted construction and demolition debris or \$7.17 per cubic yard after applying Brevard County's conversation factor of 3.2999. The landfills surveyed provided a range for tipping fees between \$7.17 and \$12.73 per uncompacted cubic yard. Public or government owned landfills set tipping fees on an annual basis. While private operators are able to set their own tipping fees, however they typically charge the same fees as the public facilities in order to stay competitive. Brevard County's tipping fee for C & D debris has remained level or unchanged for the past six years (2014-2020). By direct comparison to surrounding counties, Solid Waste Management's survey of municipal landfills reports that Brevard

County's tipping fees for C & D debris is the lowest reported rate charged. The appraisers anticipate that Brevard County will begin to raise its rates in the coming years.

For this analysis, we have also reviewed the income for the subject operation via financial statements as well as 2018 tax returns for Florida Recyclers of Brevard, LLC., the operating company for the Melbourne Landfill and Recycle Center. The following table provides the actual gross income of the C & D operation for the subject's landfill over the past five years:

Melbourne Landfill and Recycle Center – Historical C & D Income	
Year	C & D Income
2014	\$ 536,926
2015	\$ 583,129
2016	\$ 685,288
2017	\$ 834,945
2018	\$1,074,798

As shown above, the C & D income increased over the latest three-year period by 23%, or an average of 7% per year. The revenue increases were primarily attributable to volume of C&D debris material received in that given year. Considering the historical growth of the C & D income observed and the expected increase to Brevard County's rates, we have applied a 6 percent increase to the scheduled tipping fees every three years in the discounted cash flow model.

Based on the available data for this analysis, our review of the subject's historical FDEP quantity annual reports and Jones, Edmunds and Associates, Inc. (JEA) Landfill Evaluation report prepared in June 2018; we have estimated the average acceptance rate of all waste received at subject property to be 50,000 tons per year. Furthermore, the recycling operations on-site reduces the amount of material that ultimately ends up in the landfill. These operations were observed to make minimal if any profit but contribute to extending the life and therefore profitability of the landfill. The total amount of uncompacted waste material that is ultimately landfilled averages 29,900 tons per year, or 60% of all the overall C & D debris or waste material that is received at the subject property.

In order to use the estimated averages stated above in our analysis, we needed to convert the average uncompacted tons reportedly landfilled each year to compacted cubic yards as a means to calculate the airspace capacity use of the landfill per year. After considering a survey of C&D landfills in Florida of Volume to Weight ratios and Brevard County's conversation factor, conversation factors range between 0.24 to 0.303 (1 ton divided by 0.24 or .303) or 3.2999 to 4.1667 cubic yards per uncompacted ton. However, this calculation does not account for the compaction of landfilled material. After consideration of compaction methods for C & D landfills, we have concluded to a compaction factor to be between 2 and 2.7. Using the calculations above, the factor used to convert annual

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tons of landfilled material to compacted cubic yards used on an annual basis range between 0.60 (0.303 x 2.) and 0.65 (0.24 x 2.7).

Applying those factors to the average tons landfilled per year or 29,900 tons, equates to a range of 46,000 (29,900 / 0.65) to 49,833 (29,900 / .60) of compacted cubic yards of airspace used per year. Therefore, considering previously estimated range and JEA's analysis of the historical cubic yards of airspace used per year, we have reconciled the average airspace capacity used on an annual basis to be 46,300 cubic yards.

As previously stated, JEA estimated the total airspace capacity of the subject landfill, based on the conditional use permit height of 64 feet, to be 1,620,000 cubic yards (CY). JEA also estimated that as of March 17, 2017, approximately 970,000 cubic yards (CY) of waste is in-place or airspace used at the subject landfill. We also considered a topographical survey conducted on the subject landfill, dated June 21, 2019, which estimated that the airspace capacity used totaled 1,049,585 cubic yards (CY). Therefore, considering the stated waste in-place or used airspace capacity estimated, we have reconciled, that the reasonable airspace capacity used as of the date of value to be 1,100,000 cubic yards (CY). After subtracting the total cubic yards of capacity (1,620,000 CY), from the estimated remaining capacity for the subject landfill (1,100,000 CY), provides a total of 520,000 cubic yards of remaining airspace, to be used in our discounted cash flow analysis.

Based on the estimated average airspace capacity usage rate of 46,300 cubic yards per year, **the subject landfill has a remaining estimated life span of approximately 10 years while allowing for a portion of the remaining capacity to be used for top cap or closure spacing.**

Expenses

The typical operating expenses generated by a construction and demolition debris landfill include but are not limited to property taxes, insurance, utilities, labor, and equipment maintenance and repair. Other operating expenses include maintenance and repair on the building improvements and site equipment, as well as professional fees for legal, accounting, and management.

For this analysis, operating expenses for the subject landfill for the Years 2014 through 2018 were provided and reviewed. The following table provides the actual expenses and the percentage of gross revenue for the five years, as follows:

Melbourne Landfill and Recycle Center – Landfill Expenses		
Year	C & D Expenses	Percentage of C & D Income
2014	\$309,730	24%
2015	\$542,234	39%
2016	\$511,018	36%
2017	\$565,339	38%
2018	\$573,968	32%

Based on the above C & D expenses reported, the five-year average was \$500,458, or 35.13% of the reported gross income. Thus, by comparison to industry averages, the gross expenses, as a percentage of gross revenue, appear to be on the low end of the range. Discussions with managers and property owners of landfills throughout the Florida area, provided typical operating expense ratios ranging between 45% and 55% of gross revenue. However, considering this information but primarily based on the subject data available, we have estimated operating expenses for the subject landfill at 35% of the C & D income.

Discount Rate

A discount rate is the annualized yield or rate of return on revenue that is generated by an investment over a period of ownership. This rate typically measures the risk and return characteristics of an investment by converting future payments into a present value. The method for estimating the discount rate for the subject property is to compare the rates of investments with similar risk as the subject property. However, it is noted that construction and demolition debris landfills have discount rates that are typically higher than most income producing real estate properties due to the inherent high risk and liability at the close of the operation.

Our review of articles from the Appraisal Institute indicates a typical historical discount rate range for an operating landfill between 20% and 30%. However, considering the historical operation of the subject landfill and its remaining economic life as of the date of valuation, for this analysis, we have utilized discount rates of 18% and 15% to provide an estimated value range for the subject landfill.

Present Valuation Analysis – Landfill Operation

As discussed, a net operating income for the subject landfill operation was derived based on an analysis of the provided operating income and expenses. Thus, based on the estimated operating period for the subject landfill of 10 years, a present value of the projected net operating income stream over this holding period provides a present value range between \$3,460,000 (R) to \$3,890,000 (R).

Costs of Closure

For a landfill operation, at the end of its operation, the cost of closure must be deducted. As previously discuss, the owner (Florida Recyclers of Brevard County, Inc.) was required to fund and make annual deposits in a Trust Fund as proof of financial assurance for the cost to close the landfill. We have reviewed "Closure Cost Estimating Form for Solid Waste Facilities" submitted to FDEP by the owner on February 26, 2020 for 2020 fiscal period. FDEP subsequently approved the closure cost estimates for the subject landfill totaling \$2,721,389 for closing cost and \$396,938 for long-term care cost over a five-year period. Therefore, we have included in our analysis, the total cost of closure of \$3,118,327 (\$2,721,389 + \$396,938). A copy of owner submitted "Closure Cost Estimating Form for Solid Waste Facilities" is within the appraisers' work file.

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Conclusion of Market Value – Income Approach

As indicated, the present value for the subject landfill's projected net operating income stream over the anticipated remaining life of 10 years equals a range of \$3,460,000 (R) to \$3,890,000 (R). For the final calculations within the Income Approach, the net cost of closure after considering the existing (as of the valuation date) trust balance (\$917,573) together with the estimated annual contribution to be made during the discounted 10 year cash flow is estimated at (\$1,072,687), needs to be deducted. Therefore, considering the total cost of closure of \$3,118,327, as detailed above, and deducting the total trust balance of \$1,990,260 (\$917,573 + \$1,072,687), equates to \$1,128,067 of net closure cost to be deducted from the present value of the cash flows. Thus, based on the data available, a market value estimate for the subject property C & D landfill, via the Income Approach, as of June 17, 2020 was as follows, see the following discounted cash flow charts.

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DISCOUNTED CASH FLOW ANALYSIS AT 18% DISCOUNT RATE

TOTAL AIRSPACE CAPACITY 1,620,000 CY (40' CLIP MAX or 64' NGVD)
ESTIMATED AIRSPACE CAPACITY USED 29,900 Based on five year average of total tons landfilled
ESTIMATED REMAINING CAPACITY LEFT 1,100,000 CY (As of DOV)
520,000 CY (As of DOV)

*TONS RECEIVED PER YR. 50,000 based on five year average of total tons received then 5% increase every three years
AVERAGE TONS LANDFILLED PER YR. 29,900 based on five year average of total tons landfilled
AVERAGE ANNUAL CUBIC YARDS USAGE 46,300 based on historical airspace capacity used
*RATE PER TON \$23.66 initial rate \$23.66 is based on Brevard County's 2019-20 rate for C & D material, then increases 6% every three years

Melbourne Landfill & Recycle Center (AKA Florida Recyclers of Brevard, LLC)

DISCOUNTED USAGE / REMAINING LIFE ANALYSIS											
ENDING PERIOD YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTALS
C & D Income	\$ 1,183,000	\$ 1,183,000	\$ 1,329,219	\$ 1,329,219	\$ 1,329,219	\$ 1,493,510	\$ 1,493,510	\$ 1,493,510	\$ 1,678,108	\$ 1,678,108	
Average Annual Tons Received*	50,000	50,000	53,000	53,000	53,000	56,180	56,180	56,180	59,551	59,551	
Rate Per Ton*	\$ 23.66	\$ 23.66	\$ 25.08	\$ 25.08	\$ 25.08	\$ 26.58	\$ 26.58	\$ 26.58	\$ 28.18	\$ 28.18	
Remaining Airspace Capacity Cubic Yards	520,000	473,700	427,400	381,100	334,800	288,500	242,200	195,900	149,600	103,300	
Average Annual Airspace Used Cubic Yards*	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	
REMAINING CAPACITY / LIFE	473,700	427,400	381,100	334,800	288,500	242,200	195,900	149,600	103,300	57,000	
Gross Revenue	\$ 1,183,000	\$ 1,183,000	\$ 1,329,219	\$ 1,329,219	\$ 1,329,219	\$ 1,493,510	\$ 1,493,510	\$ 1,493,510	\$ 1,678,108	\$ 1,678,108	
Less: Expenses											
Operating Expenses (based on % of GR)	414,050	414,050	465,227	465,227	465,227	522,739	522,739	522,739	587,338	587,338	
Total Expenses	(8414,050)	(8414,050)	(8465,227)	(8465,227)	(8465,227)	(8522,739)	(8522,739)	(8522,739)	(8587,338)	(8587,338)	
% of Gross Revenue	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
Net Revenue	\$ 768,950	\$ 768,950	\$ 863,992	\$ 863,992	\$ 863,992	\$ 970,762	\$ 970,762	\$ 970,762	\$ 1,090,770	\$ 1,090,770	
Annual Closure Trust Fund Reserve	100,000	100,000	103,169	103,169	103,169	109,740	109,740	109,740	117,124	117,124	
Net Revenue After Closure Fund Deposit	\$ 668,950	\$ 668,950	\$ 760,823	\$ 760,823	\$ 760,823	\$ 861,041	\$ 861,041	\$ 861,041	\$ 973,646	\$ 973,646	
Discount Rate @ 18.0%	0.8475	0.7182	0.6086	0.5158	0.4371	0.3704	0.3139	0.2660	0.2255	0.1911	
Present Value of Sales Revenue	\$566,907	\$480,429	\$463,061	\$392,424	\$332,563	\$318,957	\$270,302	\$229,070	\$219,514	\$186,029	\$3,469,287
TRUST ACCOUNT BALANCE (01/22/2020)		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Plus: Scheduled Deposits in DCF		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Total Trust Fund Amount		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Less: Closure Costs (2020)		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Long Term Cap Cost (2020) for 5 yrs.		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Total Closure Costs		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Net Cost to Close		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Present Value of the Cash Flows		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Less: Net Cost to Close		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Net Present Value, "Permitted Land Operating as a Land Fill"		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Rounded to:		\$2,331,478	\$2,331,478	\$2,331,478	\$2,331,478	\$2,331,478	\$2,331,478	\$2,331,478	\$2,331,478	\$2,331,478	

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DISCOUNTED CASH FLOW ANALYSIS AT 15% DISCOUNT RATE

TOTAL AIRSPACE CAPACITY 1,620,000 CY (40' CUP MAX or 64' NGVD)
ESTIMATED AIRSPACE CAPACITY USED 1,100,000 CY (As of DOV)
ESTIMATED REMAINING CAPACITY LEFT 520,000 CY (As of DOV)

*TONS RECEIVED PER YR. 50,000 based on five year average of total tons received then 5% increase every three years
*AVERAGE TONS LANDFILLED PER YR. 29,900 based on five year average of total tons landfilled
*AVERAGE ANNUAL CUBIC YARDS USAGE 46,300 based on historical airspace capacity used
*RATE PER TON \$23.66 Initial rate \$23.66 is based on Brevard County's 2019-20 rate for C & D material, then increases 6% every three years

Melbourne Landfill & Recycle Center (AKA Florida Recyclers of Brevard, LLC)												
ENDING PERIOD YEAR	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	TOTALS	
C & D Income	\$ 1,183,000	\$ 1,183,000	\$ 1,328,407	\$ 1,328,407	\$ 1,328,407	\$ 1,492,599	\$ 1,492,599	\$ 1,492,599	\$ 1,677,084	\$ 1,677,084	\$ 1,677,084	
Annual Tons Received*	50,000	50,000	53,000	53,000	53,000	56,180	56,180	56,180	59,551	59,551	59,551	
Rate Per Ton*	\$ 23.66	\$ 23.66	\$ 25.06	\$ 25.06	\$ 25.06	\$ 26.57	\$ 26.57	\$ 26.57	\$ 28.16	\$ 28.16	\$ 28.16	
Remaining Airspace Capacity Cubic Yards	520,000	473,700	427,400	381,100	334,800	288,500	242,200	195,900	149,600	103,300	103,300	
Average Annual Airspace Used Cubic Yards*	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	46,300	
REMAINING CAPACITY / LIFE	473,700	427,400	381,100	334,800	288,500	242,200	195,900	149,600	103,300	57,000	57,000	
Gross Revenue	\$ 1,183,000	\$ 1,183,000	\$ 1,328,407	\$ 1,328,407	\$ 1,328,407	\$ 1,492,599	\$ 1,492,599	\$ 1,492,599	\$ 1,677,084	\$ 1,677,084	\$ 1,677,084	
Less: Expenses												
Operating Expenses (based on % of GR)	414,050	414,050	464,943	464,943	464,943	522,410	522,410	522,410	586,979	586,979	586,979	
Total Expenses	(\$414,050)	(\$414,050)	(\$464,943)	(\$464,943)	(\$464,943)	(\$522,410)	(\$522,410)	(\$522,410)	(\$586,979)	(\$586,979)	(\$586,979)	
% of Gross Revenue	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	
Net Revenue	\$ 768,950	\$ 768,950	\$ 863,465	\$ 863,465	\$ 863,465	\$ 970,189	\$ 970,189	\$ 970,189	\$ 1,090,104	\$ 1,090,104	\$ 1,090,104	
Annual Closure Trust Fund Reserve	100,000	100,000	103,136	103,136	103,136	109,704	109,704	109,704	117,083	117,083	117,083	
Net Revenue After Closure Fund Deposit	\$ 668,950	\$ 668,950	\$ 760,329	\$ 760,329	\$ 760,329	\$ 860,485	\$ 860,485	\$ 860,485	\$ 973,021	\$ 973,021	\$ 973,021	
Discount Rate @ 15.0%	0.8696	0.7561	0.6575	0.5718	0.4972	0.4323	0.3759	0.3269	0.2843	0.2472	0.2472	
Present Value of Sales Revenue	\$581,696	\$505,822	\$469,928	\$434,720	\$378,018	\$372,011	\$322,488	\$281,294	\$276,593	\$240,516	\$3,894,087	
TRUST ACCOUNT BALANCE (01/22/2020)												
Plus: Scheduled Deposits in DCF		\$ 917,573	\$1,072,687									
Total Trust Fund Amount		\$ 1,990,260										
Less: Closure Costs (2020)		\$ 2,721,389										
Long Term Cap Cost (2020) for 5 yrs.		\$ 396,938										
Total Closure Costs		\$ 3,118,327										
Net Cost to Close		\$ (1,128,067)										
Present Value of the Cash Flows		\$ 3,894,087										
Less: Net Cost to Close		\$ (1,128,067)										
Net Present Value, "Permitted Land Operating as a Land Fill"		\$2,766,020										
Rounded to:		\$2,766,000										

PROPERTY NAME: MELBOURNE LANDFILL AND RECYCLE CENTER
OWNER/PERMITTEE: FLORIDA RECYCLERS OF BREVARD, LLC
COUNTY: BREVARD

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FINAL RECONCILIATION OF VALUE

In reconciling the market value for the subject landfill, assuming a continued operation as of the date of valuation, all three approaches to value were considered. The value estimates are summarized as follows:

Cost Approach	N/A
Sales Comparison Approach	N/A
Income Approach	\$2,331,000 to \$2,766,000 ¹

¹Utilizing the discounted cash flow analysis or yield capitulation technique within the Income Approach to value; the value range above represents the net present value for the subject property after making reasonable assumptions based on the historical operation of the landfill operation.

As previously discussed, only the Income Approach to value was considered in the valuation of the subject landfill, each approach is independent of the other, and, thus, appropriately weighted in the final value estimate. As discussed, utilizing the Income Approach recognizes the value of an operating C & D landfill.

Thus, in conclusion, the final estimate of market value for the subject property, assuming a continued operation of the C & D landfill as of the date of valuation, as of June 17, 2020 was:

TWO MILLION SEVEN HUNDRED THOUSAND DOLLARS

\$2,700,000

ADDENDUM

"LANDFILL EVALUATION REPORT", JONES EDMUNDS & ASSOCIATES, INC.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

OWNERS RESPONSE LETTER TO CONSENT ORDER FROM FDEP

TOPOGRAPHY MAP

SOIL MAP WITH DESCRIPTIONS

FLOOD PLAIN MAP

QUALIFICATIONS OF APPRAISERS

"LANDFILL EVALUATION REPORT", JONES EDMUNDS & ASSOCIATES, INC.

JonesEdmunds



**MELBOURNE LANDFILL AND RECYCLING CENTER
(AKA FLORIDA RECYCLERS OF BREVARD, LLC)
LANDFILL EVALUATION**

Brevard County Solid Waste Management Department | June 2018

**MELBOURNE LANDFILL AND RECYCLING CENTER
(AKA FLORIDA RECYCLERS OF BREVARD, LLC)
WACS ID 18444**

**LANDFILL EVALUATION
TASK ORDER 17-01**

Prepared for:

Brevard County
Solid Waste Management Department
2275 Judge Fran Jamleson Way, Bldg. A Suite 118
Viera, Florida 32940

Prepared by:

Jones Edmunds & Associates, Inc.
730 NE Waldo Road
Gainesville, Florida 32641

Certificate of Engineering Authorization #1841

Jones Edmunds Project No.: 08705-048-01

June 2018

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EXECUTIVE SUMMARY

The Brevard County Solid Waste Management Department (SWMD) contracted with Jones Edmunds to evaluate the regulatory, economic, and environmental liability of the privately owned and operated Melbourne Landfill and Recycling Center (aka Florida Recyclers of Brevard, LLC). This private facility is adjacent to the County's Sarno Road Class III Landfill and the Sarno Road Transfer Station as shown in Figure 1, Overall Area Plan. The site is permitted by the Florida Department of Environmental Protection (FDEP) as a Construction & Demolition (C&D) debris recycling and disposal and yard trash processing facility.

The goals of this preliminary engineering evaluation are to review the existing design and regulatory conditions of the Florida Recyclers facility and to identify the risks and benefits related to operation of the facility and any further expansion. Jones Edmunds reviewed and evaluated the following:

- Solid Waste Permitting History
- Overall Facility Operations
- Financial Assurance Documentation
- FDEP Environmental Resource Permit (ERP) History
- Permitted Stormwater Management System
- Historical Water Quality and Gas Monitoring Data
- Current Volume and Lifespan Analysis of the Facility
- Valley Fill Expansion Option

This evaluation is based on publically available data and information, and Jones Edmunds used the FDEP Oculus Database and FDEP Water Permitting Portal to obtain historical documentation. This evaluation does not consider permitting documentation that may be maintained by the St. Johns River Water Management District (SJRWMD) for the facility. Jones Edmunds also reviewed the City of Melbourne Conditional Use Permit (CUP) granted for the Sarno Road Class III Landfill and the 2017 aerial topographic survey performed by Pickett and Associates provided by the County. Jones Edmunds understands that the Florida Recyclers facility is also regulated by a City of Melbourne CUP, but a copy of the permit was not available at the time of this review.

The Florida Recyclers of Brevard, LLC is recorded as the owner of two parcels of property¹, approximately 45 acres total, with about 36 acres permitted as disposal area. The facility started operations in 1998 as an unlined C&D debris disposal facility. In 1999, the facility converted to a Class III landfill; and in 2014, the facility filed a permit application requesting classification as a C&D debris and recycling facility. FDEP granted the facility a 10-year operation permit as a C&D facility, but required the site continue to monitor groundwater, surface water, and landfill gas in accordance with Class III landfill guidelines. The 2014 change in designation from a Class III landfill to a C&D debris disposal facility resulted in the facility being required to stop using an escrow account for financial assurance and to pursue to an alternate method. In March 2017 FDEP issued the facility a

¹ Parcel Nos. 27-36-24-00-507 (25.05 acres) and 27-36-24-00-508 (19.7 acres).

Consent Order for failure to provide proof of an alternate financial assurance mechanism (i.e. a trust fund). According to a verbal discussion with FDEP, the site has an approved Trust Fund in place.

The sequence of ERPs for this facility on FDEP databases is incomplete, particularly with regard to property ownership and easements. A complete timeline of the site's stormwater permitting history could not be developed. The February 2000 ERP application included a proposed wetland mitigation plan for parcels purchased for the expansion of the landfill to its current footprint. **Jones Edmunds found documentation confirming the completion of the wetland mitigation activities in August 2001.**

Jones Edmunds compared the 2017 inflated costs against the closure and long-term-care cost estimates for the 2017 Sarno Road Class III Landfill costs, on a cost-per-acre basis. **In our opinion, the cost per acre for closure is low, based on our experience with recent significant increases in construction costs.** In addition, the closure cost estimate is based on a clay-soil final closure system.

The operation permit states that the facility accepts on average 200 tons per day. Based on Solid Waste Quantity Reports submitted over the last 4 years, the site has landfilled approximately 105 tons per day. The facility's primary incoming waste stream is new construction debris and vegetative waste.

Several down-gradient groundwater monitoring wells and shallow surficial wells appear impacted by the facility. The sources of the elevated groundwater monitoring parameters may be attributed to the type of materials processed at the facility and modest management of sediment and erosion control at the site. **There is no evidence of landfill gas migration at the site.**

Our estimate of the remaining lifespan of the 34-acre landfill using Florida Recyclers current landfilling rates is approximately 35 years to its permitted buildout elevation of 104 feet. However, the facility appears to be limited by a City ordinance restricting the buildout elevation to 40 feet above natural grade. Based on this limitation, **the estimated lifespan to a buildout elevation 64 feet is 14 years.**

To obtain additional airspace, Jones Edmunds explored the option of constructing a valley fill expansion to merge the facility with the Sarno Road Class III Landfill. The proposed expansion area would require a 60-mil minimum high-density polyethylene (HDPE) bottom liner and geosynthetic clay liner (GCL) system and a primary leachate collection and removal system. The estimated construction cost of this additional capacity is approximately \$300,000 per acre – refer to Section 9, Supplemental Information, for cost information. Assuming Sarno's current landfilling rates, the County could expect to gain approximately 4 to 9 years of additional disposal capacity from the valley fill option. The valley fill airspace, plus remaining capacity at the Florida Recyclers facility, could provide about 8 to 20 years of additional capacity at the Sarno current landfilling rate.

In general, the stormwater system appears to be adequate for the permitted design of the existing facility. The as-built construction should be confirmed. If permitted design conditions change (e.g., valley fill design), the stormwater system and groundwater monitoring network will need to be modified.

Based on our review, the facility appears to be operating in a manner consistent with its permit and applicable regulatory guidelines. Based on our evaluation, the following items were identified and should be given further consideration:

- Jones Edmunds could not confirm that the stormwater system is constructed as designed and permitted.
- The obstacles that the County may face in obtaining a height variance as described in the City of Melbourne CUP for the Sarno Road Landfill are unclear. It would be prudent to review a copy of Florida Recyclers facility's CUP to determine whether a height variance is possible and whether any restrictions have been placed on the facility with regard to dates of closure, or additional operational conditions.
- In Jones Edmunds' experience, unlined disposal facilities exhibit higher environmental risk. The environmental liability of this facility is unclear.
- Evidence of groundwater contamination exists at this facility. The source and long-term risk posed by this evidence may require further evaluation.
- If the County were to pursue the valley fill expansion option, the cost benefit results of constructing the expansion area (including requirements for a bottom liner, leachate collection system, stormwater redesign) compared to the additional capacity obtained for Class III waste disposal may be unfavorable if limited by City restrictions.
- The property could be valuable if the County wanted to pursue the continued operation of the facility as primarily a recycling and yard waste processing center.

1 INTRODUCTION

The Brevard County Solid Waste Management Department (SWMD) contracted with Jones Edmunds to evaluate the regulatory, economic, and environmental status of the privately owned and operated Melbourne Landfill and Recycling Center (aka Florida Recyclers of Brevard, LLC). This privately owned facility is at 3351 Sarno Road, Melbourne, Florida, adjacent to the County's Sarno Road Class III Landfill and the Sarno Road Transfer Station as shown in Figure 1, Overall Area Plan, and Figure 2, Site Plan. The site is permitted by the Florida Department of Environmental Protection (FDEP) as a Construction & Demolition (C&D) debris recycling and disposal and yard trash processing facility.

Considering its proximity to the Sarno Road Class III Landfill and Transfer Station, SWMD is performing due diligence with this preliminary evaluation of the facility to determine the risks and benefits related to operating the facility and any future expansions.

The goals of the evaluation were to review the existing design and regulatory conditions of the Florida Recyclers facility and to identify potential benefits and items of concern or risks to the County related to its continued operation and potential expansion and incorporation into the Sarno Road Class III Landfill. Jones Edmunds reviewed and evaluated the following:

- The permitting history and general operations data.
- The financial assurance documentation.
- The last 5 years of groundwater and landfill gas monitoring data.
- The stormwater management system and permit history.
- The volume and lifespan analyses for the existing site and for possible expansion/merger with the Sarno Road Class III Landfill.

This evaluation did not include a site visit, field investigations, or an evaluation of costs to operate the facility. This evaluation is not intended to provide a real estate value of the property. Jones Edmunds' evaluation was based on publicly available data and information. The information in this report presents our general findings and recommendations.

2 BACKGROUND

Florida Recyclers of Brevard, LLC is recorded as the owner of two parcels of property² that make up the facility for a total area of approximately 45 acres, with about 36 acres permitted as disposal area. The facility started operations in 1998.

Jones Edmunds reviewed publicly available information from FDEP's Oculus (Electronic Document Management System) database. In accordance with our review of these documents, the permitting and regulatory history of the site is as follows:

- **1998:** 20-acre unlined C&D debris disposal facility permitted.
- **1999:** Landfill expansion to 36 acres (unlined) and site converted to Class III Landfill.

² Parcel Nos. 27-36-24-00-507 (25.05 acres) and 27-36-24-00-508 (19.7 acres).

- **1999:** Site applied for a Materials Recovery Facility permit (FDEP Permit No. SO 05-0133456-005 MRF).
- **2005:** Permit renewed (FDEP Permit No. SO 05-0133456-006 Class III and -007 MRF).
- **2010:** Permit renewed (FDEP Permit No. SO 05-0133456-008 Class III and -009 MRF).
- **2014:** Intermediate permit modification and renewal application (FDEP Permit No. SO 05-0133456-010); permit modification requested to go back to a C&D debris and recycling facility; 10-year permit issued (expires June 1, 2024).
- **May 2015:** Order granting Variance issued by FDEP to allow for continued use of escrow account while seeking an alternative financial assurance mechanism for closure. Variance allowed for 12 months to secure an alternative financial mechanism.
- **August 2015:** Gas monitoring and reporting requirements were revised by FDEP to meet rule requirements.
- **June 2016:** Request by Owner to extend the Order granting Variance denied.
- **March 2017:** Consent Order OGC File No.: 16-1272 issued.
- **April 2017:** Permit modified to incorporate relevant actions from the Consent Order.

Florida Recyclers currently operates the facility under a 10-year operation permit for a C&D debris disposal landfill and recycling facility. At the time of application, Florida Recyclers paid one installment of the permit renewal fee; the 2nd installment payment of \$2,500 is due by May 31, 2019.

The site's stormwater is managed in accordance with FDEP ERP No. 05-10333455-002-EI.

In addition to its permitted disposal/recycling/yard processing operations, the facility also operates the Simply Organic Lawn and Garden Center at the site. According to their website³ they are a full-service lawn and garden center that provides organic mulches, soils, and fertilizers that are processed and sold on site.

3 SOLID WASTE OPERATIONS

The Florida Recyclers of Brevard, LLC disposal facility was initially designed and permitted as an unlined C&D debris disposal facility in 1998. Upon conversion to a Class III landfill in 1999, FDEP required that the facility perform water quality and landfill gas monitoring in accordance with Class III landfill requirements in effect at that time. In 1999, bottom liners and leachate collection systems were not required for Class III landfills. The requirements have since changed and these are now required for new or expanded Class III landfills.

In accordance with Rule 62-701, FAC, Class III and C&D debris is defined as follows:

62-701.200(14) "Class III waste" means yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, furniture other than appliances, or other materials approved by the Department, that are not expected to produce leachate that poses a threat to public health or the environment.

³ www.simplyorganiclawnandgardencenter.com

62-701.200(24) "Construction and demolition debris" means discarded materials generally considered to be not water soluble and non-hazardous in nature, including but not limited to steel, glass, brick, concrete, asphalt material, pipe, gypsum wallboard, and lumber, from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure, including such debris from construction of structures at a site remote from the construction or demolition project site.

In 2014, the permittee requested to convert back to a C&D debris disposal facility because the site did not receive Class III waste and the incoming waste stream was primarily from new construction sites and vegetative waste. The solid waste operation permit was modified, but FDEP continued to require the permittee to monitor groundwater, surface water, and landfill gas per Class III landfill guidelines (as described in Section 6.0). FDEP also required that the facility's closure design be in accordance with Class III closure requirements (closure with a barrier layer, 24-inches of protective cover soil, and vegetation). The Operating Permit expires on June 1, 2024.

According to the permit drawings, the approximate natural grade on the site is at elevation 25 feet NGVD 29. The bottom of waste is at approximately elevation 24.4 feet. The setback requirements of 100 feet from the property boundary for Class III landfills was reduced to 50 feet because of the adjacent Sarno Road Class III Landfill and Sarno Road Transfer Station. The majority of the waste appears to be landfilled on the south portion of the site, and there are piles of mulched material placed on the north half of the site. Based on the current recycling and processing operations at the site, it is unclear if the entire permitted footprint area has landfilled waste.

Waste is monitored and recorded at the facility scale house. The site's 2014 Operation Plan states that recyclable materials from construction waste and vegetative waste are recycled and that non-recyclable construction debris is landfilled. The site does not currently accept CCA pressure-treated wood for disposal. However, CCA-treated wood was likely accepted for disposal in the past before FDEP's prohibition regarding disposal of this waste in unlined landfills. The 2014 Operation Plan noted that "any CCA pressure-treated wood (telephone poles) currently stored on site will be removed within 6 months from permit issuance." The facility is also authorized to process yard trash. Residential yard waste is processed into landscaping mulch and topsoil.

The facility has 10 groundwater monitoring wells and one surface water sampling point; monitoring and sampling are performed semi-annually. The facility also monitors landfill gas migration quarterly at the perimeter landfill gas probes and within structures on the property.

The Operating Permit states the facility accepts on average 200 tons per day. Based on our review of tonnage data over the last 4 years, the site has accepted on average of about 105 tons per day.

4 FINANCIAL ASSURANCE AND CONSENT ORDER REVIEW

The permittee previously maintained an escrow account for the closure financial assurance of the site. FDEP rules originally allowed this for private- and government-owned facilities. However, due to rule changes and changes in the facility's designation from a C&D facility to Class III to C&D, an escrow account is no longer a viable option for privately owned C&D facilities.

In 2014, FDEP approved the Florida Recyclers of Brevard's intermediate permit modification and renewal application that requested the designation of the facility be changed from a Class III landfill to a C&D debris disposal facility. This change meant that their escrow account no longer met the requirements of Chapter 403.707(9)(c), FAC, which states that escrow accounts may not be used as a mechanism to provide financial assurance for closure of a C&D facility. The facility Operating Permit (issued July 28, 2014) required that Florida Recyclers replace the escrow account with an alternative, acceptable financial assurance mechanism. In accordance with our review, the following legal actions were initiated between Florida Recyclers and FDEP:

- **Application for Variance, October 20, 2014:** Florida Recyclers requested a 2-year variance for continued use of the funded escrow account to prevent economic hardship while searching for an alternate mechanism.
- **Variance Request Granted, May 22, 2015:** FDEP approved Florida Recyclers application for variance (OGC File No. 14-0657) for a period of 12 months (expiration date – May 22, 2016).
- **FDEP Notice Letter, September 16, 2015:** FDEP determined that the 2014 escrow account balance was underfunded by approximately \$5,000 and requested that a deposit be made to adequately fund the closure account within 30 days.
- **FDEP Warning Letter, June 10, 2016:** FDEP issued a letter stating that Florida Recyclers failed to meet the May 22, 2016 deadline for providing an alternate financial mechanism and was in violation of Rules 62-701.730 and 62-701.630, FAC.
- **Variance Extension Request Denied, June 17, 2016:** FDEP denied Florida Recyclers' request to extend the time allotment granted by the 2015 variance up to 24 months. FDEP deemed a new application for variance would be required to request additional time.
- **Consent Order Issued, March 29, 2017:** FDEP issued Consent Order (OGC No. 16-1272) against Florida Recyclers for failing to provide an alternate financial assurance mechanism. The solid waste permit was then modified to include relevant actions of the Consent Order into the permit.

The issued Consent Order required the facility to initiate a Trust Fund as proof of financial assurance and to make annual payments of \$100,000 (plus any and all applicable trustee fees and expenses) to the Fund by January 5 beginning in 2018. Among other conditions, the facility is required to submit an updated Closure and Long-Term-Care Cost Estimate every 5 years in accordance with the applicable conditions of Rule 62-701.630, FAC. The cost estimate is due in 2019. Based on a verbal conversation with FDEP a Trust Fund has been established as an alternate funding mechanism.

The most recently submitted closure cost estimate from Florida Recyclers was approved by FDEP in April 2017 – estimated \$2.62 million for closure of 35.31 acres, and estimated

\$382,000 over 5 years for long-term care of 44.72 acres. Jones Edmunds compared the facility's 2017 inflated costs against the closure and long-term-care cost estimates for the Sarno Road Landfill most recently submitted in 2017, on a cost-per-acre basis. Table 1 provides the comparison figures.

Table 1 Closure and Long-Term Care Cost Estimate Comparison

	Closure Cost Estimate (\$/acre)	Annual Long-Term- Care Cost (\$/acre)
Florida Recyclers Facility (2017)	\$74,100	\$1,700
Sarno Road Class III Landfill (2017)	\$188,000	\$2,000

The permitted closure design plan for the facility provides two final cover system options, which are the installation of a geosynthetic clay liner cap or a 36-inch soil closure (18 inches of clay and 18 inches of soil). The closure cost estimate accounts for a clay-soil cover but not a geosynthetic clay liner closure cap. **Based on our experience and with recent significant increases in construction costs, it is our opinion that the cost per acre for closure is insufficient. Therefore, it is probable that the Trust Fund is underfunded.**

5 STORMWATER PERMITTING REVIEW

Jones Edmunds reviewed the facility's stormwater management system and permits, as found on the Florida Water Permitting Portal (<http://flwaterpermits.com/>). In general, the information provided on the website appears incomplete, particularly with regard to property ownership and easements. Jones Edmunds did not contact FDEP to clarify the questions that arose during our review. The focus of our review was on the stormwater system; the stormwater system design appears adequate for the final landfill design.

5.1 STORMWATER PERMIT DOCUMENT REVIEW

The facility site name is the "Florida Recyclers of Brevard." However, the Florida Water Permitting Portal shows it as the "Sarno Road Industrial Complex" and that website links to the FDEP Nexus portal, which lists the Environmental Resource Permit (ERP) documents related to the expansion and modification of the landfill as listed in Table 2.

Table 2 ERP History for the Sarno Road Industrial Complex

Permit Number	Facility Name	Date	Expiration Date	Description
0133455-001SI	Florida Recyclers of Brevard, Inc.	12/11/1997		Permit for Cell 1.
0133455-002EI	Florida Recyclers of Brevard, Inc.	02/08/2000	01/07/2005	Permit for Cell 1 expansion and a wet detention pond.
0133455-004EI	Florida Recyclers of Brevard/Sarno Road Industrial Complex	08/21/2007	08/20/2012	Permit Application for Sarno Industrial Subdivision on parcel north of the landfill.

Based on our review of the aerial, the stormwater system appears roughly the same size as designed. The design is adequate for a final cover of grass in good condition, with 8 to 12 inches of permeable soil. The as-built documentation was completed by Timothy C. Jelus, PE, of Jelus Engineering, Inc., and was submitted to FDEP on August 24, 2001.

The permit application for ERP 0133455-002EI also included a discussion of wetland mitigation. Figures 3 and 4 show the Cell 1 expansion with the wetland that was impacted by the construction of the Cell. FDEP issued a letter to William Kerr, of BKI, Inc., dated June 25, 2001, which stated that the preservation acquisition mitigation requirements for permit 133455-002 had been satisfied; and that the conditions of the permit modification 133455-003 had been fulfilled. The letter goes on to provide authorization for the escrow agent to release the security funds. Jones Edmunds was able to locate the permit modification conditions file 133455-003. **This documentation confirms satisfactory completion of the mitigation requirement for the facility.**

Jones Edmunds also compared the current aerial and Brevard County light detection and ranging (LIDAR) data to the permitted design drawings, see Figure 5. The LIDAR data is displayed as a range of colors with each color corresponding to a specific elevation. If the landfill was constructed according to the plans, the colors would align with the contours. The facility's current operation is primarily recycling and yard waste processing. The side slopes are not uniform or at the design elevation. It is very important to note that an ERP is based on the design of the final grades of the closed landfill. Therefore, noting that the current landfill grades are not the same as the ERP does not indicate that the landfill operation is violating their permit. Rather, it indicates that work needs to be done to achieve the final grade that was permitted in the ERP. **In general, the stormwater system has the same top-of-bank footprint as depicted in the permitted design drawing. The actual depth of the system compared to the permitted design cannot be determined without survey.**

The landfill site is not within a flood hazard area. Figure 6 shows the Federal Emergency Management Agency (FEMA)-approved Flood Insurance Rate Map for the area. The area shaded in brown indicates the special flood hazard area. The landfill is outside of the designated flood hazard area.

In 2007, Florida Recyclers applied to FDEP to modify their permit, 0133455-004EI, to construct the "Sarno Road Industrial Complex" on the parcel to the north of the landfill (see Figure 7). The permit application discussed expanding the landfill's stormwater treatment ponds to provide treatment for the proposed development and mitigating the impact to a wetland on the parcel. FDEP did not issue the permit. In 2010, the west side of the parcel to the north of the facility, which includes wetlands, was deeded to the City of Melbourne; and in 2012, the east side of the parcel to the north of the facility was sold to Liberty Investments of Brevard, LLC.

5.2 ERP GENERAL OBSERVATIONS

In general, the stormwater system appears adequate for the design. If the permitted design conditions were to change (such as using steeper slopes or a more impervious cover such as a geomembrane), the stormwater management system would need to be modified and re-permitted.

The ERP application and drawings did not include a detailed sediment and erosion control plan. Although the site is primarily operating as a recycling and yard waste processing facility, sediment control is generally recommended. Jones Edmunds expects that the stormwater system will have accumulated sediment from the landfill operations and will need some excavation to restore the design elevations.

6 WATER QUALITY AND LANDFILL GAS MONITORING DATA REVIEW

6.1 BACKGROUND

The groundwater monitoring network at the Florida Recyclers facility consists of 10 groundwater compliance wells installed in the surficial aquifer, one surface water monitoring point, and 10 landfill gas monitoring probes. The water quality monitoring and reporting are subject to the Class III landfill requirements, Rule 62-701.510, FAC. Groundwater and surface water quality monitoring is conducted semi-annually; samples are analyzed for field and laboratory parameters as defined in Appendix 3 of the current solid waste operations permit.

Based on a technical report dated May 2015, prepared by Universal Engineering Sciences for Florida Recyclers, there is a containment wall (running north south) adjacent to the drainage canal between the facility access road and the scale house as a means of keeping potential contaminants within the landfill. The report states that the wall is constructed of relatively impermeable clay and approximately 2 feet wide by 4 feet deep. The report did not provide the length of the wall. However, in 2010 FDEP questioned the existence of the wall since no as-builts or evidence of a sealed slurry wall/confining layer was provided. FDEP stated even if the purported "clay layer" were a "confining clay" it would not be much good as the well screenings crossed it; therefore, whatever is in their ground water or surface water pond could seep into the L-16 canal.

A technical report was due in August 2017. We are unable to locate that report on the FDEP Oculus site.

6.2 GROUNDWATER MONITORING NETWORK

The compliance groundwater monitoring wells are along the perimeter of the landfill and are identified as MW-2, MW-4R, MW-5R, MW-6R, MW-7, MW-8, MW-9R, MW-10, MW-11, and MW-12. The total well depths range from 14.8 to 16.6 feet below land surface with 10-foot screen intervals. Wells MW-9R, MW-10, and MW-11 are up-gradient. Groundwater flow at the site is generally south to southeast although flow appears to vary over time.

6.2.1 GROUNDWATER MONITORING WELLS

Jones Edmunds reviewed the last 5-years' groundwater monitoring data for the facility. We also reviewed the background groundwater monitoring well MW-16S at the adjacent Sarno Road Class III Landfill (WACS ID 16255), and used that data as the control for comparison. The Sarno Class III Landfill well MW-16 is also installed in the shallow surficial aquifer with a total well depth of 15.5 feet below land surface with a 10-foot screen interval.

- Increasing Vanadium in MW-2, MW-4R, and MW-5R. Decreasing Vanadium in MW-8, MW-9, MW-10, MW-11, and MW-12.
- Decreasing Zinc in MW-10 and MW-11.

6.2.2 SURFACE WATER DATA REVIEW

A review of surface water results at the Melbourne Landfill (sampling site SW-1) indicate elevated Conductivity, Ammonia, Chemical Oxygen Demand (COD), Total Phosphorus, Sulfate, Total Dissolved Solids, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon, Antimony, Arsenic, Chromium, Copper, and Iron. Sources for these parameters may be attributed to the type of materials being landfilled and/or processed at the facility such as:

- Drywall/Sheetrock: Calcium Sulfate (Gypsum) – Conductivity, Total Dissolved Solids, Total Hardness, Sulfate.
- CCA-Treated Lumber: Arsenic, Chromium, Copper.
- Yard Waste/Mulch: Ammonia, COD, Total Phosphorus, Total Kjeldahl Nitrogen, Total Organic Carbon.

6.2.3 GAS MONITORING PROBES

Gas monitoring at the Florida Recyclers facility is conducted quarterly per the requirements of the July 28, 2014 site permit and the Monitoring Plan Implementation Schedule of Chapter 62-160, FAC. Eleven gas monitoring probes (GMPs) are installed along the perimeter of the landfill. The probes are sampled quarterly to determine if excessive methane gas concentrations exist within the soils outside of the landfill. In addition, ambient air is sampled within building structures adjacent to the landfill (i.e., scale house office, etc.) for the presence of methane.

The most recent gas sampling event was conducted in February 2018 by Universal Engineering Sciences, Inc. Based on the First Quarter 2018 Quarterly Gas Monitoring Event report, dated February 23, 2018, no methane gas was detected to have concentrations greater than the detection limit of the sampling instrument. The detection limit of the gas sampling instrument is 1 percent.

The lower explosive limit (LEL) for methane gas is 5 percent or 50,000 parts per million (ppm). The FDEP Solid Waste Department and Rule 62-701, FAC, guidelines for a combustible gas exceedance is 25 percent of the LEL, or 12,500 ppm. Since December 2015, all quarterly gas monitoring results are reported as % LEL methane, and no gas exceedances were measured.

From August 2004 to September 2015, the quarterly monitoring results were measured and reported as ppm methane units, and in all cases no monitoring point samples exceeded 12,500 ppm methane.

6.2.4 MONITORING DATA GENERAL OBSERVATIONS

The facility's shallow surficial wells MW-2, MW-4R, MW-5R, and MW-6R have elevated levels of Conductivity, Chloride, Sodium, Sulfate, TDS, and Barium compared to background well MW-16S at the Sarno Landfill. TDS was consistently above the Safe Drinking Water Standard (SDWS) of 500 milligrams per liter (mg/L) in all four down-gradient Melbourne

wells, and Ammonia-Nitrogen, Chloride, and Sodium were repeatedly reported above their respective groundwater protection standards during the past 5 years. In addition, Conductivity, TDS, Ammonia-Nitrogen, Chloride, Sodium, and Barium are all increasing in wells MW-2, MW-4R, MW-5R, and MW-6R. Increasing Arsenic was also reported in MW-2, MW-4R, and MW-5R, and reported concentrations have repeatedly been greater than the Primary Drinking Water Standard (PDWS) of 10 µg/L.

Groundwater in the down-gradient wells appears to be impacted by the landfill. The source is likely the type of materials being landfilled and/or processed at the Melbourne facility including yard waste, mulch, compost materials, and construction debris such as drywall and CCA-treated lumber. A review of surface water results at the Melbourne Landfill indicate elevated levels of Conductivity, Ammonia-Nitrogen, COD, Total Phosphorus, Sulfate, TDS, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon, Antimony, Arsenic, Chromium, Copper, and Iron. These parameters are also consistent with erosional run-off from materials in the landfill.

Groundwater impacts, in a pattern similar to that noted for the Florida Recyclers' facility, were noted in the two Sarno Class III Landfill shallow-surficial wells, MW-24S and MW-25S, just down-gradient of the Florida Recyclers' property boundary.

7 VOLUME AND LIFESPAN ANALYSES

As part of this preliminary engineering evaluation, Jones Edmunds performed volume and lifespan analyses for the existing site and for the possible expansion/merger with the Sarno Road Class III Landfill. The following sections discuss the City of Melbourne buildout constraints, volume analyses, and a possible option of merging the two facilities and designing a valley fill.

7.1 BACKGROUND

On November 12, 2009, the City of Melbourne approved Brevard County's application for a CUP (CU-2009-06) and City Ordinance (Ordinance No. 2009-41) for a 9.5-acre expansion of the Sarno Road Class III Landfill up to a height of 40 feet above grade. The Florida Recyclers facility also has a similar CUP; however, Jones Edmunds was not able to obtain a copy of the document.

If the County were to acquire the Florida Recyclers facility and expand the Sarno Landfill footprint, the County would be required to submit a CUP application with a revised site plan to the City Engineering Department and Planning and Economic Development Department in accordance with City Ordinance No. 2009-41, Condition 2.a. Since City land development regulations limit the height of any structure or material or debris pile to less than 40 feet, the County will also have to make a request for a variance to exceed the height restriction.

According to the Ordinance, the County is expected to close the Sarno Road Class III Landfill by December 31, 2020, unless the County applies for and receives approval of a new proposed closure date by the City. The results of Sarno's 2017 capacity analysis submitted to FDEP indicates that landfill closure is expected by September 2024. This lifespan estimate included the approximately 9.5-acre footprint of the Pond A expansion area and a final landfill elevation of 104 ft NGVD.

7.2 VOLUME ANALYSIS

7.2.1 FLORIDA RECYCLERS MELBOURNE LANDFILL

The Florida Recyclers facility is permitted to a buildout elevation of 104 ft NGVD; however, the site's CUP from the City of Melbourne limits the full buildout to a maximum of 40 feet above grade or about an elevation 64 ft NGVD. Jones Edmunds performed two remaining volume analyses for the Florida Recyclers facility: one assuming full buildout to elevation 104 feet and one to elevation 64 feet based on the CUP. The volumes were calculated using AutoCAD Civil 3D 2016 software and based on the following:

- Topographic survey dated March 17, 2017, performed by Pickett & Associates Inc.
- Permitted Final Closure (up to 104 feet elevation), Melbourne Landfill and Recycling Center top-of-waste surface (final cover surface lowered 3 feet to account for final cover), dated March 2014.
- Conceptual Final Closure (up to 64 feet elevation), Melbourne Landfill and Recycling Center top-of waste surface (final cover surface lowered 3 feet to account for final cover).

Florida Recyclers performs recycling and yard waste processing operations within the footprint of the facility. Several areas identified as mulch or recycling material stockpiles are not representative of permanent waste disposal and were removed from the survey data. Currently, landfilling operations are isolated to the south edge of the facility; the current Operation Permit states that on average the facility accepts about 200 tons per day or 830 cubic yards per year (CY/yr) (assuming 500 pounds per cubic yard [lb/CY] waste density).

The estimate of the remaining life of the facility, summarized in Table 3. Given the information available, Jones Edmunds performed the lifespan calculation using an average of the annual volumetric disposal rate, in CY/yr, over the last 4 years.

As of March 17, 2017, Jones Edmunds estimates that approximately 970,000 cubic yards (CY) of waste is in-place at the facility. We assumed that this waste is primarily new construction debris or vegetative waste. In March 2013, a topographic survey report⁴ determined that approximately 786,000 CY of waste was in-place. From 2013 to 2017, approximately 185,000 CY of design capacity was consumed, which equates to about 46,300 CY/yr over 4 years.

⁴ Prepared by William Mott Land Surveying.

Table 3 Florida Recyclers Facility – Estimate of Remaining Life Based on Current Landfill Rates

Buildout Elevations	Total Design Capacity (CY)	Estimated Used Capacity (CY)	Estimated Remaining Capacity (CY)	Annual Waste Rate: (CY/yr)	Lifespan (yr)
Annual Waste Rate: FL Recyclers					
104 feet Permitted	2,600,000 (1)	970,000	1,618,000 (3)	46,300	35
64 feet CUP Restriction	1,620,000 (2)	970,000	650,000	46,300	14
Annual Waste Rate: Sarno Landfill					
104 feet Permitted	2,600,000 (1)	970,000	1,618,000 (3)	150,000	11
64 feet CUP Restriction	1,620,000 (2)	970,000	650,000	150,000	4.3

Notes:

1. Total design capacity to permitted buildout elevation of 104 feet NGVD from March 1999 FDEP Permit application.
2. Estimated remaining volume from CAD.
3. Estimate of remaining capacity as of March 2017.

7.2.2 EXPANSION OPTION

The Sarno Road Class III Landfill and the Florida Recyclers facility limits-of-waste boundaries are approximately 300 feet apart. If the County were to acquire the facility from Florida Recyclers of Brevard, Inc., there is a potential to merge the footprint of the two facilities by filling the airspace between the two disposal areas, i.e., valley fill. By pursuing the option of valley fill construction, an approximate 6.6 acres of additional disposal area footprint is gained or up to 1,330,000 CY of capacity (assuming 104-foot final buildout elevation).

Valley fill designs are not unusual, but they do present several challenges during the design and construction phases. Assuming the expanded area would be permitted as a Class III disposal facility, the following regulations would apply:

- Rules 62-701.400(3)(g) and 62-701.430(1)(c), FAC – a bottom liner system (60-mil minimum HDPE bottom liner and GCL) and a primary leachate collection and removal system would be required.
- Rule 62-701.340(3)(c), FAC – limits of waste shall be set back 100 feet from the property boundary, measured from the toe of the proposed final cover slope to the landfill property boundary.

Jones Edmunds performed a volume analysis of the conceptual valley fill design, using two conceptual closure surfaces with buildout elevations of 104 feet and 64 feet. These two surfaces were created to represent design closure grades required to blend the final closure surfaces listed below over the valley fill area:

1. Permitted Final Closure (up to elevation 104 feet) Florida Recyclers facility top-of-waste surface (final cover surface lowered 3 feet to account for final cover), dated March 2014.

2. Permitted Final Closure (up to elevation 104 feet) Sarno Road Class III Landfill top-of-waste surface (final cover surface lowered 3 feet to account for final cover), dated August 2016.

Table 4 shows the total conceptual design capacity and life span of the valley fill based on an airspace consumption rate matching the Sarno Road Class III Landfill (about 150,000 CY/yr). Table 4 also shows the total life span of the valley fill airspace plus the remaining capacity of the facility at the Sarno Road Class III Landfill consumption rate.

Table 4 Valley Fill Construction Option – Volume and Lifespan Analysis

Buildout Elevations	Conceptual Design Capacity (CY)	Annual Waste Rate (CY/yr)	Lifespan (yr)
Valley Fill Lifespan			
104 feet Permitted	1,330,000	150,000	9
64 feet CUP Restriction	537,000	150,000	4
Valley Fill plus Florida Recyclers Facility			
104 feet Permitted	2,950,000	150,000	20
64 feet CUP Restriction	1,200,000	150,000	8

If the County were to pursue this expansion option, the regulatory and design requirements need to be further evaluated to determine the feasibility and cost benefit of a valley fill expansion. The estimated construction cost of this additional capacity is approximately \$300,000 per acre – refer to Section 9, Supplemental Information, for cost estimates.

8 GENERAL OBSERVATIONS AND RECOMMENDATIONS

8.1 SUMMARY

Based on our review and evaluation of publicly available information, it appears that this facility is operating in a manner consistent with their permit and following regulatory guidelines. General findings related to the data review are as follows:

- Facility Operation:
 - The site operates primarily as a C&D recycling and yard waste processing facility. Disposed waste is primarily recycling residual from these operations (i.e., new construction material, vegetative waste).
 - Approximately 40 percent of the permitted volume has been consumed since 1999. The in-place waste density is unknown.
- Financial Assurance Review:
 - The site was issued a Consent Order (OGC File No. 16-1272) requiring the permittee to establish a Trust Fund as an alternative mechanism for financial assurance. It appears this was completed by the Owner.
 - Based on the approved closure cost estimate submitted to FDEP in 2017, the Trust Fund is likely underfunded when compared to recent higher closure costs at similar facilities.

- The remaining lifespan of the 34-acre landfill based on the volume of waste currently landfilled at the Sarno Road Landfill ranges from 4 years at a buildout elevation of 64 feet to 11 years at the permitted buildout elevation of 104 feet.
- Valley Fill Option:
 - The estimated lifespan of the conceptual 6.6-acre valley fill option based on the volume of waste currently landfilled at the Sarno Road Landfill ranges from 4 years at a buildout elevation of 64 feet to 9 years at a buildout to the permitted elevation of 104 feet.
 - The estimated lifespan of the valley fill option plus the remaining capacity of the Florida Recyclers facility based on the volume of waste currently landfilled at the Sarno Road Landfill ranges from 8 years at a buildout to elevation 64 feet to 20 years at a buildout to the permitted elevation of 104 feet
- Landfill Expansion Construction Requirements:
 - Assuming the expansion area would be a permitted Class III disposal facility in accordance with Chapter 62-701.400(3)(g), FAC, a bottom liner system (60-mil minimum HDPE bottom liner and GCL) and a primary leachate collection and removal system are required.
- Major Construction Permit Modification:
 - The expansion project would require a major redesign and permit modification. The expansion challenges will be the design and construction of the liner and leachate collection system over the existing unlined landfills and likely significant stormwater modifications.
 - If a height variance is not granted by the City, the new expansion area would be limited to an approximately 64-foot buildout elevation and limited lifespan.

Major concerns related to the data review are as follows:

- In Jones Edmunds' experience, unlined disposal facilities exhibit higher environmental risk. The environmental liability of this facility is unclear.
- There is evidence of groundwater contamination at this facility. The source and long-term risk posed by this evidence of contamination may require further evaluation.
- It is unclear what obstacles the County may face in obtaining a height variance as described in the City of Melbourne CUP for the Sarno Road Landfill. The City's 40-foot height limitation could reduce the permitted landfill capacity by approximately 40 percent.
- If the County were to pursue the valley fill expansion option, the cost benefit results of constructing the expansion area compared to the additional capacity obtained for Class III waste disposal may be unfavorable.

8.2 RECOMMENDATIONS

- Since we could not locate final as-built drawings of the stormwater system in the FDEP files, Jones Edmunds recommends that the as-built certification be requested or a detailed survey be performed to determine adequacy of system.

- Jones Edmunds recommends that Brevard County request documentation of adequacy of the Trust Fund for closure costs.
- Jones Edmunds recommends that Brevard County obtain the City Ordinance granted for the Florida Recyclers facility and confirm with the City of Melbourne the current procedures in place for obtaining a height variance.

9 SUPPLEMENTAL INFORMATION

The following supplemental information provides additional cost information to supplement Section 7.2.2 regarding liner development costs associated with the capacities presented in Table 4. Table 5 presents approximate development costs based on an estimated \$300,000 per acre for lining the valley and unfilled portions of the Florida Recyclers landfill. This table also provides the relative development cost for the additional capacity in terms of cost per cubic yard of disposal capacity.

The Valley Fill Lifespan calculations assume that both the Sarno Class III and Florida Recyclers cells have been filled to capacity, and the area to be lined, associated cost, and cost per disposal capacity are presented for build-out elevations of 64 feet NGVD and 104 feet NGVD. The 64-foot option requires 13 acres to be lined at an estimated cost of \$3.9 million with relatively high development cost of \$7.30 per cubic yard; whereas, the 104-foot option more than doubles capacity and requires 20 acres to be lined at an estimated cost of \$6.0 million and development cost of \$4.51 per cubic yard.

Alternatively, Class III waste may be placed over the entire Florida Recyclers landfill if a liner is first placed over the existing waste. The existing 34-acre landfill has about 970,000 cubic yards of solid waste in place and a remaining 650,000 cubic yards up to a height of 64 feet NGVD and 1.6 million cubic yards up to 104 feet NGVD. We estimated the construction cost to be \$300,000 per acre. Lining the Valley Fill and over the entire Florida Recyclers facility requires 44 acres and a cost of \$13.2 million for build-out to 64 feet NGVD and a cost of \$11.00 per cubic yard. The 104-foot build-out requires 48 acres of liner at a cost of \$14.4 million and a development cost of \$4.88 per cubic yard.

Table 5 Estimated Construction Costs

Buildout Elevations	Conceptual Design Capacity (CY)	Liner acreage (AC)	Development Cost (\$)	Cost per CY (\$/CY)
Valley Fill Lifespan				
64 feet CUP Restriction	537,000	13	\$3.9M	\$7.30
104 feet Permitted	1,330,000	20	\$6.0M	\$4.51
Valley Fill plus Florida Recyclers Facility				
64 feet CUP Restriction	1,200,000	44	\$13.2M	\$11.00
104 feet Permitted	2,950,000	48	\$14.4M	\$4.88

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Figure 3

ERP 133455-001 Project Plan

Florida Recylers of Brevard

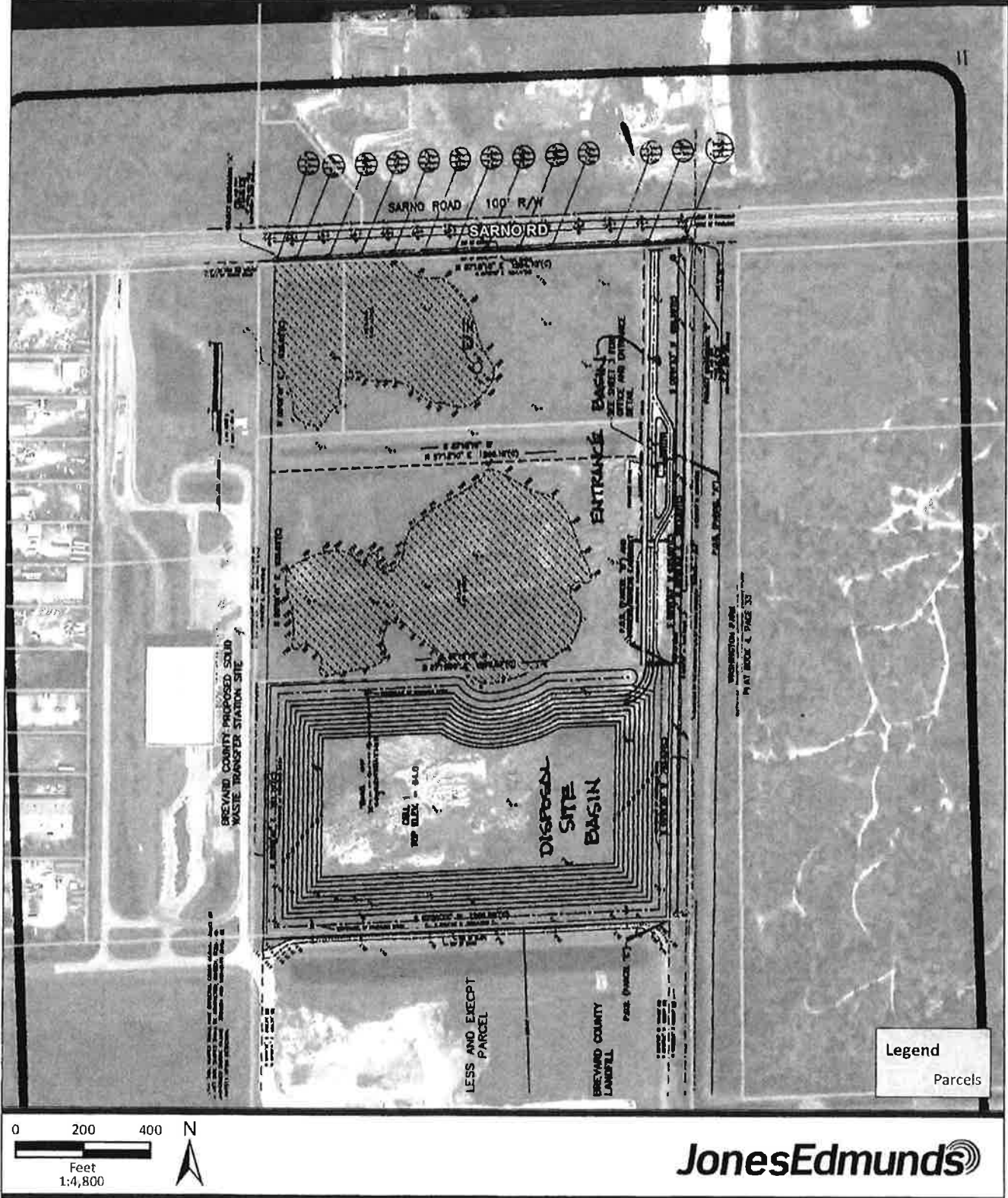


Figure 4

ERP 133455-002 Project Plan

Florida Recylers of Brevard

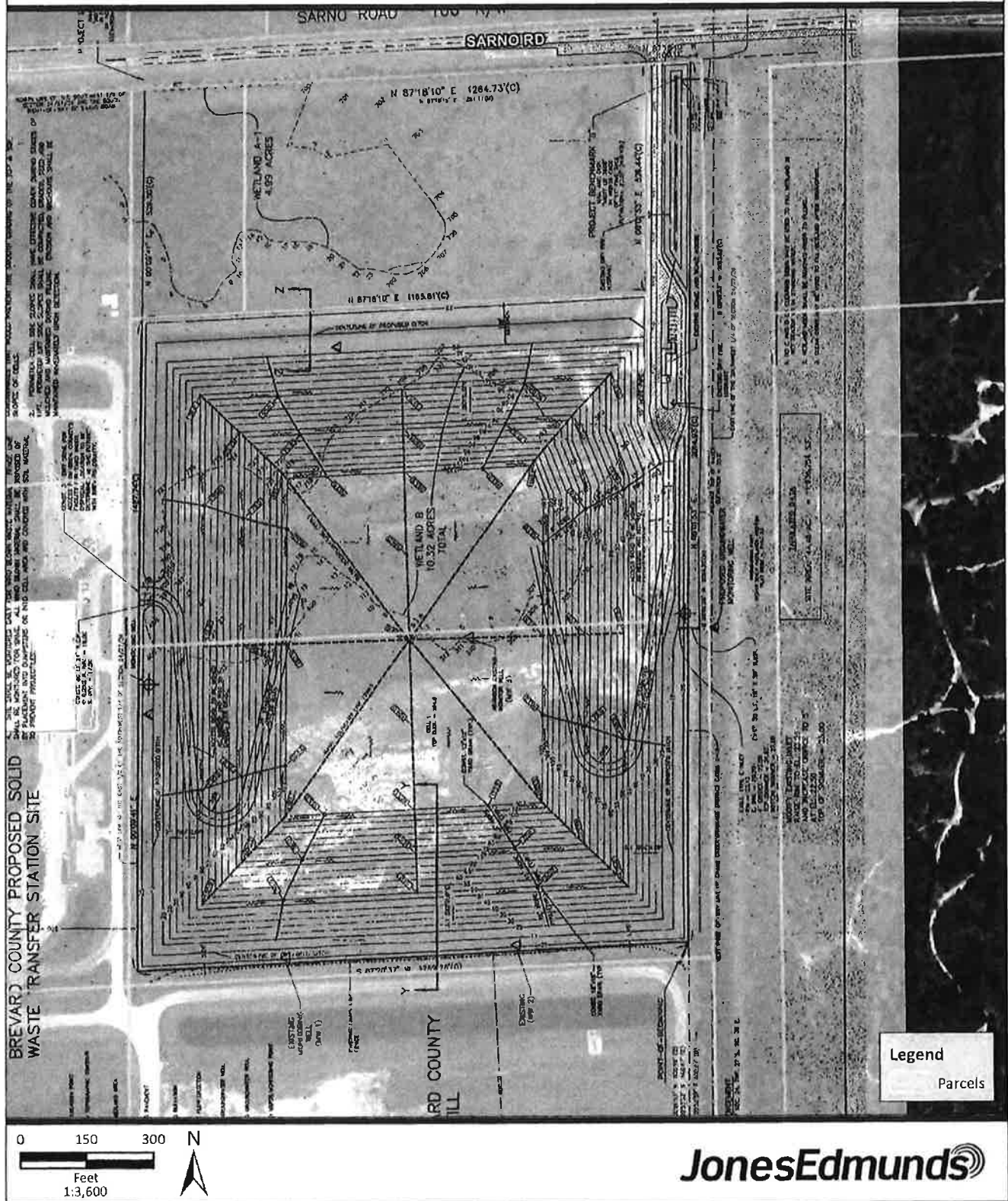
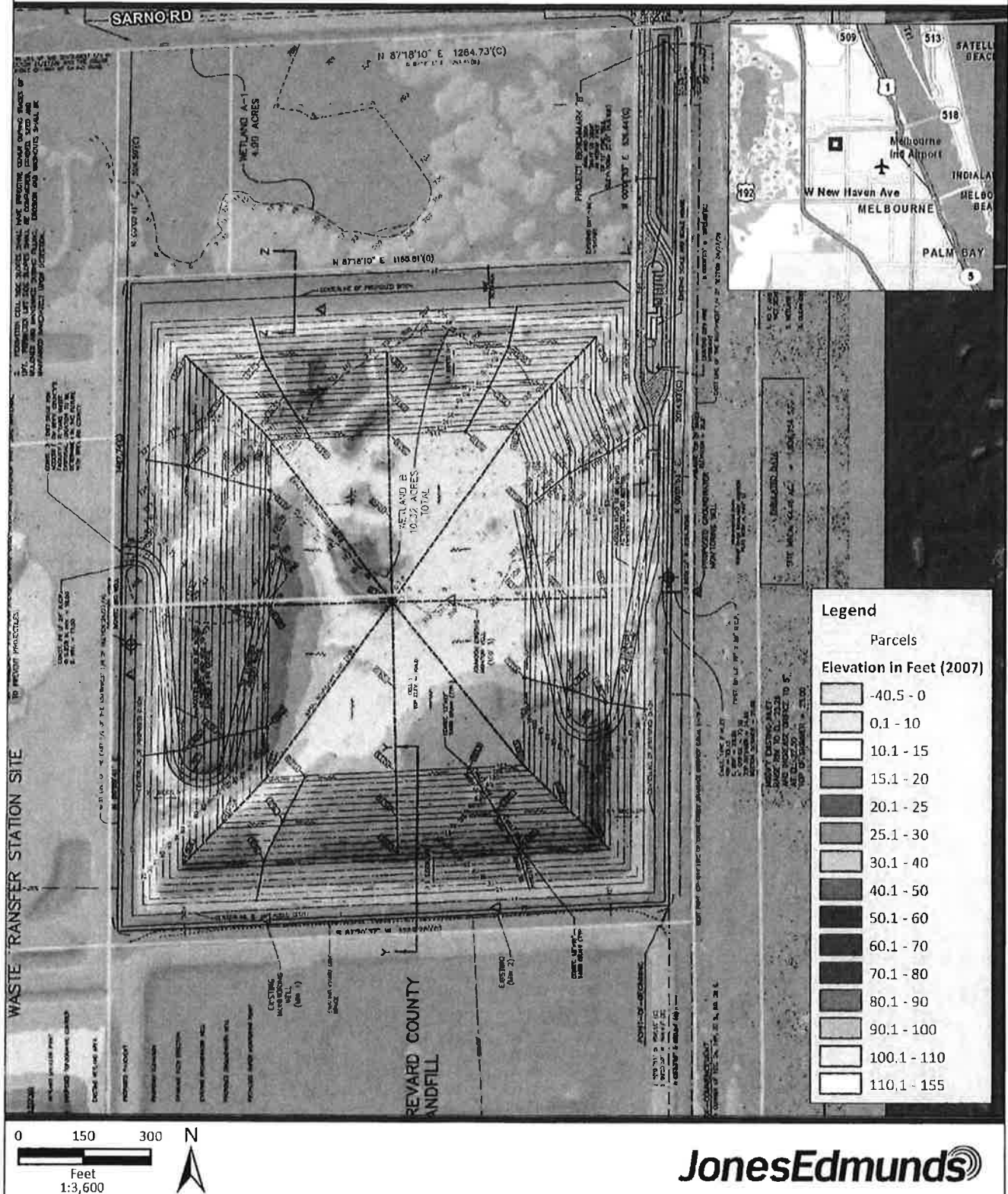


Figure 5

ERP Design Contours Compared to LIDAR Elevation

Florida Recylers of Brevard



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Figure 6
Flood Hazard Map
 Florida Recyclers of Brevard



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Figure 7

ERP 133455-004 Project Plan - Not Permitted

Florida Recyclers of Brevard



**Summary Table
of Groundwater Data
5-Year Average**

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLE DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER
STANDARD UNITS		(1) uS/cm	6.5-8.5 S.U.	2.8 mg/L	250 mg/L	10 mg/L	250 mg/L	500 mg/L	200 ug/L	6 ug/L	10 ug/L	2000 ug/L	4 ug/L	5 ug/L	100 ug/L	140 ug/L	1000 ug/L
Sarno Shallow Surficial Background Well																	
MW-105	5 YR AVERAGE	675.3	8.49	0.30	7.0	2.3	34.5	431.2	Not Sampled	0.56	2.38	38.25	0.29	0.28	1.25	2.38	1.44
	all dev	87.7	8.18	0.26	2.0	2.82	8.5	28.3		0.18	0.48	6.55	0.11	0.11	0.80	0.40	0.89
	3x std dev	263	0.58	0.76	5.9	7.85	28.4	118		0.57	1.19	19.7	0.33	0.33	0.80	1.18	1.76
	upper range	508	7.88	1.06	12.8	18.17	63.0	549		0.88	1.56	55.8	0.62	0.62	1.25	3.56	3.19
Melbourne Surficial Compliance Wells																	
MW-2	5 YR AVERAGE	1370	7.03	2.29	138.0	0.088	62.1	865		0.75	6.58	71.84	0.53	0.51	2.25	1.65	1.10
MW-4R	5 YR AVERAGE	1780	6.97	5.77	198.9	0.041	135.5	1240		0.82	8.07	147.54	0.53	0.51	4.59	1.65	1.10
MW-6R	5 YR AVERAGE	2427	6.74	13.15	443.6	0.186	75.0	1830		0.76	6.38	138.18	0.54	0.51	4.68	1.24	1.10
MW-6R	5 YR AVERAGE	1806	6.77	8.39	206.7	0.202	68.77	1218		0.76	3.06	128.38	0.52	0.51	4.85	1.30	4.85
MW-7	5 YR AVERAGE	713	8.88	0.08	15.8	0.028	4.30	357		0.76	8.21	21.45	0.53	0.51	2.25	1.05	1.10
MW-8	5 YR AVERAGE	647	6.71	0.17	18.4	0.028	3.48	288		0.76	3.05	12.50	0.47	0.51	2.25	1.05	1.10
MW-8R	5 YR AVERAGE	771	7.11	0.34	37.4	0.029	38.10	452		0.76	3.05	34.07	0.53	0.51	2.25	1.05	7.08
MW-10	5 YR AVERAGE	833	7.00	1.08	29.5	0.028	21.13	457		0.76	3.05	41.48	0.47	0.51	2.25	1.05	1.65
MW-11	5 YR AVERAGE	744	7.27	0.30	21.0	0.026	55.14	481		0.76	3.05	24.82	0.47	0.51	2.25	1.05	1.65
MW-12	5 YR AVERAGE	654	7.07	1.78	44.0	0.031	25.22	511		0.76	3.37	38.74	0.53	0.51	2.25	1.05	5.81

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Red = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
 MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
 MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	IRON	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD UNITS		300 µg/L	15 µg/L	2 µg/L	100 µg/L	50 µg/L	100 µg/L	160 mg/L	2 µg/L	40 µg/L	5000 µg/L
Sarno Shallow Surficial Background Well											
MW-16S	5 YR AVERAGE	476.08	3.24	0.05	1.43	4.35	1.25	5.53	0.28	111.71	4.75
	std dev	722	0.39	0.08	1.18	1.88	0.80	4.53	0.88	3.85	0.79
	3x std dev	2167	1.17	0.24	3.56	5.64	2.40	13.59	2.64	11.58	2.37
	upper range	2883	4.41	0.35	5.18	8.39	3.25	22.53	6.51	22.38	7.12
Melbourne Surficial Compliance Wells											
MW-2	5 YR AVERAGE	483.9	0.80	0.0224	2.64	3.25	0.15	80.5	0.29	7.26	8.0
MW-4R	5 YR AVERAGE	630.8	0.80	0.0158	3.42	3.25	0.15	714.8	0.29	5.10	8.0
MW-5R	5 YR AVERAGE	4879	0.80	0.0162	5.05	3.25	0.15	155.3	0.29	7.80	8.0
MW-6R	5 YR AVERAGE	582.4	0.80	0.0155	3.85	3.25	0.15	84.8	0.38	5.77	8.0
MW-7	5 YR AVERAGE	9450	0.80	0.0115	1.80	3.25	0.15	13.9	0.29	5.45	8.0
MW-6	5 YR AVERAGE	2467	0.80	0.0115	1.80	3.25	0.15	17.0	0.29	2.85	11.38
MW-4R	5 YR AVERAGE	7885	0.80	0.0115	1.80	3.25	0.15	22.5	0.29	2.48	8.0
MW-10	5 YR AVERAGE	92782	0.80	0.0115	1.80	3.25	0.15	24.8	0.29	1.75	36.51
MW-11	5 YR AVERAGE	2225	0.80	0.0115	1.80	3.25	0.15	18.1	0.29	1.72	88.47
MW-12	5 YR AVERAGE	1150	0.80	0.0153	1.88	3.25	0.15	24.7	0.29	3.28	19.44

LESS3MD
 Values = Outside 3 Std Deviations of Background Average
 Based = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SUBSURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON
STANDARD UNITS		(1)	6.5-8.5 U.S.	2.8 mg/L	250 mg/L	mg/L	250 mg/L	500 mg/L	200 µg/L	5 µg/L	10 µg/L	2000 µg/L	4 µg/L	5 µg/L	100 µg/L	140 µg/L	1000 µg/L	300 µg/L
Sarno Shallow Subsurface Background Well																		
MW-1S	6/4/2013	647	6.21	0.083	9.8	7.8	32.3	415		0.25	2.5	40.4	0.25	0.25	1.25	2.5	1.25	80.8
MW-1S	11/9/2013	473	6.28	0.01	8.8	5.9	25.5	329		0.25	2.5	30.5	0.25	0.25	1.25	2.5	1.25	284
MW-1S	6/1/2014	748	6.70	0.18	9.2	0.8	45	472		0.25	2.5	45.3	0.25	0.25	1.25	2.5	1.25	454
MW-1S	12/1/2014	627	6.37	0.34	7.8	0.32	-	437		0.54	2.5	27.8	0.25	0.25	1.25	2.5	1.25	117
MW-1S	6/16/2015	720	6.84	0.26	6.4	1	-	422		0.25	2.5	40.1	0.25	0.25	1.25	2.5	1.25	368
MW-1S	1/9/2015	663	6.37	0.17	5.4	3.4	-	443		0.25	2.5	38.6	0.25	0.25	1.25	2.5	1.25	148
MW-1S	5/18/2016	767	6.57	0.45	5.4	1.3	-	470		0.25	2.5	42.3	0.25	0.25	1.25	2.5	1.25	360
MW-1S	12/2/2016	685	6.65	0.26	5.1	1.2	-	433		0.76	2.5	35.2	0.25	0.25	1.25	2.5	1.25	80.3
MW-1S	6/14/2017	769	6.43	0.22	4.8	0.125	-	435		0.58	2.5	32.8	0.25	0.25	1.25	2.5	1.25	2650
MW-1S	12/18/2017	654	6.47	0.37	5.5	1.2	-	435		0.25	2.5	25	0.25	0.25	1.25	2.5	1.25	44.8
AVERAGE		675.3	6.49	0.30	7.9	2.3	34.6	431.3	Not Sampled	0.36	2.58	36.25	0.28	0.28	1.25	2.38	1.44	426.89
	std dev	87.7	0.18	0.25	2.0	2.62	9.5	38.3		0.10	0.40	6.55	0.11	0.11	0.00	0.40	0.59	72.9
	3x std dev	263	0.54	0.75	5.9	7.86	28.4	118		0.30	1.19	18.7	0.33	0.33	0.00	1.19	1.76	216.7
	upper range	838	7.06	1.06	12.9	10.17	53.0	548		0.80	3.56	55.9	0.62	0.62	1.25	3.56	3.19	2603
Melbourne Compliance Wells - Shallow Subsurface																		
MW-2	5/17/2013	1500	6.99	4.7	300	0.028	35	1300	34	0.55	3.05	89.9	0.47	0.55	2.25	1.05	1.1	81.1
MW-2	10/9/2013	1507	6.7	2.7	190	0.028	89	990	34	0.55	3.05	90.3	1.04	0.55	2.25	1.05	1.1	88.7
MW-2	4/9/2014	1083	6.85	3.3	160	0.028	7.4	710	34	0.55	3.05	47.5	0.47	0.55	2.25	1.05	1.1	1220
MW-2	10/9/2014	1480	6.4	0.71	180	0.13	58	1100	34	0.55	3.05	78.1	0.47	0.55	2.25	1.05	1.1	354
MW-2	4/23/2015	970	7.31	2.7	100	0.028	26	600	34	0.55	3.05	30.6	0.47	0.55	2.25	1.05	1.1	1200
MW-2	10/13/2015	1246	7.14	0.4	140	0.028	88	880	34	0.55	3.05	100	0.47	0.55	2.25	1.05	1.1	241
MW-2	4/19/2016	1816	7.85	3.3	100	0.028	7.4	540	72.3	0.55	3.05	53.3	0.47	0.45	2.25	1.05	1.1	115
MW-2	10/13/2016	1085	7.0	1.4	110	0.46	250	1100	77.6	1.25	3.05	104	0.47	0.45	2.25	1.05	1.1	118
MW-2	4/18/2017	1110	7.55	2.5	90	0.028	21	600	34	1.25	3.05	48.9	0.47	0.45	2.25	1.05	1.1	108
MW-2	10/18/2017	1324	6.84	3.1	130	0.12	75	810	34	1.25	3.05	79.8	0.47	0.45	2.25	1.05	1.1	885
AVERAGE		1378	7.03	2.39	150.0	0.088	62.1	885	42.2	0.76	3.55	71.84	0.53	0.51	2.25	1.05	1.1	423.9
MW-4R	5/17/2013	2800	8.8	5.4	450	0.028	2.7	1300	34	0.55	3.05	163	0.47	0.55	5.12	1.05	1.1	473
MW-4R	10/10/2013	1472	6.96	1.1	120	0.028	120	970	34	0.55	3.05	99.4	1.08	0.55	2.25	1.05	1.1	597
MW-4R	4/9/2014	1592	6.73	5.2	120	0.028	210	1100	34	0.55	3.05	107	0.47	0.55	2.25	1.05	1.1	392
MW-4R	10/9/2014	1318	6.56	1.8	120	0.18	130	880	299	0.55	3.05	130	0.47	0.53	2.25	1.05	1.1	278
MW-4R	4/23/2015	2142	7.21	1.4	210	0.028	230	1500	299	0.55	3.05	135	0.47	0.53	3.12	1.05	1.1	1300
MW-4R	10/13/2015	1642	7.27	4.7	300	0.028	140	1300	229	0.55	3.05	165	0.47	0.53	2.25	1.05	1.1	1260
MW-4R	4/19/2016	1437	6.95	10	200	0.028	150	1300	349	0.55	3.05	180	0.47	0.45	2.25	1.05	1.1	849
MW-4R	10/13/2016	1024	7.0	0.92	89	0.028	100	770	159	1.25	3.05	117	0.47	0.45	2.25	1.05	1.1	310
MW-4R	4/19/2017	2789	7.38	13	300	0.028	82	1200	147	1.25	3.05	228	0.47	0.45	10.1	1.05	1.1	554
MW-4R	10/18/2017	1599	6.77	0.82	160	0.028	130	1100	87.3	1.25	3.05	139	0.47	0.45	2.25	1.05	1.1	722
AVERAGE		1780	6.87	5.77	199.9	0.041	125.5	1249	194.5	0.89	3.07	147.54	0.53	0.51	4.03	1.05	1.10	880.8

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Red = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SUBSURFICIAL BACKGROUND AT SAENO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (µS/cm)	PH (FIELD)	AMMONIA NITROGEN (mg/L)	CHLORIDE (mg/L)	NITRATE NITROGEN (mg/L)	SULFATE (mg/L)	TOTAL DISSOLVED SOLIDS (mg/L)	ALUMINUM (µg/L)	ANTHONY (µg/L)	ARSENIC (µg/L)	BARBAR (µg/L)	BERYLLIUM (µg/L)	CADMIUM (µg/L)	CHROMIUM (µg/L)	COBALT (µg/L)	COPPER (µg/L)	IRON (µg/L)
STANDARD UNITS		(1)	6.5-8.5 S.U.	2.8 mg/L	250 mg/L	10 mg/L	250 mg/L	500 mg/L	200 µg/L	6 µg/L	10 µg/L	2000 µg/L	4 µg/L	5 µg/L	100 µg/L	140 µg/L	1000 µg/L	500 µg/L
MW-6R	5/17/2013	2940	6.75	12	480	0.025	0.7	2000	34	0.55	3.05	123	0.47	0.55	2.25	1.05	1.1	2150
MW-6R	10/10/2013	3037	6.48	15	450	0.026	21	1900	34	0.55	3.05	150	0.47	0.55	5.91	1.05	1.1	4680
MW-6R	4/9/2014	2809	6.08	12	570	0.026	4.4	2000	71.5	0.55	3.05	166	0.47	0.55	5.1	1.05	1.1	5000
MW-6R	10/8/2014	1585	6.76	12	180	0.026	190	1100	34	0.55	6.71	52.8	0.47	0.55	2.25	1.05	1.1	381
MW-6R	4/29/2015	2867	6.77	12	530	0.025	37	2000	34	0.55	3.05	162	0.47	0.55	5.59	1.05	1.1	11600
MW-6R	10/12/2015	2507	6.61	8.5	580	0.13	61	2500	34	0.55	3.05	140	0.47	0.55	5.78	1.05	1.1	8900
MW-6R	4/18/2016	1757	6.6	28	720	0.065	1.2	2500	34	0.55	3.05	187	0.47	0.45	8.74	2.86	1.1	14800
MW-6R	10/13/2016	1077	7.03	1.5	96	0.044	270	1100	34	1.25	3.05	68.3	0.47	0.45	2.25	1.05	1.1	2460
MW-6R	4/13/2017	3882	7.27	37	660	0.026	4.7	3400	34	1.25	3.05	167	0.47	0.45	8.79	1.05	1.1	7800
MW-6R	10/18/2017	1584	7.13	23	160	0.026	180	1100	34	1.25	3.05	167	0.47	0.45	2.25	1.05	1.1	8900
AVERAGE		2427	6.74	13.15	442.6	0.196	75.0	1835	37.8	0.75	6.29	100.18	0.54	0.51	4.89	1.34	1.10	8270
MW-6R	5/17/2013	1710	6.97	4.8	150	0.029	85	1100	34	0.55	3.05	107	0.966	0.55	2.25	1.05	37.5	560
MW-6R	10/10/2013	1815	6.58	7.1	150	0.028	57	1300	34	0.55	3.05	146	0.47	0.55	2.25	1.05	1.1	500
MW-6R	4/9/2014	2930	6.25	11	250	0.025	20	1700	70.3	0.55	3.05	164	0.47	0.55	4.56	1.05	1.1	314
MW-6R	10/8/2014	906	6.6	0.62	43	0.1	48	580	34	0.55	3.05	94.8	0.47	0.55	2.25	1.05	1.1	186
MW-6R	4/29/2015	3156	6.89	16	370	0.028	0.005	1900	34	0.55	3.05	147	0.47	0.55	6.72	1.05	1.1	1360
MW-6R	10/14/2015	1300	6.74	3.4	140	0.078	77	1000	34	0.55	3.05	153	0.47	0.55	2.25	1.05	1.1	490
MW-6R	4/19/2016	1079	5.79	21	480	0.38	0.85	2300	34	0.55	3.05	188	0.47	0.45	8.68	2.4	1.1	1140
MW-6R	10/13/2016	1481	6.29	0.35	53	0.64	240	840	34	1.25	3.05	134	0.47	0.45	2.25	1.05	1.1	114
MW-6R	4/19/2017	3078	7.48	21	360	0.025	20	1300	34	1.25	3.05	152	0.47	0.45	7	1.05	1.1	880
MW-6R	10/18/2017	1129	6.7	0.00565	67	0.69	150	700	34	1.25	3.05	128	0.47	0.45	2.25	1.05	1.1	120
AVERAGE		1801	6.77	8.53	206.7	0.032	86.77	1318	44.8	0.75	6.25	138.38	0.52	0.51	4.85	1.38	1.10	580.4
MW-7	5/16/2013	775	6.89	0.068	26	0.025	2	540	206.6	0.55	14.3	10	0.47	0.55	2.25	1.05	1.1	11500
MW-7	10/9/2013	452	6.82	0.013	6.3	0.028	4.7	310	132	0.55	3.05	24.4	0.982	0.55	2.25	1.05	1.1	1720
MW-7	4/8/2014	386	6.51	0.00965	8.7	0.026	5.4	280	216	0.55	3.05	38.6	0.47	0.55	2.25	1.05	1.1	1160
MW-7	10/9/2014	313	6.4	0.057	2.5	0.025	0.47	200	87.8	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	481
MW-7	4/22/2015	454	6.73	0.13	3	0.025	3	310	1900	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	11100
MW-7	10/14/2015	295	6.68	0.00585	4.7	0.025	1.3	240	147	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	720
MW-7	4/18/2016	578	7.2	0.062	11	0.025	4.3	330	221	0.55	3.05	45.6	0.47	0.45	2.25	1.05	1.1	8550
MW-7	10/12/2016	303	6.72	0.012	6.1	0.025	0.38	240	153	1.25	3.05	20.7	0.47	0.45	2.25	1.05	1.1	1110
MW-7	4/18/2017	2890	6.43	0.37	69	0.062	21	550	91.8	1.25	3.05	30.8	0.47	0.45	2.25	1.05	1.1	8900
MW-7	10/17/2017	235	6.58	0.00385	11	0.028	0.48	270	91.1	1.25	3.05	36.6	0.47	0.45	2.25	1.05	1.1	486
AVERAGE		713	6.68	0.08	15.8	0.029	4.39	327	240.6	0.75	6.29	21.45	0.52	0.51	2.25	1.05	1.10	4683
MW-8	5/16/2013	762	7.11	0.38	54	0.028	17	490	77	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	8130
MW-8	10/9/2013	330	6.41	0.028	7.9	0.028	4.6	270	141	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	438
MW-8	4/9/2014	532	6.58	0.14	34	0.025	6.4	380	311	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	539
MW-8	10/8/2014	156	5.72	0.004	1.5	0.025	0.87	120	348	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	571
MW-8	4/22/2015	608	7.01	0.32	12	0.025	1.1	470	252	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	8250
MW-8	10/14/2015	153	6.15	0.14	6.5	0.025	1	180	404	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	914
MW-8	4/18/2016	1004	7.17	0.28	21	0.025	2.5	310	194	0.55	3.05	25	0.47	0.45	2.25	1.05	1.1	3640
MW-8	10/12/2016	189	6.01	0.01	6.1	0.028	0.8	210	384	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	1900
MW-8	4/18/2017	2558	6.51	0.43	28	0.032	0.99	360	85.4	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	3840
MW-8	10/17/2017	181	5.89	0.00565	12	0.026	0.42	180	242	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	406
AVERAGE		647	6.71	0.17	18.4	0.029	3.69	298	220.9	0.75	6.25	12.50	0.47	0.51	2.25	1.05	1.10	2487

LEGEND
Values = Outside 3 Std Deviations of Background Average
Bold = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SUBSURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTHONY	ARSENIC	BARIIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON
STANDARD LIMITS		(1) $\mu S/cm$	6.5-8.5 S.U.	2.8 mg/L	250 mg/L	mg/L	250 mg/L	500 mg/L	200 $\mu g/L$	8 $\mu g/L$	10 $\mu g/L$	2000 $\mu g/L$	4 $\mu g/L$	5 $\mu g/L$	100 $\mu g/L$	140 $\mu g/L$	300 $\mu g/L$	300 $\mu g/L$
MW-9R	5/16/2013	874	6.98	0.26	57	0.026	56	305	34	0.55	3.05	95.3	0.47	0.55	2.25	1.05	51	3920
MW-9R	10/6/2013	624	6.78	0.36	25	0.026	31	430	34	0.55	3.05	30.4	0.984	0.55	2.25	1.05	1.1	7170
MW-9R	4/9/2014	633	6.50	0.23	38	0.026	39	430	34	0.55	3.05	32.3	0.47	0.55	2.25	1.05	1.1	4570
MW-9R	10/6/2014	648	6.52	0.045	30	0.026	31	410	34	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	3920
MW-9R	4/22/2015	803	7.07	0.37	82	0.026	46	440	227	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	2940
MW-9R	10/13/2015	821	7.23	0.48	32	0.026	36	440	110	0.55	3.05	38.5	0.47	0.55	2.25	1.05	1.1	8820
MW-9R	4/18/2016	1400	7.35	0.38	21	0.026	26	370	488	0.55	3.05	57	0.47	0.45	2.25	1.05	1.1	5980
MW-9R	10/12/2016	570	7.05	0.42	23	0.026	22	360	115	1.25	3.05	42.5	0.47	0.45	2.25	1.05	1.1	5380
MW-9R	4/16/2017	748	6.51	0.5	34	0.026	49	480	34	1.25	3.05	29.9	0.47	0.45	2.25	1.05	1.1	7260
MW-9R	10/17/2017	785	7.06	0.54	61	0.026	30	560	34	1.25	3.05	44.8	0.47	0.45	2.25	1.05	1.1	4380
AVERAGE		771	7.11	0.34	37.4	0.026	38.10	425	115.4	0.76	3.05	34.07	0.52	0.51	2.25	1.05	7.09	5965
MW-10	5/16/2013	849	6.91	1.3	54	0.026	7.1	470	34	0.55	3.05	31.7	0.47	0.55	2.25	1.05	6.55	13000
MW-10	10/6/2013	826	6.63	1.4	34	0.026	24	480	34	0.55	3.05	43.8	0.47	0.55	2.25	1.05	1.1	14000
MW-10	4/9/2014	794	6.46	1.2	20	0.026	18	450	34	0.55	3.05	41	0.47	0.55	2.25	1.05	1.1	16500
MW-10	10/6/2014	896	6.36	0.87	41	0.026	53	520	34	0.55	3.05	33.7	0.47	0.55	2.25	1.05	1.1	8640
MW-10	4/22/2015	819	6.93	1.3	18	0.026	7.6	440	34	0.55	3.05	28	0.47	0.55	2.25	1.05	1.1	15000
MW-10	10/13/2015	816	7.06	0.56	36	0.026	57	500	88	0.55	3.05	46.8	0.47	0.55	2.25	1.05	1.1	5380
MW-10	4/18/2016	1471	7.23	1.2	27	0.026	21	400	148	0.55	3.05	61.2	0.47	0.45	2.25	1.05	1.1	18800
MW-10	10/12/2016	585	6.96	0.76	36	0.026	26	450	79.3	1.25	3.05	45.7	0.47	0.45	2.25	1.05	1.1	11000
MW-10	4/16/2017	647	6.44	1.6	12	0.026	1.5	360	34	1.25	3.05	38.1	0.47	0.45	2.25	1.05	1.1	5480
MW-10	10/17/2017	619	7.05	0.56	17	0.026	15	420	72.4	1.25	3.05	42.7	0.47	0.45	2.25	1.05	1.1	5480
AVERAGE		835	7.00	1.08	38.5	0.026	21.13	457	53.1	0.76	3.05	41.89	0.47	0.51	2.25	1.05	1.56	12782
MW-11	5/17/2013	441	7.03	0.18	16	0.026	3.1	390	170	0.55	3.05	10	0.47	0.55	2.25	1.05	4.56	3720
MW-11	10/6/2013	580	6.9	0.21	47	0.026	44	460	242	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	1480
MW-11	4/9/2014	563	6.89	0.38	27	0.026	27	380	204	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	3610
MW-11	10/6/2014	839	6.7	0.029	18	0.026	91	500	225	0.55	3.05	25.2	0.47	0.55	2.25	1.05	1.1	783
MW-11	4/22/2015	640	7.31	0.66	14	0.026	37	360	127	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	4270
MW-11	10/13/2015	575	7.41	0.1	27	0.026	150	370	661	0.55	3.05	47.1	0.47	0.55	2.25	1.05	1.1	3710
MW-11	4/18/2016	1083	7.59	0.73	10	0.026	22	350	833	0.55	3.05	33.1	0.47	0.45	2.25	1.05	1.1	2570
MW-11	10/12/2016	842	7.35	0.00385	25	0.026	130	640	844	1.25	3.05	46.4	0.47	0.45	2.25	1.05	1.1	520
MW-11	4/16/2017	577	6.82	0.68	6.3	0.026	7.3	360	103	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	2940
MW-11	10/17/2017	837	7.23	0.555	31	0.026	30	530	78.7	1.25	3.05	26.4	0.47	0.45	2.25	1.05	1.1	1830
AVERAGE		744	7.27	0.30	21.0	0.026	35.14	481	301.9	0.76	3.05	24.82	0.47	0.51	2.25	1.05	1.45	2225
MW-12	5/17/2013	1270	6.71	3.2	240	0.026	48	1300	105	0.55	3.05	86.7	0.47	0.55	2.25	1.05	44.2	3520
MW-12	10/6/2013	412	6.86	0.00365	5.6	0.026	14	300	136	0.55	3.05	10	0.382	0.55	2.25	1.05	1.1	343
MW-12	4/9/2014	440	6.64	0.00365	10	0.026	18	310	108	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	311
MW-12	10/6/2014	480	6.25	0.15	2.4	0.026	5.4	380	124	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	322
MW-12	4/22/2015	546	7.21	0.00365	4.7	0.026	11	250	109	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	341
MW-12	10/13/2015	413	7.19	0.013	1.4	0.026	7.9	310	129	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	200
MW-12	4/18/2016	1245	7.28	0.54	36	0.026	28	480	303	0.55	3.05	44.9	0.47	0.45	2.25	1.05	1.1	1920
MW-12	10/12/2016	409	6.98	0.00265	4.7	0.026	6.9	320	105	1.25	3.05	21.8	0.47	0.45	2.25	1.05	1.1	156
MW-12	4/16/2017	815	6.85	1.4	120	0.026	110	860	103	1.25	3.05	62	0.47	0.45	2.25	1.05	1.1	943
MW-12	10/17/2017	600	6.88	0.00365	15	0.026	8	470	81.5	1.25	3.05	29	0.47	0.45	2.25	1.05	1.1	595
AVERAGE		604	7.07	1.79	44.0	0.026	25.22	571	133.4	0.76	3.05	20.74	0.42	0.51	2.25	1.05	5.41	1150

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Black = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
 MEXBORNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SUBSURFICIAL BACKGROUND AT SARNO LANDFILL
 MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	LEAD	MERCURY	MOSE	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD UNITS	15 µg/L ^a	2 µg/L ^a	100 µg/L ^a	50 µg/L ^a	100 µg/L ^a	150 µg/L ^a	150 mg/L ^a	2 µg/L ^a	40 µg/L ^a	5000 µg/L ^a
Sarno Shallow Subsurface Background (N/A)										
MW-10S	5/9/2013	0.5	0.05	1.25	3.75	1.25	13.3	0.25	8	5
MW-10S	11/25/2013	2.5	0.05	1.25	3.75	1.25	8.8	0.25	13.2	5
MW-10S	6/11/2014	2.5	0.05	1.25	3.75	1.25	17.5	0.25	8.2	5
MW-10S	12/11/2014	2.5	0.05	1.25	3.75	1.25	14.3	0.25	11.6	5
MW-10S	8/16/2015	2.5	0.05	1.25	3.75	1.25	9.1	0.25	10.8	5
MW-10S	12/9/2015	2.5	0.05	1.25	3.75	1.25	6.8	0.25	14.8	5
MW-10S	5/16/2016	2.5	0.05	1.25	3.75	1.25	6.8	0.25	8.5	5
MW-10S	12/8/2016	2.5	0.05	1.25	3.75	1.25	4.8	0.25	15.8	5
MW-10S	8/14/2017	2.5	0.05	1.25	3.75	1.25	5.5	0.50	2.5	5
MW-10S	12/18/2017	0.65	0.05	5	8.7	1.25	4.3	0.85	13	2.8
AVERAGE	2.52	0.05	1.83	4.85	1.25	0.98	9.03	0.28	10.71	4.78
Std Dev	0.80	0.00	1.30	1.68	0.00	0.00	4.52	0.38	3.86	0.70
2nd std dev	1.70	0.00	2.60	3.66	0.00	0.00	13.60	0.76	11.58	2.22
Upper Range	4.07	0.05	5.18	8.39	1.25	0.00	28.69	0.68	22.58	7.03
Malden Compliance Wells - Shallow Su										
MW-2	5/17/2013	0.8	0.0115	1.8	3.25	0.145	147	0.28	3.65	8
MW-2	10/9/2013	0.8	0.0115	1.8	3.25	0.145	184	0.28	10.3	8
MW-2	4/8/2014	0.8	0.0115	1.8	3.25	0.145	81.1	0.28	7.24	8
MW-2	10/8/2014	0.8	0.0115	4.03	3.25	0.145	58.6	0.28	8.68	8
MW-2	4/22/2015	0.8	0.0115	1.8	3.25	0.145	84.4	0.28	5.91	8
MW-2	10/13/2015	0.8	0.0115	2.54	3.25	0.145	68.8	0.28	4.83	8
MW-2	4/16/2016	0.8	0.0115	1.8	3.25	0.145	85.8	0.28	8.69	8
MW-2	10/14/2016	0.8	0.0083	4.03	3.25	0.145	84.8	0.28	5.48	8
MW-2	4/18/2017	0.8	0.0115	1.8	3.25	0.145	82.3	0.28	3.34	8
MW-2	10/18/2017	0.8	0.0278	5.1	3.25	0.145	82.3	0.28	8.57	8
AVERAGE	0.80	0.0204	2.64	3.25	0.15	0.15	88.9	0.28	7.28	8.0
MW-4R	5/17/2013	0.6	0.0115	1.8	3.25	0.145	223	0.28	7.08	8
MW-4R	10/10/2013	0.6	0.0115	1.8	3.25	0.145	77.8	0.28	10.1	8
MW-4R	4/9/2014	0.6	0.0115	1.8	3.25	0.145	87	0.28	8.21	8
MW-4R	10/9/2014	0.6	0.0548	1.8	3.25	0.145	51.9	0.28	5.15	8
MW-4R	4/23/2015	0.6	0.0115	4.03	3.25	0.145	130	0.28	8.38	8
MW-4R	10/13/2015	0.6	0.0115	5.55	3.25	0.145	98.2	0.28	9.5	8
MW-4R	4/18/2016	0.6	0.0115	4.17	3.25	0.145	145	0.28	8.87	8
MW-4R	10/13/2016	0.6	0.0115	1.8	3.25	0.145	39	0.28	3.54	8
MW-4R	4/16/2017	0.6	0.0115	5.89	3.25	0.145	270	0.28	10.4	8
MW-4R	10/18/2017	0.6	0.0115	5.12	3.25	0.145	74.5	0.28	7.54	8
AVERAGE	0.60	0.0156	3.42	3.25	0.15	0.15	114.3	0.28	8.19	8.2

1.888888
 Yellow = Outside 3 Std Deviations of Background Average
 Bold = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
 MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
 MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD UNITS		15 µg/L	2 µg/L	100 µg/L	50 µg/L	100 µg/L	150 mg/L	2 µg/L	40 µg/L	5000 µg/L
MW-6R	5/17/2013	0.8	0.0115	3.4	3.25	0.145	185	0.28	6.08	8
MW-6R	10/10/2013	0.8	0.0115	1.8	3.25	0.145	185	0.28	0.89	8
MW-6R	4/8/2014	0.8	0.0115	4.89	3.25	0.145	218	0.28	0.89	8
MW-6R	10/8/2014	0.8	0.0089	5.38	3.25	0.145	183.1	0.28	3.64	8
MW-6R	4/28/2015	0.8	0.0115	4.58	3.25	0.145	183	0.28	8.97	8
MW-6R	10/13/2015	0.8	0.0115	5.77	3.25	0.145	178	0.28	7.88	8
MW-6R	4/18/2016	0.8	0.0115	4.43	3.25	0.145	225	0.28	13.2	8
MW-6R	10/3/2016	0.8	0.0046	6.38	3.25	0.145	193.8	0.28	1	8
MW-6R	4/19/2017	0.8	0.0115	5.78	3.25	0.145	185	0.28	33.1	8
MW-6R	10/18/2017	0.8	0.0115	3.28	3.25	0.145	172.2	0.28	7.56	8
AVERAGE		0.80	0.0102	5.06	3.25	0.15	185.9	0.28	7.80	8.0
MW-6R	5/17/2013	0.8	0.0115	1.8	3.25	0.145	74.1	0.28	5.2	8
MW-6R	10/10/2013	0.8	0.0115	1.8	3.25	0.145	85.8	0.28	6.94	8
MW-6R	4/8/2014	0.8	0.0115	5.43	3.25	0.145	183	0.28	8	8
MW-6R	10/8/2014	0.8	0.0115	1.8	3.25	0.145	20.6	0.28	2.2	8
MW-6R	4/28/2015	0.8	0.0115	4.18	3.25	0.145	192	0.28	7.57	8
MW-6R	10/14/2015	0.8	0.0115	3.86	3.25	0.145	84.8	0.28	6.87	8
MW-6R	4/18/2016	0.8	0.0115	5.3	3.25	0.145	195	0.28	8.8	8
MW-6R	10/18/2016	0.8	0.0115	5.78	3.25	0.145	54.2	0.28	1	8
MW-6R	4/19/2017	0.8	0.0115	5.3	3.25	0.145	188	0.28	3.34	8
MW-6R	10/18/2017	0.8	0.0115	5.08	3.25	0.145	42.7	0.28	1	8
AVERAGE		0.80	0.0115	3.86	3.25	0.15	88.8	0.28	5.77	8.0
MW-7	5/19/2013	0.8	0.0115	1.8	3.25	0.145	38.1	0.28	11.3	8
MW-7	10/8/2013	0.8	0.0115	1.8	3.25	0.145	7.25	0.28	6.27	8
MW-7	4/8/2014	0.8	0.0115	1.8	3.25	0.145	8.53	0.28	6.67	8
MW-7	10/8/2014	0.8	0.0115	1.8	3.25	0.145	3.07	0.28	1	8
MW-7	4/28/2015	0.8	0.0115	1.8	3.25	0.145	18.4	0.28	18.5	8
MW-7	10/14/2015	0.8	0.0115	1.8	3.25	0.145	4.8	0.28	1	8
MW-7	4/18/2016	0.8	0.0115	1.8	3.25	0.145	16.5	0.28	6.94	8
MW-7	10/18/2016	0.8	0.0115	1.8	3.25	0.145	4.85	0.28	1	8
MW-7	4/19/2017	0.8	0.0115	1.8	3.25	0.145	38.5	0.28	1	8
MW-7	10/18/2017	0.8	0.0115	1.8	3.25	0.145	8.98	0.28	1	8
AVERAGE		0.80	0.0115	1.80	3.25	0.15	11.8	0.28	5.48	8.0
MW-8	5/18/2013	0.8	0.0115	1.8	3.25	0.145	38.4	0.28	2.87	8
MW-8	10/8/2013	0.8	0.0115	1.8	3.25	0.145	7.25	0.28	3.52	8
MW-8	4/8/2014	0.8	0.0115	1.8	3.25	0.145	32.3	0.28	2.37	8
MW-8	10/8/2014	0.8	0.0115	1.8	3.25	0.145	2.48	0.28	1	8
MW-8	4/28/2015	0.8	0.0115	1.8	3.25	0.145	23	0.28	12.8	8
MW-8	10/14/2015	0.8	0.0115	1.8	3.25	0.145	5.13	0.28	1	8
MW-8	4/18/2016	0.8	0.0115	1.8	3.25	0.145	18.7	0.28	2.87	8
MW-8	10/18/2016	0.8	0.0115	1.8	3.25	0.145	4.94	0.28	1	8
MW-8	4/19/2017	0.8	0.0115	1.8	3.25	0.145	20.8	0.28	2.18	8
MW-8	10/18/2017	0.8	0.0115	1.8	3.25	0.145	6.26	0.28	1	8
AVERAGE		0.80	0.0115	1.80	3.25	0.15	17.0	0.28	2.86	8.0

LEGEND
 Yellow = Double 3 Std Deviations of Background Average
 Based on Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SUBSURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2011 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD LIMITS		15 µg/L ^a µg/L	2 µg/L ^a µg/L	100 µg/L ^a µg/L	50 µg/L ^a µg/L	100 µg/L ^a µg/L	160 mg/L ^a mg/L	2 µg/L ^a µg/L	49 µg/L ^a µg/L	5000 µg/L ^a µg/L
MW-9R	5/16/2013	0.8	0.0115	1.6	3.25	0.145	25.8	0.29	2.22	8
MW-9R	10/9/2013	0.8	0.0115	1.6	3.25	0.145	18.5	0.29	4.66	8
MW-9R	4/9/2014	0.8	0.0115	1.6	3.25	0.145	16.2	0.29	2.57	8
MW-9R	10/8/2014	0.8	0.0115	1.6	3.25	0.145	18	0.29	2.04	8
MW-9R	4/22/2015	0.8	0.0115	1.6	3.25	0.145	31.8	0.29	2.3	8
MW-9R	10/13/2015	0.8	0.0115	1.6	3.25	0.145	20	0.29	2.08	8
MW-9R	4/18/2016	0.8	0.0115	1.6	3.25	0.145	17.4	0.29	4.79	8
MW-9R	10/12/2016	0.8	0.0115	1.6	3.25	0.145	18.4	0.29	1	8
MW-9R	4/16/2017	0.8	0.0115	1.6	3.25	0.145	20	0.29	1	8
MW-9R	10/17/2017	0.8	0.0115	1.6	3.25	0.145	35.2	0.29	2.12	8
AVERAGE		0.80	0.0115	1.60	3.25	0.15	22.5	0.29	2.48	8.0
MW-10	5/16/2013	0.8	0.0115	1.6	3.25	0.145	27.2	0.29	2.64	8
MW-10	10/9/2013	0.8	0.0115	1.6	3.25	0.145	26.2	0.29	3.6	24
MW-10	4/9/2014	0.8	0.0115	1.6	3.25	0.145	26.2	0.29	1	21.4
MW-10	10/8/2014	0.8	0.0115	1.6	3.25	0.145	32.2	0.29	1	27.6
MW-10	4/22/2015	0.8	0.0115	1.6	3.25	0.145	26.6	0.29	1	46.7
MW-10	10/13/2015	0.8	0.0115	1.6	3.25	0.145	35.7	0.29	1	17.5
MW-10	4/18/2016	0.8	0.0115	1.6	3.25	0.145	21.2	0.29	2.82	29.2
MW-10	10/12/2016	0.8	0.0115	1.6	3.25	0.145	25.3	0.29	1	15.9
MW-10	4/16/2017	0.8	0.0115	1.6	3.25	0.145	17.8	0.29	1	8
MW-10	10/17/2017	0.8	0.0115	1.6	3.25	0.145	14.4	0.29	2.57	43.9
AVERAGE		0.80	0.0115	1.60	3.25	0.15	25.8	0.29	1.75	24.21
MW-11	5/17/2013	0.8	0.0115	1.6	3.25	0.145	13.9	0.29	1	8
MW-11	10/9/2013	0.8	0.0115	1.6	3.25	0.145	28	0.29	3.44	46.3
MW-11	4/9/2014	0.8	0.0115	1.6	3.25	0.145	18.4	0.29	1	41.2
MW-11	10/8/2014	0.8	0.0115	1.6	3.25	0.145	19.7	0.29	1	159
MW-11	4/22/2015	0.8	0.0115	1.6	3.25	0.145	15.9	0.29	1	58.2
MW-11	10/13/2015	0.8	0.0115	1.6	3.25	0.145	25	0.29	2.38	87.8
MW-11	4/18/2016	0.8	0.0115	1.6	3.25	0.145	12.1	0.29	3.22	42.9
MW-11	10/12/2016	0.8	0.0115	1.6	3.25	0.145	19.4	0.29	1	131
MW-11	4/16/2017	0.8	0.0115	1.6	3.25	0.145	5.36	0.29	1	8
MW-11	10/17/2017	0.8	0.0115	1.6	3.25	0.145	18	0.29	2.25	53.2
AVERAGE		0.80	0.0115	1.60	3.25	0.15	18.1	0.29	1.72	80.47
MW-12	5/17/2013	0.8	0.0115	1.6	3.25	0.145	98	0.29	4.4	8
MW-12	10/9/2013	0.8	0.0115	1.6	3.25	0.145	6.09	0.29	3.82	8
MW-12	4/9/2014	0.8	0.0115	1.6	3.25	0.145	5.52	0.29	2.22	8
MW-12	10/8/2014	0.8	0.0265	1.6	3.25	0.145	3.2	0.29	2.60	22.2
MW-12	4/22/2015	0.8	0.0115	1.6	3.25	0.145	2.89	0.29	2.32	8
MW-12	10/13/2015	0.8	0.0115	1.6	3.25	0.145	2.51	0.29	1	8
MW-12	4/18/2016	0.8	0.0115	1.6	3.25	0.145	23	0.29	6.69	8
MW-12	10/12/2016	0.8	0.0115	1.6	3.25	0.145	3.37	0.29	1	25.1
MW-12	4/16/2017	0.8	0.0115	1.6	3.25	0.145	86.2	0.29	6.87	26.3
MW-12	10/17/2017	0.8	0.0115	1.6	3.25	0.145	12	0.29	1	59.8
AVERAGE		0.80	0.0123	1.68	3.28	0.15	24.7	0.29	3.20	19.44

LEGEND
Values = Outside 3 Std Deviations of Background Average
Bracket = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
SARNO ROAD CLASS III LANDFILL
JUNE 2013 THROUGH DECEMBER 2017

PARAMETER	CONDUCTIVITY (FIELD)	AMMONIA NITROGEN	UN-IONIZED AMMONIA	BIOCHEMICAL OXYGEN DEMAND	CHEMICAL OXYGEN DEMAND	CHLORIDE	NITRATE NITROGEN	TOTAL PHOS- PHORUS as P	SULFATE	TOTAL DISSOLVED SOLIDS
CLASS III (FRESH) SURFACE WATER STANDARD	<50 % increase or <1275 max	NA	0.02 mg/L	NA	NA	NA	NA	NA	NA	NA
GROUNDWATER STANDARD	(1)	2.8 mg/L***	(1)	(1)	(1)	(1)	10 mg/L*	(1)	250 mg/L**	500 mg/L**
UNITS	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sarno Surface Waters										
SW-1 / SW-1R	5 YR AVERAGE	0.43	0.03	7.3	133	NS	0.027	0.037	40.6	598
	std dev	0.54	0.03	1.9	17	NS	0.015	0.020	3.6	78
	3 x std dev	1.61	0.09	5.8	51	NS	0.044	0.061	10.7	234
	upper range	2.04	0.12	13.1	165	NS	0.071	0.097	51.3	832
Melbourne Surface Water										
SW-1	5 YR AVERAGE	6.47	0.26	18.4	323	174	0.030	0.79	125	1150
Sarno Surface Waters										
SW-2	5 YR AVERAGE	3.24	0.04	5.0	105	NS	0.048	0.117	30	721
SW-3	5 YR AVERAGE	0.57	0.05	8.1	153	NS	0.048	0.072	66	688
SW-4 / SW-4R	5 YR AVERAGE	0.78	0.01	4.5	47	NS	0.047	0.096	29	546
SW-7	5 YR AVERAGE	2.40	0.03	NS	NS	NS	NS	NS	NS	NS

LEGEND

* = Primary Drinking Water Standard

** = Secondary Drinking Water Standard

*** = Chapter 62-777 Groundwater Cleanup Target Levels (GCTL)

Wednesday, March 21, 2018

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
SARNO ROAD CLASS III LANDFILL
JUNE 2013 THROUGH DECEMBER 2017

PARAMETER	TOTAL HARDNESS	TOTAL KIELDAHL NITROGEN	TOTAL ORGANIC CARBON	TOTAL SUSPENDED SOLIDS	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CHROMIUM	COPPER
CLASS III (FRESH) SURFACE WATER STANDARD	NA	NA	NA	NA	4300 µg/L	50 µg/L	NA	0.13 µg/L	CALC	CALC
GROUNDWATER STANDARD	(1)	(1)	(1)	(1)	6 µg/L*	10 µg/L*	2000 µg/L*	4 µg/L*	100 µg/L*	1000 µg/L**
UNITS	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sarno Surface Waters										
SW-1 / SW-1R	200	4.89	32.1	30.1	0.59	3.1	51.1	0.028	1.25	0.47
5 YR AVERAGE										
std dev	19	0.53	6.0	5.9	0.25	1.3	9.1	0.008	0.00	0.00
3 x std dev	57	1.60	18.0	17.8	0.76	3.8	27.4	0.024	0.00	0.00
upper range	257	6.49	50.1	47.9	1.35	6.9	78.5	0.051	1.25	0.47
Melbourne Surface Water										
SW-1	451	15.1	79	14.4	3.39	18.4	68.8	0.047	4.40	2.23
5 YR AVERAGE										
Sarno Surface Waters										
SW-2	374	4.7	30	34.4	0.33	3.2	51.9	0.040	1.88	0.47
5 YR AVERAGE										
SW-3	276	4.2	42	22.0	0.28	3.3	41.4	0.035	1.77	0.47
5 YR AVERAGE										
SW-4 / SW-4R	299	1.3	13	47.2	0.29	2.5	58.0	0.055	1.61	2.09
5 YR AVERAGE										
SW-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
5 YR AVERAGE										

LEGEND
* = Primary Drinking Water Standard
** = Secondary Drinking Water Standard
*** = Chapter 62-177 Groundwater Cleanup Target Levels (GCTL)

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
SARNO ROAD CLASS III LANDFILL
JUNE 2013 THROUGH DECEMBER 2017

PARAMETER	IRON	LEAD	MERCURY	SELENIUM	SILVER	THALLIUM	VANADIUM	ZINC
CLASS III (FRESH) SURFACE WATER STANDARD	1000 µg/L	CALC	0.012 µg/L	5 µg/L	0.07 µg/L	6.3 µg/L	NA	CALC
GROUNDWATER STANDARD	300 µg/L**	15 µg/L*	2 µg/L*	50 µg/L*	100 µg/L**	2 µg/L*	49 µg/L***	5000 µg/L**
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sarno Surface Waters								
SW-1 / SW-1R	5 YR AVERAGE	2.88	0.0047	0.796	0.0250	0.250	3.15	5.62
	std dev	1.20	0.0012	0.372	0.0000	0.000	1.37	1.96
	3 x std dev	3.60	0.0036	1.117	0.0000	0.000	4.12	5.88
	upper range	6.48	0.0083	1.913	0.0250	0.250	7.27	11.50
Melbourne Surface Water								
SW-1	5 YR AVERAGE	0.205	0.0101	0.325	0.0145	0.029	1.93	8.34
Sarno Surface Waters								
SW-2	5 YR AVERAGE	2.83	0.0027	0.250	0.0250	0.250	2.84	20.70
SW-3	5 YR AVERAGE	3.05	0.0036	0.433	0.0305	0.250	3.80	5.76
SW-4 / SW-4R	5 YR AVERAGE	4.14	0.0037	0.285	0.0250	0.250	5.80	15.15
SW-7	5 YR AVERAGE	NS	NS	NS	NS	NS	NS	NS

LEGEND

* = Primary Drinking Water Standard

** = Secondary Drinking Water Standard

*** = Chapter 62-777 Groundwater Cleanup Target Levels (GCTL)

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES



Florida Department of Environmental Protection

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

DEP Form # 62-701.900(28), F.A.C.
Form Title: Closure Cost Estimating Form
For Solid Waste Facilities
Effective Date: January 6, 2010
Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Melbourne Landfill & Recycling Facility WACS ID: 18444
Permit Application or Consent Order No.: 05-0133456-010-SO-22 Expiration Date: 6/1/2024
Facility Address: 3351 Sarno Road, Melbourne, Florida 32934
Permittee or Owner/Operator: Florida Recyclers of Brevard, LLC.
Mailing Address: Same as Facility Address

Latitude: 28° 07' 10.673" Longitude: 80° 40' 48.575"
Coordinate Method: GPS Datum: Ft. N GUD
Collected by: _____ Company/Affiliation: _____

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste received	If closed: Official date of closing
One	35.31	1998	107.5	85.5	NA	NA

Total disposal unit acreage included in this estimate: Closure: 35.31 Long-Term Care: 44.72

Facility type: ☐ Class I ☐ Class III ☒ C&D Debris Disposal
(Check all that apply) ☐ Other: _____

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

- ☐ Letter of Credit* ☐ Insurance Certificate ☐ Escrow Account
☐ Performance Bond* ☐ Financial Test ☐ Form 29 (FA Deferral)
☐ Guarantee Bond* ☒ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-995-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

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

Southwest District
13051 N. Telecom Pkwy.
Tempe Terrace, FL 33637
813-632-7800

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste. 200
West Palm Beach, FL 33401
561-881-5600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate adjustment below.

☒ (a) Inflation Factor Adjustment

☐ (b) Recalculated or New Cost Estimates

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated:

Feb. 08, 2019

Latest Department Approved
Closing Cost Estimate:

Current Year Inflation
Factor, e.g. 1.02

Inflation Adjusted Closing
Cost Estimate:

\$2,662,807.39

x

1.022

=

\$2,721,389.15

This adjustment is based on the Department approved long-term care cost estimate dated:

Feb. 08, 2019

Latest Department Approved
Annual Long-Term Care
Cost Estimate:

Current Year Inflation
Factor, e.g. 1.02

Inflation Adjusted Annual
Long-Term Care Cost
Estimate:

\$77,678.63

x

1.022

=

\$79,387.56

Number of Years of Long Term Care Remaining:

x

5

Inflation Adjusted Long-Term Care Cost Estimate:

=

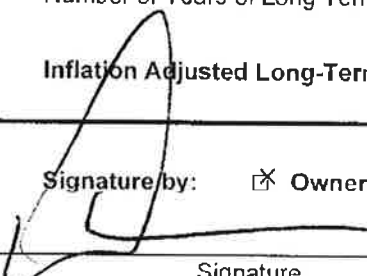
\$396,937.80

Signature by:

☒ Owner/Operator

☐ Engineer

(check what applies)



Signature

3351 Sarno Rd

Address

David Smith - Managing Member

Name & Title

Melbourne, Florida 32934

City, State, Zip Code

2-25-20

Date

flarecyc@bellsouth.net

E-Mail Address

321-255-6625 Office - 321-543-7499 Cell David Smith

Telephone Number

OWNERS RESPONSE LETTER TO CONSENT ORDER FROM FDEP

GRAY ROBINSON
ATTORNEYS AT LAW

321-727-8100

JACK.KIRSCHENBAUM@GRAY-ROBINSON.COM

July 22, 2020

VIA ELECTRONIC MAIL

David Smicherko, Environmental Manager
Central District
Florida Department of Environmental Protection
3319 Maguire Blvd.Suite232
Orlando, Florida 32803

Subject: **Draft Consent Order Comments**
Florida Recyclers of Brevard-Melbourne Landfill
WACS # 18444
3351 Sarno Road
Melbourne, FL 32934

Dear Mr. Smicherko:

The undersigned represents as attorney Florida Recyclers of Brevard (FRB). Please consider this a response to your draft Consent Order dated March, 2020 for the subject facility. Rather than commenting specifically on the consent order, it is our position that a consent order level of enforcement instrument is unwarranted to bring the facility into compliance with Department Rules. Therefore, we request a "Compliance Assistance Offer", commonly used by other Department Districts for minor violations such as alleged for this facility. The draft CAO, a copy of which is attached hereto, is based on the warning letter and consent order which state the following:

"A complaint inspection was conducted at your facility on January 23, 2020. During this inspection, possible violations of Chapter 403, F.S., 62-701, Florida Administrative Code (F.A.C.), and Chapter 62-709, F.A.C. were observed.

During the inspection Department personnel noted the following:

1. Objectionable odors were noted off-site beyond the property boundary.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
3. The facility failed to ensure there were 50 foot fire breaks in the piles of processed and unprocessed material.
4. Processed material has been stored on site for longer than 18 months."

1795 WEST NASA BLVD.
POST OFFICE BOX 1870 (32902-1870)
MELBOURNE, FLORIDA 32901
TEL 321-727-8100
FAX 321-984-4122
gray-robinson.com

BOCA RATON
FORT LAUDERDALE
FORT MYERS
GAINESVILLE
JACKSONVILLE
KEY WEST
LAKELAND
MELBOURNE
MIAMI
NAPLES
ORLANDO
TALLAHASSEE
TAMPA
WASHINGTON, DC
WEST PALM BEACH

RECEIVED

JUL 23 2020

DEP Central District



FLORIDA DEPARTMENT OF Environmental Protection

Central District Office 3319 Maguire
Blvd. Suite 232 Orlando, FL 32803

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Neah Valenstein
Secretary

July , 2019

Mr. Art F. Evans, Managing Member
Florida Recyclers of Brevard, LLC
1698 W. Hibiscus Blvd. Suite A
Melbourne, FL 32937
Art.fmdc@gmail.com

Re: Compliance Assistance Offer
Florida Recyclers of Brevard LLC.
WACS # 18444-Melborne Landfill
Brevard County

Dear Mr. Evans:

A solid waste management facility compliant inspection was conducted at the above referenced facility on January 23, 2020. During this inspection, potential non-compliance was noted. The purpose of this letter is to offer compliance assistance as a means of resolving these matters.

Specifically, potential non-compliance with the requirements of Chapter 403, Florida Statutes, Chapter 62-701 and Chapter 62-709, Florida Administrative Code (F.A.C.) were observed. Please see the attached inspection report (or Warning letter) for a full account of Department observations and recommendations. The following potential non-compliance items were observed during the inspection:

1. Objectionable odors were noted off-site beyond the property boundary.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
3. The facility failed to ensure there were 50 foot fire breaks in the piles of processed and unprocessed material.
4. Processed material has been stored on site for longer than 18 months."

A list of Recommendations for Corrective Action is attached to bring these items into compliance is attached.

We request you review the item(s) of concern noted and respond in writing within **30 days** of receipt of this Compliance Assistance Offer. Your written response should include one of the following:

<https://floridadep.gov/>

1. Describe what has been done to resolve the non-compliance issue(s) or provide a schedule describing how/when the issue(s) will be addressed.
2. Provide the requested information, or information that mitigates the concerns or demonstrates them to be invalid, or
3. Arrange for the case manager to visit your site to discuss the item(s) of concern.

It is the Department's desire that you are able to adequately address the aforementioned issues so that this matter can be closed. Your failure to respond promptly may result in the initiation of formal enforcement proceedings.

Please address your response and any questions to Ms. Mary Powers of the Central District Office at (407) 897-2921 or via e-mail at mary.powers@floridadep.gov. We look forward to your cooperation with this matter.

Sincerely,

David Smicherko, Environmental Manager
Central District
Florida Department of Environmental Protection

Enclosures: Inspection Report

cc:



**Florida Department of
Environmental Protection
Inspection Checklist**

FACILITY INFORMATION:

Facility Name: MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)
On-site Inspection Start Date: 01/23/2020
On-site Inspection End Date: 01/23/2020
WACS No.: 18444
Facility Street Address: 3351 SARNO ROAD
City: MELBOURNE
County Name: BREVARD
Zip: 32934

INSPECTION PARTICIPANTS:

(Include ALL Landfill and Department Personnel with Corresponding Titles)

Principal Inspector: Mary Powers, Inspector

Other Participants: Andrew Cannella, Manager;

INSPECTION TYPE:

Complaint Investigation Inspection for C&D Debris Disposal Facility

ATTACHMENTS TO THE INSPECTION CHECKLIST:

This Cover Page to the Inspection Checklist may include any or all of the following attachments as appropriate.

Note: Checklist items with shaded boxes are for informational purposes only.

10.0 - SECTION 10.0 - REGISTERED SOURCE-SEPARATED ORGANICS PROCESSING FACILITIES

MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

Page 5 of 9

Inspection Date: 01/23/2020

Current Violations:

Rule: 62-709.320(2)(a)3.a.

Question Number: 10.12.1

Explanation: There shall be an all-weather access road, at least 20 feet wide, all around the perimeter of the site.

Specifically, Florida Recyclers does not have an all-weather access road, at least 20 feet wide, all around the perimeter of the site.

Corrective Action: Within 30 days of receiving this report, install an all-weather access road at least 20 feet in width around the perimeter of the facility.

Rule: 62-709.320(2)(a)3.c.

Question Number: 10.12.3

Explanation: None of the processed or unprocessed material shall be more than 50 feet from access by motorized firefighting equipment.

Specifically, Florida Recyclers failed to ensure none of the processed or unprocessed material was more than 50 feet from access by motorized firefighting equipment.

Corrective Action: Within 30 days of receiving this report, the owner/operator shall install 50 foot fire breaks through larger piles of debris to create adequately sized internal fire lanes. Within 5 days of completion of corrective activities please notify the Department so that a follow up inspection can be conducted.

Rule: 62-709.320(2)(c)

Question Number: 10.14

Explanation: The facility shall be operated in a manner to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C.

Specifically, Florida Recyclers failed to operate in a manner to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C. Since off site odors were detected beyond the property boundary.

Corrective Action: Operate the facility in a manner so as to eliminate objectionable odors from leaving the site.

Rule: 62-701.300(1)(a)

Question Number: 10.1

Explanation: Unauthorized storage, processing, or disposal of solid waste except as authorized at a permitted or registered solid waste management facility or other exempt facility? 62-701.300(1)(a)

Corrective Action: Within 60 days of receiving this report, remove all processed material that has remained on site at the facility for longer than 18 months

MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

Page 6 of 9

Inspection Date: 01/23/2020

Rule: 62-709.300(7)(a)

Question Number: 10.2

Explanation: No person shall cause or allow the discharge of air pollutants that cause objectionable odor in violation of Chapter 62-296, F.A.C.

Specifically, Florida Recyclers failed to control objectionable odors off site beyond the property boundary.

Corrective Action: See Corrective Actions listed for Question Number 10.14.

Rule: 62-709.330(2)

Question Number: 10.26

Explanation: Processed material shall be removed from the facility within 18 months. However, if a yard processing facility is authorized under another Department solid waste management facility permit, then the department shall authorize on-site storage of processed material for longer than 18 months if the owner or operator demonstrates that there is a quantifiable use for such material for cover, erosion control, closure, or other similar activities at that permitted facility. Specifically, Florida Recyclers has failed to remove processed material from the facility within 18 months. A longer period of storage is not authorized by their permit.

Corrective Action: Within 60 days of receiving this report, remove all processed material that has remained on site at the facility for longer than 18 months

Inspection Date 01/23/2020

COMMENTS:

Permit 0133456-012-SO-MM Issued: 04/13/2017

Permit Renewal Application Due Date: 4/1/2024

Permit Expires: 6/1/2024

On January 23, 2020 at 8:17 A.M., no odor was detected at Ridgewood Club Condominium, which lies to the east of Florida Recyclers. At 8:20 A.M., a musty, earthy odor was detected on New York avenue located southeast of Florida Recyclers. At 8:31 A.M., Mary Powers of DEP met with Andrew Cannella, Manager of Florida Recyclers, and the on site inspection began.

A large compost pile exists in the southeast corner of the facility that Andrew Canella stated is approximately 5 years old (Fig. 1). This is a violation of Rule 62-709.330(2), F.A.C., listed above, which states that "processed material shall be removed from the facility within 18 months. However, if a yard processing facility is authorized under another Department solid waste management facility permit, then the department shall authorize on-site storage of processed material for longer than 18 months if the owner or operator demonstrates that there is a quantifiable use for such material for cover, erosion control, closure, or other similar activities at that permitted facility."

The compost pile is adjacent to the C&D working face of the facility (Fig. 2). An odor similar to the one detected off site was noted in this area.

Additionally, large piles of compost exist in the central part of the property (Fig. 3). Steam was observed emanating and dispersing from the piles of compost; most notably when a pile was being turned by use of an excavator (Fig. 4). Freshly ground yard waste is located next to the compost piles that exist in the central part of the property (Fig. 5).

ATTACHMENTS:

Fig. 1 Large compost pile



Fig. 2 C&D adjacent to compost



MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

Page 8 of 9

Inspection Date: 01/23/2020

Fig. 3 Central compost piles



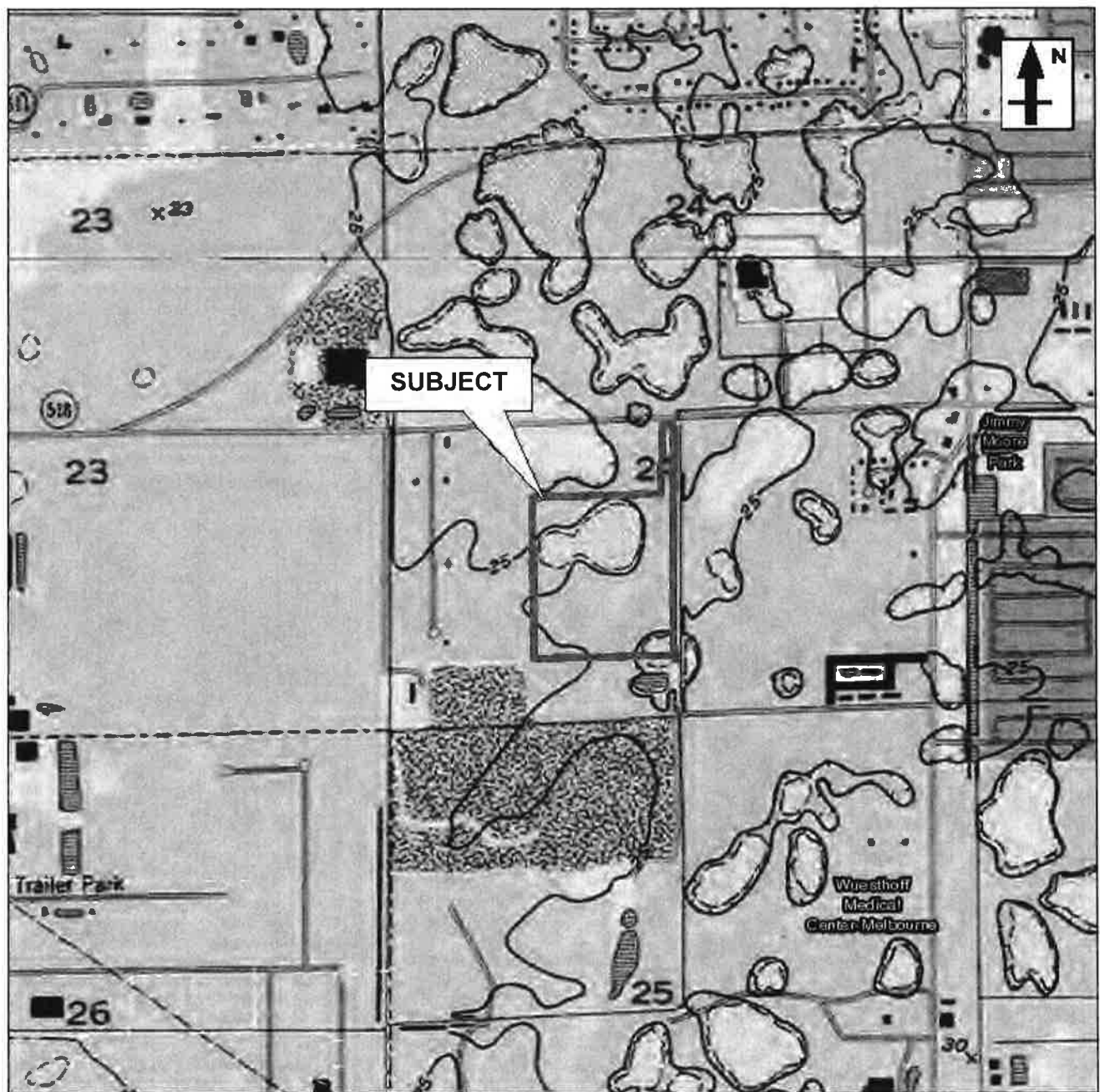
Fig. 4 Steam off compost piles



Fig. 5 freshly ground yard waste

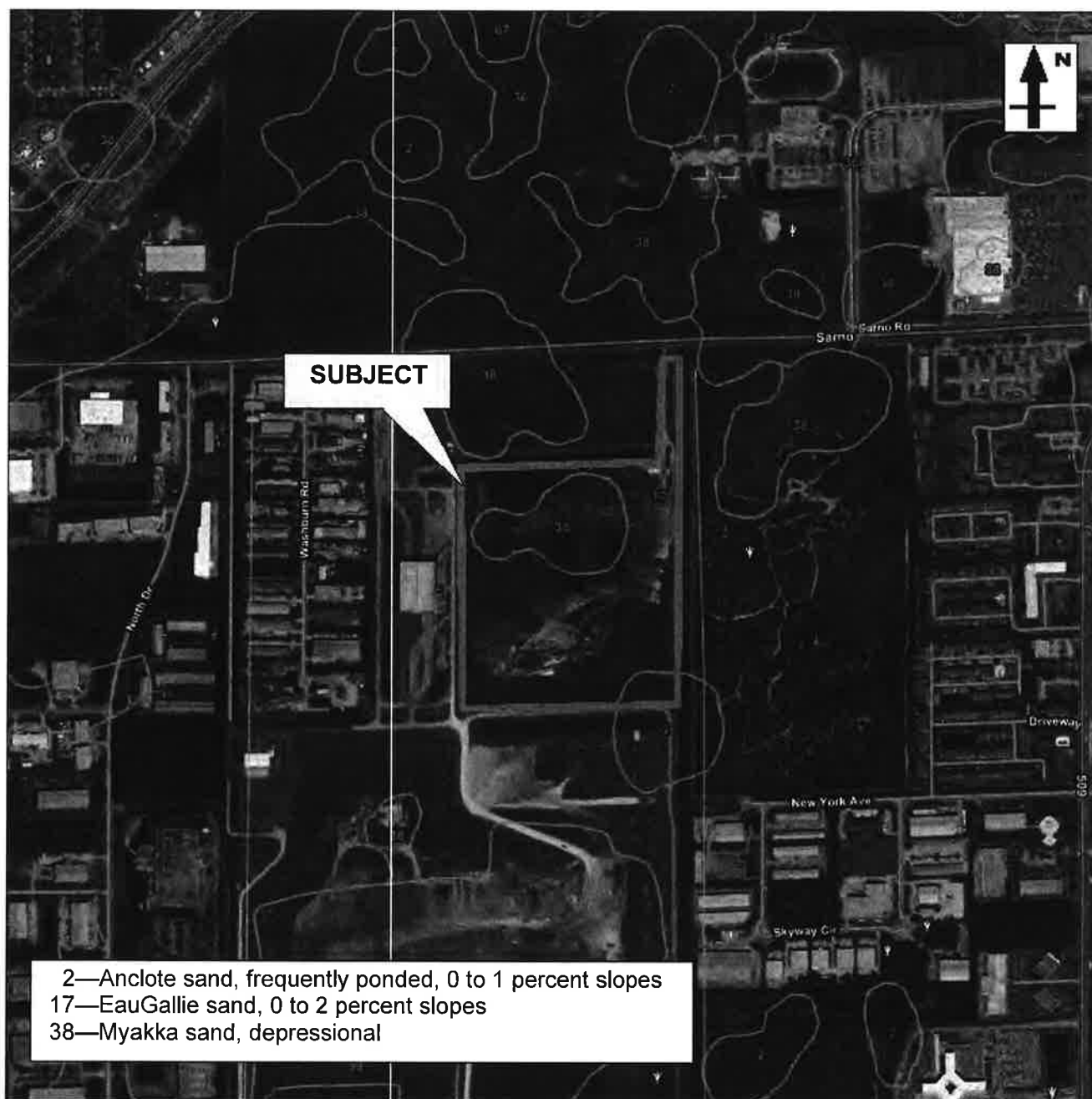


TOPOGRAPHY MAP



Approximate Representation
Source: USGS, Topographical Map

SOIL MAP WITH DESCRIPTIONS



*Approximate Representation
Source: Florida Soil Survey, Brevard County*

FLOOD PLAIN MAP



QUALIFICATIONS OF APPRAISERS

QUALIFICATIONS OF APPRAISER

WALTER N. CARPENTER JR., MAI, CRE

BUSINESS ADDRESS

Pinel & Carpenter, Inc.
1390 Hope Road, Suite 100
Maitland, FL 32751

EDUCATION

University of Florida; Bachelor of Science Degree in Business Administration majoring in Real Estate, 1975.

PROFESSIONAL EDUCATION

Completed the following courses under the direction of the American Institute of Real Estate Appraisers:

- Transferred Value (2020)
- The Appraiser as an Expert Witness: Preparation and Testimony (2019)
- Evaluating Commercial Leases: The Tenant and the Terms Both Matter (2019)
- Supervisory Appraiser/Trainee Appraiser (2018)
- Another View of The Tough One: Comparison Approach for Mixed Use Properties (2018)
- The Tough One: Mixed Use Properties (2018)
- National USPAP Update (2018)
- Florida Law (2018)
- National USPAP Update (2016)
- Florida Law (2016)
- Business Practices & Ethics (2015)
- Supervisory Appraiser/Trainee Appraiser (2015)
- Purchase Price Allocations for Financial Reporting & Tax (2014)
- National USPAP Update (2014)
- Florida Law (2014)
- Business Practices & Ethics (2013)
- National USPAP Update (2012)
- Florida Appraisal Law (2012)
- Financial Crimes Symposium (2011)
- Litigation Appraising: Specialized Topics & Applications (2011)
- The Appraiser as an Expert Witness (2011)
- National USPAP Update (2010)
- Appraisal Curriculum Overview (2010)
- National USPAP Equivalent (2008)
- Business and Ethics (2008)
- Identify & Prevent Real Estate Fraud (2008)
- USPAP Update (2006)
- Eminent Domain (2005)
- USPAP Update (2004)
- Appraisal of Real Estate (2004)
- Separating Real and Personal Property from Intangible Business Assets (2003)
- Condemnation Appraising: Advanced Topics and Applications (1999)
- Litigation Valuation/Mock Trial (1993)
- Litigation Valuation (1992)
- Standards of Professional Practice Exam SPP (1990)
- Litigation Valuation (1987)
- The Electronic Spreadsheet in the Appraisal Office-Seminole Community College (1985)
- Standards of Professional Practice (1984)
- Introduction to R.E. Investment Analysis (1983)
- Urban Properties (1977)
- Capitalization Theory and Techniques (1976)
- Fundamentals of Appraising (1975)

QUALIFICATION OF APPRAISER WALTER N. CARPENTER JR., MAI, CRE
Contd.

SEMINARS ATTENDED

- 2019 Central Florida Real Estate Forum (2019)
- Ignorance Isn't Bliss: Understanding an Investigation by a State Appraiser Regulatory Board or Agency (2019)
- 2018 Central Florida Real Estate Forum: Unity of the Community (2018)
- Appraising for Department of Interior-OVS and other Federal Agencies (2018)
- New Technology for Appraisers (2016)
- Fall Education Seminar Assoc. of Eminent Domain Professionals (2016)
- Online Cool Tools: New Technology for Real Estate Appraisers (2016)
- 2014 Central Florida Real Estate Forum: Unity of the Community (2014)
- Senior Housing & Long Term Care Properties (2014)
- Excel as an Appraiser: Making Your Job Easier Using Excel Spreadsheets (2013)
- Understanding the Loan Quality Initiative & Residential Collateral Data Delivery (2011)
- Investment Firm & Institutional Investor Initiative & Perspectives on RE Valuation (2010)
- Understanding Repurchase Demands & Rebuttal Appraisals (2010)
- Analyzing the Effects of Environmental Contamination (2010)
- Financial Reform Legislation (2010)
- Property Tax Assessment (2010)
- Residential Valuation Trends (2009)
- Valuation for Financial Reporting (2009)
- Analyzing Operative Expenses (2008)
- Analyzing Distressed Real Estate (2008)
- Supervisory/Trainee Roles & Relationship (2008)
- Appraisal Law Update (2008)
- Appraiser Law Update (2006)
- Appraisal Scope of Work (2006)
- Technology III (2006)
- Complex Cures Using Before and After Techniques (2000)
- Technology Forum, Part I (1999)
- Valuing Your Business (1999)
- Case Study Seminar (1999)
- The Globalization of Real Estate (1999)
- Appraisal of Local Retail Properties (1998)
- The Appraisal and Capital Markets (1998)
- Understanding and Using DCF Software (1998)
- The High Tech Appraisal Office (1996)
- The Internet and Appraising (1996)
- Case Law of Eminent Domain (1996)
- Special Purpose Properties-Challenges of Real Estate Appraising/ Limited Markets (1995)
- Understanding Limited Appraisals (1994)
- Core Law Update (1994)
- Appraising Troubled Properties (1992)
- Reviewing Appraisals (1990)
- Persuasive Style in the Narrative Appraisal (1989)
- Standards of Professional Practice Update (1988)
- Applied Appraisal Techniques (1983)
- Applied Statistical Analysis in Appraising (1980)
- Income Capitalization Workshop (1978)
- New Developments in Condemnation (1975)
- H.U.D. Uniform Act of 1970

Completed the following courses and seminars under the direction of the Real Estate Securities and Syndication Institute:

- Applied Real Estate Syndication (1981)
- Syndication Real Estate (1982)
- Real Estate Partnership Administration

August 2020

QUALIFICATION OF APPRAISER WALTER N. CARPENTER JR., MAI, CRE
Contd.

LICENSES

State-Certified General Real Estate Appraiser
License No. RZ1231

Real Estate Broker, State of Florida
License No. BK 0130637

PROFESSIONAL DESIGNATION

Member of the Appraisal Institute, holding the MAI designation, Certificate No. 7567
Member of the Counselors of Real Estate, CRE

EXPERIENCE

President, Pinel & Carpenter, Inc., 1987 to present.
Vice-President, Pinel, Rex & Carpenter, Inc., 1980-1987
Associate and Assistant to Thomas H. Pinel, MAI, 1975-1980.

Active in real estate sales in Orlando since 1974 and in real estate appraising since 1975.

Completed appraisals of military bases, water/wastewater treatment plants, residential, commercial, and industrial properties, citrus groves, and special purpose properties, including office buildings, shopping centers, apartments, condominiums, theaters, restaurants, churches, dance studios, child care centers, etc., prepared for attorneys, accounting firms, banks, Internal Revenue Service, City of Orlando, Orange County, corporations, and individuals since 1975.

MAJOR APPRAISALS

duPont Centre, Church Street Station Entertainment Complex, Disney's Celebration City, LeeVista Center, Airport Industrial Park at Orlando, Hunter's Creek, City of Casselberry Electric & Distribution System, City of Port St. Lucie Water & Waste Water System, City of New Smyrna Water & Waste Water System, Eastern Subregional Waste Water Treatment Plant, Fairbanks Avenue Widening, Oak Ridge Road Widening, Conroy-Windermere Road Widening, Old Winter Garden Road Widening, and Forsyth Road Widening, Naval Training Center at Orlando, the Charleston Navy Base, City of Winter Park Utilities System, Gulfstream Properties Natural Gas Pipeline, Universal Studios – MCA Parcels

PROFESSIONAL SERVICE

- NFIB, National Federation of Independent Business, Leadership Council
- Member of The Counselors of Real Estate, 2003 to present
- Executive Committee, Urban Land Institute, 2000 to 2012
- National Board of Directors, Appraisal Institute, 2001 - 2004

**QUALIFICATION OF APPRAISER WALTER N. CARPENTER JR., MAI,
CRE Contd.**

- Executive Committee, Appraisal Institute, 2003 -2004
- National Committee of Regional Chairs, Chairman Appraisal Institute, 2004
- National Chairman, Government Relations Committee, Appraisal Institute, 2000 - 2001
- Vice Chairman, Government Relations Committee, Region X, Appraisal Institute, 1997 - 2000
- Chairman, Government Relations Committee, Appraisal Institute, East FL Chapter, 1994 - 1999
- President, East Florida Chapter Appraisal Institute, 2001
- Vice-President, East Florida Chapter Appraisal Institute, 1999
- Treasurer, East Florida Chapter Appraisal Institute, 1998
- Secretary, East Florida Chapter Appraisal Institute, 1997
- Director, East Florida Chapter Appraisal Institute, 1996 to 2002
- Member of the Legislative Committee, Home Builders Association of Mid-Florida, 1985 - 1999
- Member of the Legislative Committee, Greater Orlando Association of Realtors
- Alumni Relations Director, Florida Blue Key Alumni Association of Central Florida
- Member of the Real Estate Securities and Syndication Institute
- Member of the Central Florida Investment Council
- Chairman, Education Committee, Greater Orlando Association of Realtors, 1988
- Director, The Economic Club of Orlando, 1985-1988
- Member of the Real Estate Advisory Board, Center for Real Estate Studies, University of Florida, Warren College of Business, 2001 to present
- Member of the National Federation of Independent Business Florida Chapter
- Member of the Association of Eminent Domain Professionals,
- Member of The Executive Committee (TEC), 2003 to 2012
- Member of US Chamber of Commerce
- Member of Orlando Regional Chamber of Commerce
- Moderator of Linear Rights-of-Way Workshop, Washington, DC, December 2001

COMMUNITY SERVICE


- Member, State of Florida Employer-Sponsored Benefits Study Task Force, 2013-2014
- President, Central Florida Fair, 2000-2002
- Director, Central Florida Fair, 1992 to present
- Chairman, Last Wave Committee, House of Hope, 1999
- Chairman, Stewardship Committee, St. Michael's Episcopal Church, 1998, 2009, 2010
- Chairman, Search Committee, St. Michael's Episcopal Church, 2014
- Ninth Judicial Circuit Grievance Committee Member, 1998 – 2000
- Director, Christian Service Center, 2008-2013
- Treasurer, Christian Service Center, 2013
- Director, Canterbury Episcopal Retreat & Conference Center, 1996 - 2000
- Director, Winter Park YMCA, 1987-1991
- Vestry, St. Michael's Episcopal Church, 1979-1981; 1989-1992
- President, Board of Directors, Big Brothers and Big Sisters of Central Florida, Inc., 1979
- Director, Big Brothers of Greater Orlando, Inc., 1977-1979
- Member of Committee of 100 Orange County
- Board of Directors, Committee of 100 Orange County, 2014
- Member of Florida United Business Association
- Member of The Leadership Trust NFIB

Walter N. Carpenter

State of Florida


Department of Business and Professional Regulation

License



RICK SCOTT, GOVERNOR


JONATHAN ZACHEM, SECRETARY



STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
FLORIDA REAL ESTATE APPRAISAL BD
THE CERTIFIED GENERAL APPRAISER HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 475, FLORIDA STATUTES

CARPENTER, WALTER N JR
1390 HOPE ROAD SUITE 100
MAITLAND FL 32751

LICENSE NUMBER: RZ1231
EXPIRATION DATE: NOVEMBER 30, 2020
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QUALIFICATIONS OF APPRAISER

KEVIN M. EATON

BUSINESS ADDRESS

Pinel & Carpenter, Inc.
1390 Hope Rd., Suite 100
Maitland, Florida 32751

EDUCATION

Bachelor of Science Degree (Real Estate), 2008, The Florida State University, Tallahassee, Florida, 2008

Bachelor of Science Degree (Entrepreneurship and Small Business Management), 2008, The Florida State University, Tallahassee, Florida, 2008

LICENSES

State-Certified General Real Estate Appraiser
License No. RZ3677

Real Estate Broker, State of Florida
License No. BK3315857

PROFESSIONAL EDUCATION

- Advanced Concepts and Case Study (2019)
- Condemnation Appraising: Principals and Applications (2019)
- 7-Hour USPAP Update (2018)
- 3-Hour Law Update (2018)
- Central Florida Real Estate Forum (2018)
- Three Hour Florida Law (2018)
- Advanced Market Analysis/ Highest & Best Use (2017)
- 7-Hour USPAP Update (2016)
- 3-Hour Law Update (2016)
- Business Practices and Ethics (2016)
- Three Hour Florida Law (2016)
- National USPAP Update (2016)
- Advance Income Capitalization (2015)
- Appraiser as an Expert Witness: Preparation & Testimony (2012)
- General Appraiser Market Analysis and Highest and Best Use (2010)
- Statistics, Modeling and Finance (2010)
- General Appraiser Sales Comparison Approach (2010)
- General Appraiser Site Valuation and Cost Approach (2010)
- General Appraiser Income Approach (2009)
- General Appraiser Report Writing and Case Studies (2009)
- Florida Laws and Rules (2009)
- Roles and Responsibilities of Supervisors and Trainees (2008)
- The Florida State University - Real Estate Trends Conference 2008

QUALIFICATIONS OF APPRAISER KEVIN M. EATON

(CONTD.)

EXPERIENCE

Nov. 2014 to Date - Staff Appraiser, Pinel & Carpenter, Inc.,

1390 Hope Road, Suite 100, Maitland, FL 32751

Aug. 2008 – Nov. 2014 - Associate Appraiser, Calhoun, Dreggors & Associates, Inc.,

728 W. Smith Street, Orlando, FL 34704

MAJOR APPRAISALS

Clients served include: Bank of America, New Traditions Bank, BB&T, IberiaBank, Florida Department of Transportation, Greater Orlando Aviation Authority, Central Florida Expressway, Osceola County, Orange County, City of Kissimmee, City of Altamonte Springs, Shutts & Bowen, Orange County School Board, Broad & Cassel, Lowndes, Drosdick, Doster, Kantor & Reed, P.A., Dean Mead, Gray Robinson, et. al.

APPRAISAL EXPERIENCE

Appraisal experience includes narrative and form report writing of commercial & residential vacant land, apartment complexes, automobile dealerships, condemnation/ eminent domain, litigation, mobile home parks, shopping centers, regional enclosed shopping malls, retail buildings, industrial buildings, office buildings, churches, educational facilities, financial institutions, conservation land, proposed residential subdivision properties, industrial sites and form report writing of residential properties.

PROFESSIONAL AFFILIATIONS

Candidate for Designation, Appraisal Institute

East Chapter Member, Appraisal Institute

**QUALIFICATIONS OF APPRAISER
KEVIN M. EATON**

(CONTD.)





**MELBOURNE LANDFILL AND RECYCLING CENTER
(AKA FLORIDA RECYCLERS OF BREVARD, LLC)
LANDFILL EVALUATION**

Brevard County Solid Waste Management Department | June 2018

**MELBOURNE LANDFILL AND RECYCLING CENTER
(AKA FLORIDA RECYCLERS OF BREVARD, LLC)
WACS ID 18444**

**LANDFILL EVALUATION
TASK ORDER 17-01**

Prepared for:

Brevard County
Solid Waste Management Department
2275 Judge Fran Jamieson Way, Bldg. A Suite 118
Viera, Florida 32940

Prepared by:

Jones Edmunds & Associates, Inc.
730 NE Waldo Road
Gainesville, Florida 32641

Certificate of Engineering Authorization #1841

Jones Edmunds Project No.: 08705-048-01

June 2018

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EXECUTIVE SUMMARY

The Brevard County Solid Waste Management Department (SWMD) contracted with Jones Edmunds to evaluate the regulatory, economic, and environmental liability of the privately owned and operated Melbourne Landfill and Recycling Center (aka Florida Recyclers of Brevard, LLC). This private facility is adjacent to the County's Sarno Road Class III Landfill and the Sarno Road Transfer Station as shown in Figure 1, Overall Area Plan. The site is permitted by the Florida Department of Environmental Protection (FDEP) as a Construction & Demolition (C&D) debris recycling and disposal and yard trash processing facility.

The goals of this preliminary engineering evaluation are to review the existing design and regulatory conditions of the Florida Recyclers facility and to identify the risks and benefits related to operation of the facility and any further expansion. Jones Edmunds reviewed and evaluated the following:

- Solid Waste Permitting History
- Overall Facility Operations
- Financial Assurance Documentation
- FDEP Environmental Resource Permit (ERP) History
- Permitted Stormwater Management System
- Historical Water Quality and Gas Monitoring Data
- Current Volume and Lifespan Analysis of the Facility
- Valley Fill Expansion Option

This evaluation is based on publically available data and information, and Jones Edmunds used the FDEP Oculus Database and FDEP Water Permitting Portal to obtain historical documentation. This evaluation does not consider permitting documentation that may be maintained by the St. Johns River Water Management District (SJRWMD) for the facility. Jones Edmunds also reviewed the City of Melbourne Conditional Use Permit (CUP) granted for the Sarno Road Class III Landfill and the 2017 aerial topographic survey performed by Pickett and Associates provided by the County. Jones Edmunds understands that the Florida Recyclers facility is also regulated by a City of Melbourne CUP, but a copy of the permit was not available at the time of this review.

The Florida Recyclers of Brevard, LLC is recorded as the owner of two parcels of property¹, approximately 45 acres total, with about 36 acres permitted as disposal area. The facility started operations in 1998 as an unlined C&D debris disposal facility. In 1999, the facility converted to a Class III landfill; and in 2014, the facility filed a permit application requesting classification as a C&D debris and recycling facility. FDEP granted the facility a 10-year operation permit as a C&D facility, but required the site continue to monitor groundwater, surface water, and landfill gas in accordance with Class III landfill guidelines. The 2014 change in designation from a Class III landfill to a C&D debris disposal facility resulted in the facility being required to stop using an escrow account for financial assurance and to pursue to an alternate method. In March 2017 FDEP issued the facility a

¹ Parcel Nos. 27-36-24-00-507 (25.05 acres) and 27-36-24-00-508 (19.7 acres).

Consent Order for failure to provide proof of an alternate financial assurance mechanism (i.e. a trust fund). According to a verbal discussion with FDEP, the site has an approved Trust Fund in place.

The sequence of ERPs for this facility on FDEP databases is incomplete, particularly with regard to property ownership and easements. A complete timeline of the site's stormwater permitting history could not be developed. The February 2000 ERP application included a proposed wetland mitigation plan for parcels purchased for the expansion of the landfill to its current footprint. **Jones Edmunds found documentation confirming the completion of the wetland mitigation activities in August 2001.**

Jones Edmunds compared the 2017 inflated costs against the closure and long-term-care cost estimates for the 2017 Sarno Road Class III Landfill costs, on a cost-per-acre basis. **In our opinion, the cost per acre for closure is low, based on our experience with recent significant increases in construction costs.** In addition, the closure cost estimate is based on a clay-soil final closure system.

The operation permit states that the facility accepts on average 200 tons per day. Based on Solid Waste Quantity Reports submitted over the last 4 years, the site has landfilled approximately 105 tons per day. The facility's primary incoming waste stream is new construction debris and vegetative waste.

Several down-gradient groundwater monitoring wells and shallow surficial wells appear impacted by the facility. The sources of the elevated groundwater monitoring parameters may be attributed to the type of materials processed at the facility and modest management of sediment and erosion control at the site. **There is no evidence of landfill gas migration at the site.**

Our estimate of the remaining lifespan of the 34-acre landfill using Florida Recyclers current landfilling rates is approximately 35 years to its permitted buildout elevation of 104 feet. However, the facility appears to be limited by a City ordinance restricting the buildout elevation to 40 feet above natural grade. Based on this limitation, **the estimated lifespan to a buildout elevation 64 feet is 14 years.**

To obtain additional airspace, Jones Edmunds explored the option of constructing a valley fill expansion to merge the facility with the Sarno Road Class III Landfill. The proposed expansion area would require a 60-mil minimum high-density polyethylene (HDPE) bottom liner and geosynthetic clay liner (GCL) system and a primary leachate collection and removal system. The estimated construction cost of this additional capacity is approximately \$300,000 per acre – refer to Section 9, Supplemental Information, for cost information. Assuming Sarno's current landfilling rates, the County could expect to gain approximately 4 to 9 years of additional disposal capacity from the valley fill option. The valley fill airspace, plus remaining capacity at the Florida Recyclers facility, could provide about 8 to 20 years of additional capacity at the Sarno current landfilling rate.

In general, the stormwater system appears to be adequate for the permitted design of the existing facility. The as-built construction should be confirmed. If permitted design conditions change (e.g., valley fill design), the stormwater system and groundwater monitoring network will need to be modified.

Based on our review, the facility appears to be operating in a manner consistent with its permit and applicable regulatory guidelines. Based on our evaluation, the following items were identified and should be given further consideration:

- Jones Edmunds could not confirm that the stormwater system is constructed as designed and permitted.
- The obstacles that the County may face in obtaining a height variance as described in the City of Melbourne CUP for the Sarno Road Landfill are unclear. It would be prudent to review a copy of Florida Recyclers facility's CUP to determine whether a height variance is possible and whether any restrictions have been placed on the facility with regard to dates of closure, or additional operational conditions.
- In Jones Edmunds' experience, unlined disposal facilities exhibit higher environmental risk. The environmental liability of this facility is unclear.
- Evidence of groundwater contamination exists at this facility. The source and long-term risk posed by this evidence may require further evaluation.
- If the County were to pursue the valley fill expansion option, the cost benefit results of constructing the expansion area (including requirements for a bottom liner, leachate collection system, stormwater redesign) compared to the additional capacity obtained for Class III waste disposal may be unfavorable if limited by City restrictions.
- The property could be valuable if the County wanted to pursue the continued operation of the facility as primarily a recycling and yard waste processing center.

1 INTRODUCTION

The Brevard County Solid Waste Management Department (SWMD) contracted with Jones Edmunds to evaluate the regulatory, economic, and environmental status of the privately owned and operated Melbourne Landfill and Recycling Center (aka Florida Recyclers of Brevard, LLC). This privately owned facility is at 3351 Sarno Road, Melbourne, Florida, adjacent to the County's Sarno Road Class III Landfill and the Sarno Road Transfer Station as shown in Figure 1, Overall Area Plan, and Figure 2, Site Plan. The site is permitted by the Florida Department of Environmental Protection (FDEP) as a Construction & Demolition (C&D) debris recycling and disposal and yard trash processing facility.

Considering its proximity to the Sarno Road Class III Landfill and Transfer Station, SWMD is performing due diligence with this preliminary evaluation of the facility to determine the risks and benefits related to operating the facility and any future expansions.

The goals of the evaluation were to review the existing design and regulatory conditions of the Florida Recyclers facility and to identify potential benefits and items of concern or risks to the County related to its continued operation and potential expansion and incorporation into the Sarno Road Class III Landfill. Jones Edmunds reviewed and evaluated the following:

- The permitting history and general operations data.
- The financial assurance documentation.
- The last 5 years of groundwater and landfill gas monitoring data.
- The stormwater management system and permit history.
- The volume and lifespan analyses for the existing site and for possible expansion/merger with the Sarno Road Class III Landfill.

This evaluation did not include a site visit, field investigations, or an evaluation of costs to operate the facility. This evaluation is not intended to provide a real estate value of the property. Jones Edmunds' evaluation was based on publicly available data and information. The information in this report presents our general findings and recommendations.

2 BACKGROUND

Florida Recyclers of Brevard, LLC is recorded as the owner of two parcels of property² that make up the facility for a total area of approximately 45 acres, with about 36 acres permitted as disposal area. The facility started operations in 1998.

Jones Edmunds reviewed publicly available information from FDEP's Oculus (Electronic Document Management System) database. In accordance with our review of these documents, the permitting and regulatory history of the site is as follows:

- **1998:** 20-acre unlined C&D debris disposal facility permitted.
- **1999:** Landfill expansion to 36 acres (unlined) and site converted to Class III Landfill.

² Parcel Nos. 27-36-24-00-507 (25.05 acres) and 27-36-24-00-508 (19.7 acres).

- **1999:** Site applied for a Materials Recovery Facility permit (FDEP Permit No. SO 05-0133456-005 MRF).
- **2005:** Permit renewed (FDEP Permit No. SO 05-0133456-006 Class III and -007 MRF).
- **2010:** Permit renewed (FDEP Permit No. SO 05-0133456-008 Class III and -009 MRF).
- **2014:** Intermediate permit modification and renewal application (FDEP Permit No. SO 05-0133456-010); permit modification requested to go back to a C&D debris and recycling facility; 10-year permit issued (expires June 1, 2024).
- **May 2015:** Order granting Variance issued by FDEP to allow for continued use of escrow account while seeking an alternative financial assurance mechanism for closure. Variance allowed for 12 months to secure an alternative financial mechanism.
- **August 2015:** Gas monitoring and reporting requirements were revised by FDEP to meet rule requirements.
- **June 2016:** Request by Owner to extend the Order granting Variance denied.
- **March 2017:** Consent Order OGC File No.: 16-1272 issued.
- **April 2017:** Permit modified to incorporate relevant actions from the Consent Order.

Florida Recyclers currently operates the facility under a 10-year operation permit for a C&D debris disposal landfill and recycling facility. At the time of application, Florida Recyclers paid one installment of the permit renewal fee; the 2nd installment payment of \$2,500 is due by May 31, 2019.

The site's stormwater is managed in accordance with FDEP ERP No. 05-10333455-002-EI.

In addition to its permitted disposal/recycling/yard processing operations, the facility also operates the Simply Organic Lawn and Garden Center at the site. According to their website³ they are a full-service lawn and garden center that provides organic mulches, soils, and fertilizers that are processed and sold on site.

3 SOLID WASTE OPERATIONS

The Florida Recyclers of Brevard, LLC disposal facility was initially designed and permitted as an unlined C&D debris disposal facility in 1998. Upon conversion to a Class III landfill in 1999, FDEP required that the facility perform water quality and landfill gas monitoring in accordance with Class III landfill requirements in effect at that time. In 1999, bottom liners and leachate collection systems were not required for Class III landfills. The requirements have since changed and these are now required for new or expanded Class III landfills.

In accordance with Rule 62-701, FAC, Class III and C&D debris is defined as follows:

62-701.200(14) "Class III waste" means yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, furniture other than appliances, or other materials approved by the Department, that are not expected to produce leachate that poses a threat to public health or the environment.

³ www.simplyorganiclawnandgardencenter.com

62-701.200(24) "Construction and demolition debris" means discarded materials generally considered to be not water soluble and non-hazardous in nature, including but not limited to steel, glass, brick, concrete, asphalt material, pipe, gypsum wallboard, and lumber, from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure, including such debris from construction of structures at a site remote from the construction or demolition project site.

In 2014, the permittee requested to convert back to a C&D debris disposal facility because the site did not receive Class III waste and the incoming waste stream was primarily from new construction sites and vegetative waste. The solid waste operation permit was modified, but FDEP continued to require the permittee to monitor groundwater, surface water, and landfill gas per Class III landfill guidelines (as described in Section 6.0). FDEP also required that the facility's closure design be in accordance with Class III closure requirements (closure with a barrier layer, 24-inches of protective cover soil, and vegetation). The Operating Permit expires on June 1, 2024.

According to the permit drawings, the approximate natural grade on the site is at elevation 25 feet NGVD 29. The bottom of waste is at approximately elevation 24.4 feet. The setback requirements of 100 feet from the property boundary for Class III landfills was reduced to 50 feet because of the adjacent Sarno Road Class III Landfill and Sarno Road Transfer Station. The majority of the waste appears to be landfilled on the south portion of the site, and there are piles of mulched material placed on the north half of the site. Based on the current recycling and processing operations at the site, it is unclear if the entire permitted footprint area has landfilled waste.

Waste is monitored and recorded at the facility scale house. The site's 2014 Operation Plan states that recyclable materials from construction waste and vegetative waste are recycled and that non-recyclable construction debris is landfilled. The site does not currently accept CCA pressure-treated wood for disposal. However, CCA-treated wood was likely accepted for disposal in the past before FDEP's prohibition regarding disposal of this waste in unlined landfills. The 2014 Operation Plan noted that "any CCA pressure-treated wood (telephone poles) currently stored on site will be removed within 6 months from permit issuance." The facility is also authorized to process yard trash. Residential yard waste is processed into landscaping mulch and topsoil.

The facility has 10 groundwater monitoring wells and one surface water sampling point; monitoring and sampling are performed semi-annually. The facility also monitors landfill gas migration quarterly at the perimeter landfill gas probes and within structures on the property.

The Operating Permit states the facility accepts on average 200 tons per day. Based on our review of tonnage data over the last 4 years, the site has accepted on average of about 105 tons per day.

4 FINANCIAL ASSURANCE AND CONSENT ORDER REVIEW

The permittee previously maintained an escrow account for the closure financial assurance of the site. FDEP rules originally allowed this for private- and government-owned facilities. However, due to rule changes and changes in the facility's designation from a C&D facility to Class III to C&D, an escrow account is no longer a viable option for privately owned C&D facilities.

In 2014, FDEP approved the Florida Recyclers of Brevard's intermediate permit modification and renewal application that requested the designation of the facility be changed from a Class III landfill to a C&D debris disposal facility. This change meant that their escrow account no longer met the requirements of Chapter 403.707(9)(c), FAC, which states that escrow accounts may not be used as a mechanism to provide financial assurance for closure of a C&D facility. The facility Operating Permit (issued July 28, 2014) required that Florida Recyclers replace the escrow account with an alternative, acceptable financial assurance mechanism. In accordance with our review, the following legal actions were initiated between Florida Recyclers and FDEP:

- **Application for Variance, October 20, 2014:** Florida Recyclers requested a 2-year variance for continued use of the funded escrow account to prevent economic hardship while searching for an alternate mechanism.
- **Variance Request Granted, May 22, 2015:** FDEP approved Florida Recyclers application for variance (OGC File No. 14-0657) for a period of 12 months (expiration date – May 22, 2016).
- **FDEP Notice Letter, September 16, 2015:** FDEP determined that the 2014 escrow account balance was underfunded by approximately \$5,000 and requested that a deposit be made to adequately fund the closure account within 30 days.
- **FDEP Warning Letter, June 10, 2016:** FDEP issued a letter stating that Florida Recyclers failed to meet the May 22, 2016 deadline for providing an alternate financial mechanism and was in violation of Rules 62-701.730 and 62-701.630, FAC.
- **Variance Extension Request Denied, June 17, 2016:** FDEP denied Florida Recyclers' request to extend the time allotment granted by the 2015 variance up to 24 months. FDEP deemed a new application for variance would be required to request additional time.
- **Consent Order Issued, March 29, 2017:** FDEP issued Consent Order (OGC No. 16-1272) against Florida Recyclers for failing to provide an alternate financial assurance mechanism. The solid waste permit was then modified to include relevant actions of the Consent Order into the permit.

The issued Consent Order required the facility to initiate a Trust Fund as proof of financial assurance and to make annual payments of \$100,000 (plus any and all applicable trustee fees and expenses) to the Fund by January 5 beginning in 2018. Among other conditions, the facility is required to submit an updated Closure and Long-Term-Care Cost Estimate every 5 years in accordance with the applicable conditions of Rule 62-701.630, FAC. The cost estimate is due in 2019. Based on a verbal conversation with FDEP a Trust Fund has been established as an alternate funding mechanism.

The most recently submitted closure cost estimate from Florida Recyclers was approved by FDEP in April 2017 – estimated \$2.62 million for closure of 35.31 acres, and estimated

\$382,000 over 5 years for long-term care of 44.72 acres. Jones Edmunds compared the facility's 2017 inflated costs against the closure and long-term-care cost estimates for the Sarno Road Landfill most recently submitted in 2017, on a cost-per-acre basis. Table 1 provides the comparison figures.

Table 1 Closure and Long-Term Care Cost Estimate Comparison

	Closure Cost Estimate (\$/acre)	Annual Long-Term- Care Cost (\$/acre)
Florida Recyclers Facility (2017)	\$74,100	\$1,700
Sarno Road Class III Landfill (2017)	\$188,000	\$2,000

The permitted closure design plan for the facility provides two final cover system options, which are the installation of a geosynthetic clay liner cap or a 36-inch soil closure (18 inches of clay and 18 inches of soil). The closure cost estimate accounts for a clay-soil cover but not a geosynthetic clay liner closure cap. **Based on our experience and with recent significant increases in construction costs, it is our opinion that the cost per acre for closure is insufficient. Therefore, it is probable that the Trust Fund is underfunded.**

5 STORMWATER PERMITTING REVIEW

Jones Edmunds reviewed the facility's stormwater management system and permits, as found on the Florida Water Permitting Portal (<http://flwaterpermits.com/>). In general, the information provided on the website appears incomplete, particularly with regard to property ownership and easements. Jones Edmunds did not contact FDEP to clarify the questions that arose during our review. The focus of our review was on the stormwater system; the stormwater system design appears adequate for the final landfill design.

5.1 STORMWATER PERMIT DOCUMENT REVIEW

The facility site name is the "Florida Recyclers of Brevard." However, the Florida Water Permitting Portal shows it as the "Sarno Road Industrial Complex" and that website links to the FDEP Nexus portal, which lists the Environmental Resource Permit (ERP) documents related to the expansion and modification of the landfill as listed in Table 2.

Table 2 ERP History for the Sarno Road Industrial Complex

Permit Number	Facility Name	Date	Expiration Date	Description
0133455-001SI	Florida Recyclers of Brevard, Inc.	12/11/1997		Permit for Cell 1.
0133455-002EI	Florida Recyclers of Brevard, Inc.	02/08/2000	01/07/2005	Permit for Cell 1 expansion and a wet detention pond.
0133455-004EI	Florida Recyclers of Brevard/Sarno Road Industrial Complex	08/21/2007	08/20/2012	Permit Application for Sarno Industrial Subdivision on parcel north of the landfill.

The 0133455-001SI permit was for the original site and stormwater system, as shown in Figure 3 (Parcel 27-36-24-00-507). Jones Edmunds reviewed the design drawings and calculations submitted in the application package. The original design for the 25.05-acre parcel was for the front entrance and a 20-acre landfill (Cell 1) as shown in Figure 3. Stormwater treatment was provided by a "retention" area on the west, south, and east sides of the cell. The drawings refer to a retention pond, but the calculations refer to a wet detention pond. Typically, retention ponds are dry and rely on percolation to recover the treatment volume. Wet detention ponds are typically excavated 8 to 12 feet into the groundwater table to create a permanent pool of water. The wet detention pond at this facility has a mean depth of 2.82 feet; significantly less than the typical depth. Wet detention ponds have an engineered control structure to "detain" the treatment volume and slowly release it over time.

The 0133455-002EI permit allowed the landfill to expand to the current footprint and included the construction of a perimeter wet detention pond (labeled as a "retention" pond on the design drawings). The plans provided with the ERP application show new wet detention ponds on the north, northwest, east, and south sides of the landfill, and the grading indicates the "retention" pond on the southwest side remained unchanged. Figure 4 shows the ERP application design drawing for the full buildout georeferenced to an aerial.

Jones Edmunds evaluated the stormwater system described in the 0133455-002EI permit as the current condition for the landfill. We reviewed and compared the following:

- The design drawings and calculations submitted in the application package for 0133455-002EI.
- The wetland delineation and mitigation described in the application package for 0133455-002EI.
- The current aerial and the current digital elevation model (DEM) from LIDAR for Brevard County.
- The FEMA special flood hazard areas as provided online through the FEMA Map Service Center.

The design was for a 36-acre landfill cell (44.46-acre site), surrounded by interconnected wet detention ponds, with a direct discharge to the L-16 Canal. The curve number for the landfill cell is 80, which is equivalent to a grass field in good condition. This curve number is within the typical range for a landfill that will be closed with a soil and grass cover. The wet detention pond was designed to provide:

- 3.54 acre-feet (ac-ft) of water quality treatment volume.
- 4.08 ac-ft or permanent pool volume.
- A control structure with a 5-inch circular bleed-down orifice at elevation 22.50 feet National Geodetic Vertical Datum (ft NGVD) (the seasonal high water table [SHWT]), and a 4.5-foot rectangular weir with an invert of 23.26 ft NGVD.
- A pond bottom elevation at 17.0 ft NGVD.
- A mean pond depth of 2.82 feet.

Based on our review of the aerial, the stormwater system appears roughly the same size as designed. The design is adequate for a final cover of grass in good condition, with 8 to 12 inches of permeable soil. The as-built documentation was completed by Timothy C. Jelus, PE, of Jelus Engineering, Inc., and was submitted to FDEP on August 24, 2001.

The permit application for ERP 0133455-002EI also included a discussion of wetland mitigation. Figures 3 and 4 show the Cell 1 expansion with the wetland that was impacted by the construction of the Cell. FDEP issued a letter to William Kerr, of BKI, Inc., dated June 25, 2001, which stated that the preservation acquisition mitigation requirements for permit 133455-002 had been satisfied; and that the conditions of the permit modification 133455-003 had been fulfilled. The letter goes on to provide authorization for the escrow agent to release the security funds. Jones Edmunds was able to locate the permit modification conditions file 133455-003. **This documentation confirms satisfactory completion of the mitigation requirement for the facility.**

Jones Edmunds also compared the current aerial and Brevard County light detection and ranging (LiDAR) data to the permitted design drawings, see Figure 5. The LiDAR data is displayed as a range of colors with each color corresponding to a specific elevation. If the landfill was constructed according to the plans, the colors would align with the contours. The facility's current operation is primarily recycling and yard waste processing. The side slopes are not uniform or at the design elevation. It is very important to note that an ERP is based on the design of the final grades of the closed landfill. Therefore, noting that the current landfill grades are not the same as the ERP does not indicate that the landfill operation is violating their permit. Rather, it indicates that work needs to be done to achieve the final grade that was permitted in the ERP. **In general, the stormwater system has the same top-of-bank footprint as depicted in the permitted design drawing. The actual depth of the system compared to the permitted design cannot be determined without survey.**

The landfill site is not within a flood hazard area. Figure 6 shows the Federal Emergency Management Agency (FEMA)-approved Flood Insurance Rate Map for the area. The area shaded in brown indicates the special flood hazard area. The landfill is outside of the designated flood hazard area.

In 2007, Florida Recyclers applied to FDEP to modify their permit, 0133455-004EI, to construct the "Sarno Road Industrial Complex" on the parcel to the north of the landfill (see Figure 7). The permit application discussed expanding the landfill's stormwater treatment ponds to provide treatment for the proposed development and mitigating the impact to a wetland on the parcel. FDEP did not issue the permit. In 2010, the west side of the parcel to the north of the facility, which includes wetlands, was deeded to the City of Melbourne; and in 2012, the east side of the parcel to the north of the facility was sold to Liberty Investments of Brevard, LLC.

5.2 ERP GENERAL OBSERVATIONS

In general, the stormwater system appears adequate for the design. If the permitted design conditions were to change (such as using steeper slopes or a more impervious cover such as a geomembrane), the stormwater management system would need to be modified and re-permitted.

The ERP application and drawings did not include a detailed sediment and erosion control plan. Although the site is primarily operating as a recycling and yard waste processing facility, sediment control is generally recommended. Jones Edmunds expects that the stormwater system will have accumulated sediment from the landfill operations and will need some excavation to restore the design elevations.

6 WATER QUALITY AND LANDFILL GAS MONITORING DATA REVIEW

6.1 BACKGROUND

The groundwater monitoring network at the Florida Recyclers facility consists of 10 groundwater compliance wells installed in the surficial aquifer, one surface water monitoring point, and 10 landfill gas monitoring probes. The water quality monitoring and reporting are subject to the Class III landfill requirements, Rule 62-701.510, FAC. Groundwater and surface water quality monitoring is conducted semi-annually; samples are analyzed for field and laboratory parameters as defined in Appendix 3 of the current solid waste operations permit.

Based on a technical report dated May 2015, prepared by Universal Engineering Sciences for Florida Recyclers, there is a containment wall (running north south) adjacent to the drainage canal between the facility access road and the scale house as a means of keeping potential contaminants within the landfill. The report states that the wall is constructed of relatively impermeable clay and approximately 2 feet wide by 4 feet deep. The report did not provide the length of the wall. However, in 2010 FDEP questioned the existence of the wall since no as-builts or evidence of a sealed slurry wall/confining layer was provided. FDEP stated even if the purported "clay layer" were a "confining clay" it would not be much good as the well screenings crossed it; therefore, whatever is in their ground water or surface water pond could seep into the L-16 canal.

A technical report was due in August 2017. We are unable to locate that report on the FDEP Oculus site.

6.2 GROUNDWATER MONITORING NETWORK

The compliance groundwater monitoring wells are along the perimeter of the landfill and are identified as MW-2, MW-4R, MW-5R, MW-6R, MW-7, MW-8, MW-9R, MW-10, MW-11, and MW-12. The total well depths range from 14.8 to 16.6 feet below land surface with 10-foot screen intervals. Wells MW-9R, MW-10, and MW-11 are up-gradient. Groundwater flow at the site is generally south to southeast although flow appears to vary over time.

6.2.1 GROUNDWATER MONITORING WELLS

Jones Edmunds reviewed the last 5-years' groundwater monitoring data for the facility. We also reviewed the background groundwater monitoring well MW-16S at the adjacent Sarno Road Class III Landfill (WACS ID 16255), and used that data as the control for comparison. The Sarno Class III Landfill well MW-16 is also installed in the shallow surficial aquifer with a total well depth of 15.5 feet below land surface with a 10-foot screen interval.

The groundwater monitoring results for the past 5 years for all wells at the facility were statistically compared to the past 5 years of data for the Sarno Class III Landfill background well MW-16S using calculated control ranges. Any parameters with a result reported above the laboratory detection limit at the facility were included in the comparison. For the parameters included, any result reported as below the laboratory detection limit was replaced with half the detection limit for statistical calculation purposes. An average 5-year concentration for each selected parameter was calculated for MW-16S along with an outer control limit (the average plus three times the standard deviation). The 5-year average result for each well and selected parameters at the facility were compared to the associated outer control limit for MW-16S. Summary tables are included in Attachment A. The tables summarize results reported above groundwater protection standards for the past 5 years at the Florida Recyclers and Sarno Road Class III Landfill background well MW-16S. The following results were noted:

- Melbourne Landfill wells MW-2, MW-4R, MW-5R, and MW-6R have multiple indicator and metals parameters with results that are statistically different than those reported for background well MW-16S.
- Sodium in wells MW-7 through MW-12 is statistically higher than that reported in MW-16S; however, the concentrations are relatively low level (by a factor of 10) compared to MW-2, MW-4R, MW-5R, and MW-6R.
- Although Chromium results are for wells MW-2 and MW-7 through MW-12 appear to be outside the control range, this is an artifact of the calculation. Chromium was actually below the laboratory detection limit for the entire report period in these wells. However, the detection limit for the Melbourne wells was 4.5 micrograms per liter (µg/L) and the detection limit for MW-16S was 2.5 µg/L, resulting in a false positive bias for samples with a high number of non-detects. Results for Zinc have the same false positive bias.
- The only volatile organic carbons (VOCs) reported above detection limits for the facility during the past 5 years were a single report of low-level 1,2-Dibromo-3-Chloropropane in MW-10 plus random low-level Acetone and Chloromethane in multiple wells. Acetone and Chloromethane are common laboratory cross-contaminants.
- Sulfate and Aluminum are not sampled at the Sarno Class III landfill, and results for the facility wells are compared to groundwater standards only.

In addition to the control range comparison, historical linear-regression trend analysis graphs were also prepared. The following trends were noted:

- Increasing Conductivity, Total Dissolved Solids (TDS), Ammonia-Nitrogen, Chloride, and Sodium in MW-2, MW-4R, MW-5R, and MW-6R.
- Decreasing Chloride, Sulfate, and Sodium in MW-8, MW-10, and MW-11. Sulfate is also decreasing in MW-7 and MW-9. Decreasing Total Dissolved Solids in MW-8, MW-9, MW-10, and MW-11.
- Increasing Arsenic in MW-2, MW-4R, and MW-5R.
- Increasing Barium in MW-2, MW-4R, MW-5R, and MW-6R.
- Decreasing Iron in MW-2, MW-4R, MW-6R, MW-8, MW-11, and MW-12. Increasing Iron in MW-5R.
- Increasing Nickel in MW-5R.

- Increasing Vanadium in MW-2, MW-4R, and MW-5R. Decreasing Vanadium in MW-8, MW-9, MW-10, MW-11, and MW-12.
- Decreasing Zinc in MW-10 and MW-11.

6.2.2 SURFACE WATER DATA REVIEW

A review of surface water results at the Melbourne Landfill (sampling site SW-1) indicate elevated Conductivity, Ammonia, Chemical Oxygen Demand (COD), Total Phosphorus, Sulfate, Total Dissolved Solids, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon, Antimony, Arsenic, Chromium, Copper, and Iron. Sources for these parameters may be attributed to the type of materials being landfilled and/or processed at the facility such as:

- Drywall/Sheetrock: Calcium Sulfate (Gypsum) – Conductivity, Total Dissolved Solids, Total Hardness, Sulfate.
- CCA-Treated Lumber: Arsenic, Chromium, Copper.
- Yard Waste/Mulch: Ammonia, COD, Total Phosphorus, Total Kjeldahl Nitrogen, Total Organic Carbon.

6.2.3 GAS MONITORING PROBES

Gas monitoring at the Florida Recyclers facility is conducted quarterly per the requirements of the July 28, 2014 site permit and the Monitoring Plan Implementation Schedule of Chapter 62-160, FAC. Eleven gas monitoring probes (GMPs) are installed along the perimeter of the landfill. The probes are sampled quarterly to determine if excessive methane gas concentrations exist within the soils outside of the landfill. In addition, ambient air is sampled within building structures adjacent to the landfill (i.e., scale house office, etc.) for the presence of methane.

The most recent gas sampling event was conducted in February 2018 by Universal Engineering Sciences, Inc. Based on the First Quarter 2018 Quarterly Gas Monitoring Event report, dated February 23, 2018, no methane gas was detected to have concentrations greater than the detection limit of the sampling instrument. The detection limit of the gas sampling instrument is 1 percent.

The lower explosive limit (LEL) for methane gas is 5 percent or 50,000 parts per million (ppm). The FDEP Solid Waste Department and Rule 62-701, FAC, guidelines for a combustible gas exceedance is 25 percent of the LEL, or 12,500 ppm. Since December 2015, all quarterly gas monitoring results are reported as % LEL methane, and no gas exceedances were measured.

From August 2004 to September 2015, the quarterly monitoring results were measured and reported as ppm methane units, and in all cases no monitoring point samples exceeded 12,500 ppm methane.

6.2.4 MONITORING DATA GENERAL OBSERVATIONS

The facility's shallow surficial wells MW-2, MW-4R, MW-5R, and MW-6R have elevated levels of Conductivity, Chloride, Sodium, Sulfate, TDS, and Barium compared to background well MW-16S at the Sarno Landfill. TDS was consistently above the Safe Drinking Water Standard (SDWS) of 500 milligrams per liter (mg/L) in all four down-gradient Melbourne

wells, and Ammonia-Nitrogen, Chloride, and Sodium were repeatedly reported above their respective groundwater protection standards during the past 5 years. In addition, Conductivity, TDS, Ammonia-Nitrogen, Chloride, Sodium, and Barium are all increasing in wells MW-2, MW-4R, MW-5R, and MW-6R. Increasing Arsenic was also reported in MW-2, MW-4R, and MW-5R, and reported concentrations have repeatedly been greater than the Primary Drinking Water Standard (PDWS) of 10 µg/L.

Groundwater in the down-gradient wells appears to be impacted by the landfill. The source is likely the type of materials being landfilled and/or processed at the Melbourne facility including yard waste, mulch, compost materials, and construction debris such as drywall and CCA-treated lumber. A review of surface water results at the Melbourne Landfill indicate elevated levels of Conductivity, Ammonia-Nitrogen, COD, Total Phosphorus, Sulfate, TDS, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon, Antimony, Arsenic, Chromium, Copper, and Iron. These parameters are also consistent with erosional run-off from materials in the landfill.

Groundwater impacts, in a pattern similar to that noted for the Florida Recyclers' facility, were noted in the two Sarno Class III Landfill shallow-surficial wells, MW-24S and MW-25S, just down-gradient of the Florida Recyclers' property boundary.

7 VOLUME AND LIFESPAN ANALYSES

As part of this preliminary engineering evaluation, Jones Edmunds performed volume and lifespan analyses for the existing site and for the possible expansion/merger with the Sarno Road Class III Landfill. The following sections discuss the City of Melbourne buildout constraints, volume analyses, and a possible option of merging the two facilities and designing a valley fill.

7.1 BACKGROUND

On November 12, 2009, the City of Melbourne approved Brevard County's application for a CUP (CU-2009-06) and City Ordinance (Ordinance No. 2009-41) for a 9.5-acre expansion of the Sarno Road Class III Landfill up to a height of 40 feet above grade. The Florida Recyclers facility also has a similar CUP; however, Jones Edmunds was not able to obtain a copy of the document.

If the County were to acquire the Florida Recyclers facility and expand the Sarno Landfill footprint, the County would be required to submit a CUP application with a revised site plan to the City Engineering Department and Planning and Economic Development Department in accordance with City Ordinance No. 2009-41, Condition 2.a. Since City land development regulations limit the height of any structure or material or debris pile to less than 40 feet, the County will also have to make a request for a variance to exceed the height restriction.

According to the Ordinance, the County is expected to close the Sarno Road Class III Landfill by December 31, 2020, unless the County applies for and receives approval of a new proposed closure date by the City. The results of Sarno's 2017 capacity analysis submitted to FDEP indicates that landfill closure is expected by September 2024. This lifespan estimate included the approximately 9.5-acre footprint of the Pond A expansion area and a final landfill elevation of 104 ft NGVD.

7.2 VOLUME ANALYSIS

7.2.1 FLORIDA RECYCLERS MELBOURNE LANDFILL

The Florida Recyclers facility is permitted to a buildout elevation of 104 ft NGVD; however, the site's CUP from the City of Melbourne limits the full buildout to a maximum of 40 feet above grade or about an elevation 64 ft NGVD. Jones Edmunds performed two remaining volume analyses for the Florida Recyclers facility: one assuming full buildout to elevation 104 feet and one to elevation 64 feet based on the CUP. The volumes were calculated using AutoCAD Civil 3D 2016 software and based on the following:

- Topographic survey dated March 17, 2017, performed by Pickett & Associates Inc.
- Permitted Final Closure (up to 104 feet elevation), Melbourne Landfill and Recycling Center top-of-waste surface (final cover surface lowered 3 feet to account for final cover), dated March 2014.
- Conceptual Final Closure (up to 64 feet elevation), Melbourne Landfill and Recycling Center top-of waste surface (final cover surface lowered 3 feet to account for final cover).

Florida Recyclers performs recycling and yard waste processing operations within the footprint of the facility. Several areas identified as mulch or recycling material stockpiles are not representative of permanent waste disposal and were removed from the survey data. Currently, landfilling operations are isolated to the south edge of the facility; the current Operation Permit states that on average the facility accepts about 200 tons per day or 830 cubic yards per year (CY/yr) (assuming 500 pounds per cubic yard [lb/CY] waste density).

The estimate of the remaining life of the facility, summarized in Table 3. Given the information available, Jones Edmunds performed the lifespan calculation using an average of the annual volumetric disposal rate, in CY/yr, over the last 4 years.

As of March 17, 2017, Jones Edmunds estimates that approximately 970,000 cubic yards (CY) of waste is in-place at the facility. We assumed that this waste is primarily new construction debris or vegetative waste. In March 2013, a topographic survey report⁴ determined that approximately 786,000 CY of waste was in-place. From 2013 to 2017, approximately 185,000 CY of design capacity was consumed, which equates to about 46,300 CY/yr over 4 years.

⁴ Prepared by William Mott Land Surveying.

Table 3 Florida Recyclers Facility – Estimate of Remaining Life Based on Current Landfill Rates

Buildout Elevations	Total Design Capacity (CY)	Estimated Used Capacity (CY)	Estimated Remaining Capacity (CY)	Annual Waste Rate: (CY/yr)	Lifespan (yr)
Annual Waste Rate: FL Recyclers					
104 feet Permitted	2,600,000 (1)	970,000	1,618,000 (3)	46,300	35
64 feet CUP Restriction	1,620,000 (2)	970,000	650,000	46,300	14
Annual Waste Rate: Sarno Landfill					
104 feet Permitted	2,600,000 (1)	970,000	1,618,000 (3)	150,000	11
64 feet CUP Restriction	1,620,000 (2)	970,000	650,000	150,000	4.3

Notes:

1. Total design capacity to permitted buildout elevation of 104 feet NGVD from March 1999 FDEP Permit application.
2. Estimated remaining volume from CAD.
3. Estimate of remaining capacity as of March 2017.

7.2.2 EXPANSION OPTION

The Sarno Road Class III Landfill and the Florida Recyclers facility limits-of-waste boundaries are approximately 300 feet apart. If the County were to acquire the facility from Florida Recyclers of Brevard, Inc., there is a potential to merge the footprint of the two facilities by filling the airspace between the two disposal areas, i.e., valley fill. By pursuing the option of valley fill construction, an approximate 6.6 acres of additional disposal area footprint is gained or up to 1,330,000 CY of capacity (assuming 104-foot final buildout elevation).

Valley fill designs are not unusual, but they do present several challenges during the design and construction phases. Assuming the expanded area would be permitted as a Class III disposal facility, the following regulations would apply:

- Rules 62-701.400(3)(g) and 62-701.430(1)(c), FAC – a bottom liner system (60-mil minimum HDPE bottom liner and GCL) and a primary leachate collection and removal system would be required.
- Rule 62-701.340(3)(c), FAC – limits of waste shall be set back 100 feet from the property boundary, measured from the toe of the proposed final cover slope to the landfill property boundary.

Jones Edmunds performed a volume analysis of the conceptual valley fill design, using two conceptual closure surfaces with buildout elevations of 104 feet and 64 feet. These two surfaces were created to represent design closure grades required to blend the final closure surfaces listed below over the valley fill area:

1. Permitted Final Closure (up to elevation 104 feet) Florida Recyclers facility top-of-waste surface (final cover surface lowered 3 feet to account for final cover), dated March 2014.

2. Permitted Final Closure (up to elevation 104 feet) Sarno Road Class III Landfill top-of-waste surface (final cover surface lowered 3 feet to account for final cover), dated August 2016.

Table 4 shows the total conceptual design capacity and life span of the valley fill based on an airspace consumption rate matching the Sarno Road Class III Landfill (about 150,000 CY/yr). Table 4 also shows the total life span of the valley fill airspace plus the remaining capacity of the facility at the Sarno Road Class III Landfill consumption rate.

Table 4 Valley Fill Construction Option – Volume and Lifespan Analysis

Buildout Elevations	Conceptual Design Capacity (CY)	Annual Waste Rate (CY/yr)	Lifespan (yr)
Valley Fill Lifespan			
104 feet Permitted	1,330,000	150,000	9
64 feet CUP Restriction	537,000	150,000	4
Valley Fill plus Florida Recyclers Facility			
104 feet Permitted	2,950,000	150,000	20
64 feet CUP Restriction	1,200,000	150,000	8

If the County were to pursue this expansion option, the regulatory and design requirements need to be further evaluated to determine the feasibility and cost benefit of a valley fill expansion. The estimated construction cost of this additional capacity is approximately \$300,000 per acre – refer to Section 9, Supplemental Information, for cost estimates.

8 GENERAL OBSERVATIONS AND RECOMMENDATIONS

8.1 SUMMARY

Based on our review and evaluation of publicly available information, it appears that this facility is operating in a manner consistent with their permit and following regulatory guidelines. General findings related to the data review are as follows:

- Facility Operation:
 - The site operates primarily as a C&D recycling and yard waste processing facility. Disposed waste is primarily recycling residual from these operations (i.e., new construction material, vegetative waste).
 - Approximately 40 percent of the permitted volume has been consumed since 1999. The in-place waste density is unknown.
- Financial Assurance Review:
 - The site was issued a Consent Order (OGC File No. 16-1272) requiring the permittee to establish a Trust Fund as an alternative mechanism for financial assurance. It appears this was completed by the Owner.
 - Based on the approved closure cost estimate submitted to FDEP in 2017, the Trust Fund is likely underfunded when compared to recent higher closure costs at similar facilities.

- Stormwater System Evaluation:
 - In general, the stormwater system appears to be adequately designed for the permitted design of the existing facility.
 - If permitted design conditions change, such as steeper slopes or a more impervious cover (i.e., geomembrane) is permitted, the stormwater system will need to be modified.
 - The ERP application and drawings did not include a detailed sediment and erosion control plan. Jones Edmunds expects that the stormwater system will have accumulated sediment result from landfilling operations and will require excavation to restore design elevations.
- Stormwater Permitting Review:
 - The sequence of ERPs publicly available on FDEP databases for this facility is incomplete.
 - A complete timeline of the site's stormwater permitting history could not be developed based on the documents available on FDEP's Oculus website.
- Wetland Mitigation:
 - The February 2000 ERP application discussed wetland mitigation and included a proposed mitigation plan for the expansion area. Jones Edmunds found documentation of acceptance of a final mitigation plan and documentation of satisfactory completion of the mitigation requirement.
- Groundwater and Gas Monitoring Network Evaluation:
 - The existing groundwater monitoring and landfill gas monitoring system at the facility meets regulations and is monitored semi-annually following Class III landfill monitoring regulations.
- Environmental Monitoring Data Review:
 - Several down-gradient groundwater monitoring wells and shallow surficial wells appear to be impacted by the facility. The sources of the elevated groundwater monitoring parameters may be attributed to the type of materials processed at the facility and poor management of active face areas.
 - The facility has no evidence of groundwater assessment plans in effect.
 - Gas migration is not evident at the facility. No combustible gas exceedances have been measured outside of the limits of waste on the property boundary since August 2004. Data before August 2004 was not reviewed.
- Volume Analysis and Lifespan Evaluation:
 - Florida Recyclers facility:
 - The remaining lifespan of the 34-acre landfill for the volume of waste currently landfilled at the Florida Recyclers facility ranges from 14 years at a buildout to elevation 64 feet to 35 years at the permitted buildout elevation of 104 feet.

- The remaining lifespan of the 34-acre landfill based on the volume of waste currently landfilled at the Sarno Road Landfill ranges from 4 years at a buildout elevation of 64 feet to 11 years at the permitted buildout elevation of 104 feet.
- Valley Fill Option:
 - The estimated lifespan of the conceptual 6.6-acre valley fill option based on the volume of waste currently landfilled at the Sarno Road Landfill ranges from 4 years at a buildout elevation of 64 feet to 9 years at a buildout to the permitted elevation of 104 feet.
 - The estimated lifespan of the valley fill option plus the remaining capacity of the Florida Recyclers facility based on the volume of waste currently landfilled at the Sarno Road Landfill ranges from 8 years at a buildout to elevation 64 feet to 20 years at a buildout to the permitted elevation of 104 feet
- Landfill Expansion Construction Requirements:
 - Assuming the expansion area would be a permitted Class III disposal facility in accordance with Chapter 62-701.400(3)(g), FAC, a bottom liner system (60-mil minimum HDPE bottom liner and GCL) and a primary leachate collection and removal system are required.
- Major Construction Permit Modification:
 - The expansion project would require a major redesign and permit modification. The expansion challenges will be the design and construction of the liner and leachate collection system over the existing unlined landfills and likely significant stormwater modifications.
 - If a height variance is not granted by the City, the new expansion area would be limited to an approximately 64-foot buildout elevation and limited lifespan.

Major concerns related to the data review are as follows:

- In Jones Edmunds' experience, unlined disposal facilities exhibit higher environmental risk. The environmental liability of this facility is unclear.
- There is evidence of groundwater contamination at this facility. The source and long-term risk posed by this evidence of contamination may require further evaluation.
- It is unclear what obstacles the County may face in obtaining a height variance as described in the City of Melbourne CUP for the Sarno Road Landfill. The City's 40-foot height limitation could reduce the permitted landfill capacity by approximately 40 percent.
- If the County were to pursue the valley fill expansion option, the cost benefit results of constructing the expansion area compared to the additional capacity obtained for Class III waste disposal may be unfavorable.

8.2 RECOMMENDATIONS

- Since we could not locate final as-built drawings of the stormwater system in the FDEP files, Jones Edmunds recommends that the as-built certification be requested or a detailed survey be performed to determine adequacy of system.

- Jones Edmunds recommends that Brevard County request documentation of adequacy of the Trust Fund for closure costs.
- Jones Edmunds recommends that Brevard County obtain the City Ordinance granted for the Florida Recyclers facility and confirm with the City of Melbourne the current procedures in place for obtaining a height variance.

9 SUPPLEMENTAL INFORMATION

The following supplemental information provides additional cost information to supplement Section 7.2.2 regarding liner development costs associated with the capacities presented in Table 4. Table 5 presents approximate development costs based on an estimated \$300,000 per acre for lining the valley and unfilled portions of the Florida Recyclers landfill. This table also provides the relative development cost for the additional capacity in terms of cost per cubic yard of disposal capacity.

The Valley Fill Lifespan calculations assume that both the Sarno Class III and Florida Recyclers cells have been filled to capacity, and the area to be lined, associated cost, and cost per disposal capacity are presented for build-out elevations of 64 feet NGVD and 104 feet NGVD. The 64-foot option requires 13 acres to be lined at an estimated cost of \$3.9 million with relatively high development cost of \$7.30 per cubic yard; whereas, the 104-foot option more than doubles capacity and requires 20 acres to be lined at an estimated cost of \$6.0 million and development cost of \$4.51 per cubic yard.

Alternatively, Class III waste may be placed over the entire Florida Recyclers landfill if a liner is first placed over the existing waste. The existing 34-acre landfill has about 970,000 cubic yards of solid waste in place and a remaining 650,000 cubic yards up to a height of 64 feet NGVD and 1.6 million cubic yards up to 104 feet NGVD. We estimated the construction cost to be \$300,000 per acre. Lining the Valley Fill and over the entire Florida Recyclers facility requires 44 acres and a cost of \$13.2 million for build-out to 64 feet NGVD and a cost of \$11.00 per cubic yard. The 104-foot build-out requires 48 acres of liner at a cost of \$14.4 million and a development cost of \$4.88 per cubic yard.

Table 5 Estimated Construction Costs

Buildout Elevations	Conceptual Design Capacity (CY)	Liner acreage (AC)	Development Cost (\$)	Cost per CY (\$/CY)
Valley Fill Lifespan				
64 feet CUP Restriction	537,000	13	\$3.9M	\$7.30
104 feet Permitted	1,330,000	20	\$6.0M	\$4.51
Valley Fill plus Florida Recyclers Facility				
64 feet CUP Restriction	1,200,000	44	\$13.2M	\$11.00
104 feet Permitted	2,950,000	48	\$14.4M	\$4.88

Figures

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- LEGEND**
- MW-7 FL RECYCLERS GROUNDWATER MONITORING WELLS
 - ⊙ GP-9 FL RECYCLERS GAS PROBES
 - SW-1 FL RECYCLERS SURFACE WATER SAMPLING LOCATION
 - ▲ SW-3 SARNO CLASS III LANDFILL SURFACE WATER SAMPLING LOCATION
 - MW-17D,I,S SARNO CLASS III LANDFILL GROUNDWATER MONITORING WELLS

NOTE:
 THE OPERATIONS AREAS SHOWN
 ON THE FL RECYCLERS FOOTPRINT
 ARE PER THE DRAWINGS PROVIDE
 IN THE SOLID WASTE OPERATION
 PERMIT.

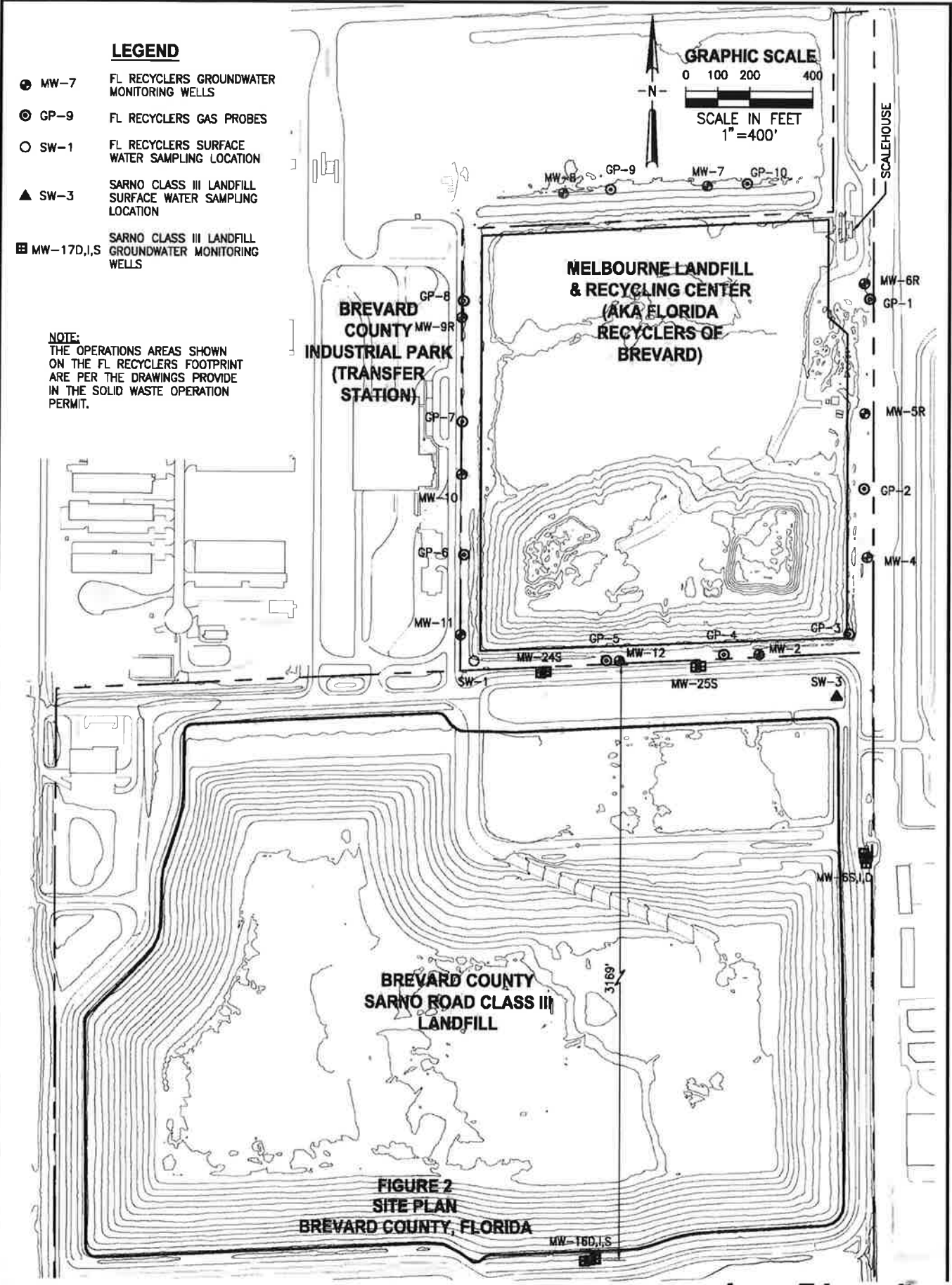


Figure 3

ERP 133455-001 Project Plan

Florida Recylers of Brevard

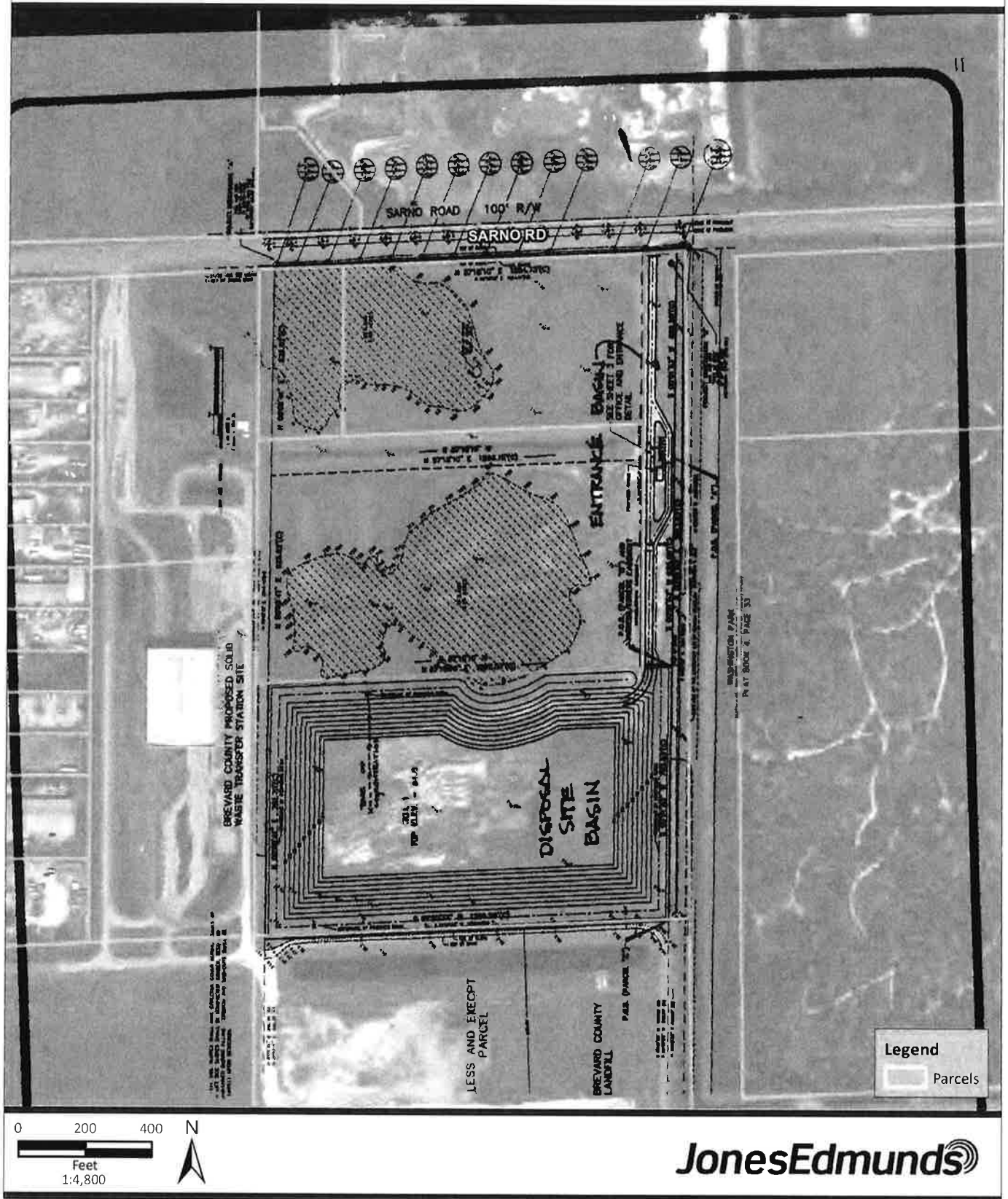
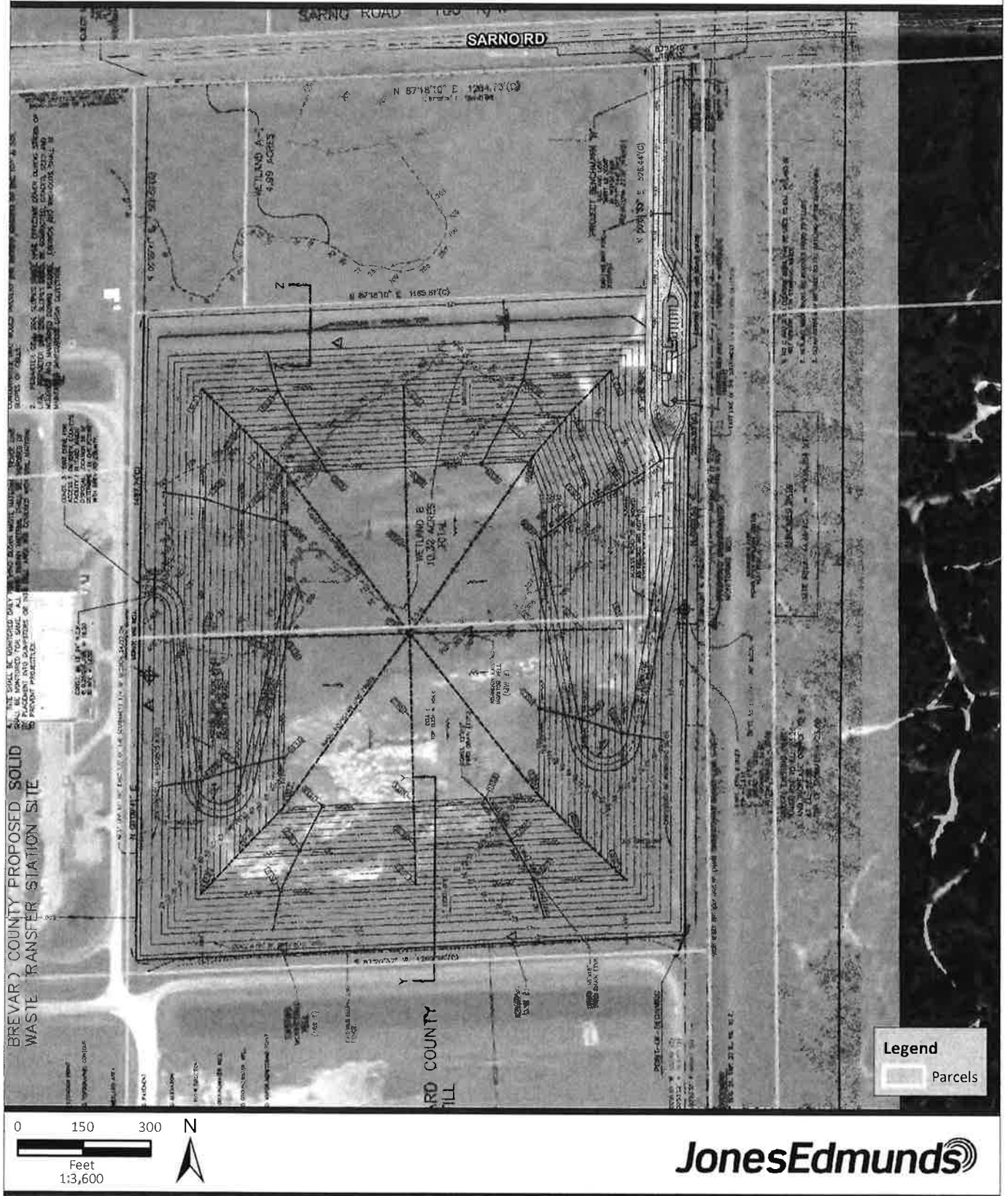


Figure 4
ERP 133455-002 Project Plan
Florida Recylers of Brevard

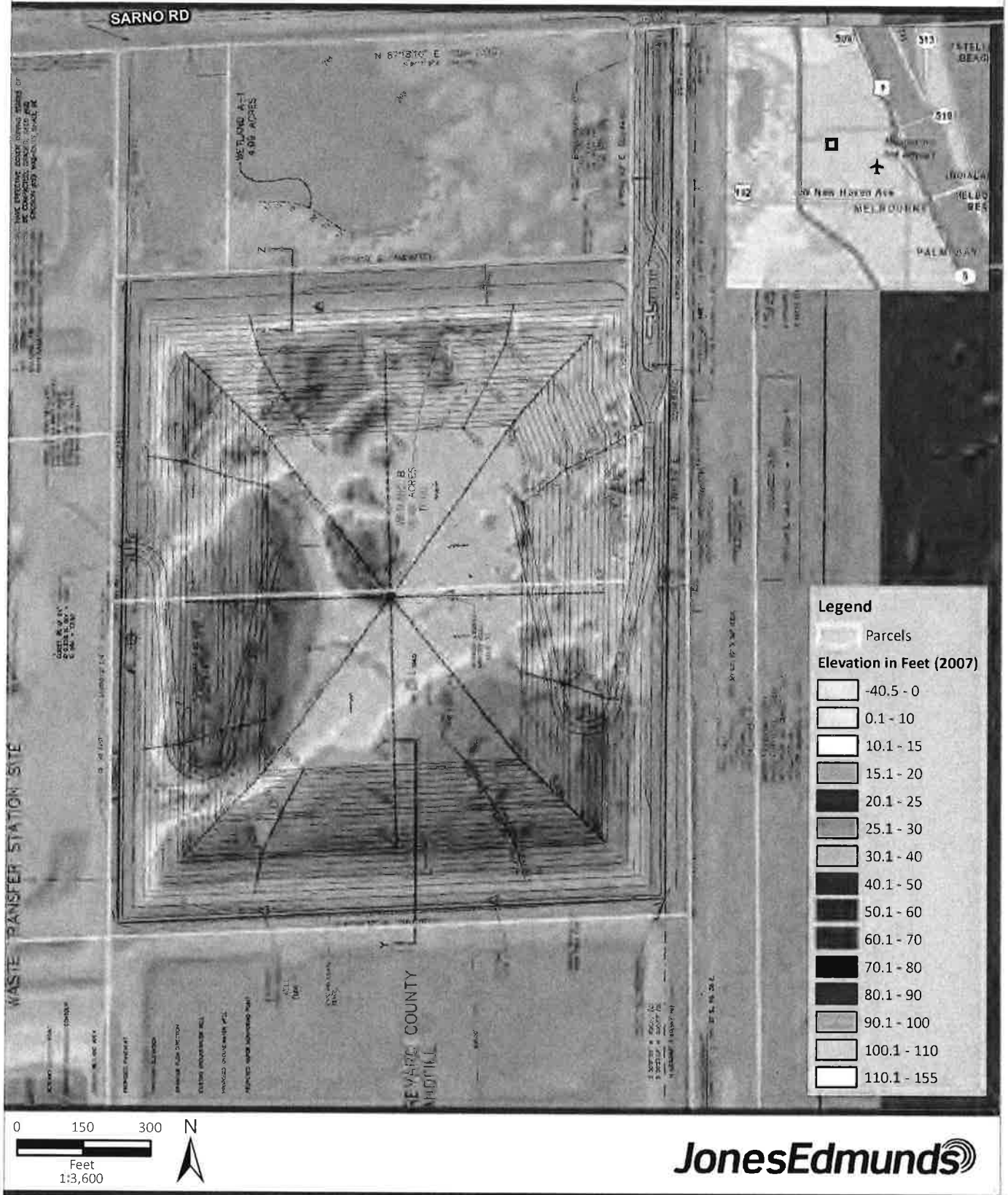


For Informational Purposes Only Q:\08705_Brevard\048-01_Landfill_Purchase_Evaluation\mxd\Final\Fig4_133455-002_ProjectPlan.mxd Snyquist 4/9/2018

Figure 5

ERP Design Contours Compared to LIDAR Elevation

Florida Recyclers of Brevard



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Figure 6

Flood Hazard Map

Florida Recylers of Brevard



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Figure 7

ERP 133455-004 Project Plan - Not Permitted

Florida Recyclers of Brevard



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Attachment A

Groundwater Tables

**Summary Table
of Groundwater Data
5-Year Average**

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER
STANDARD UNITS		(1) uS/cm	6.5-8.5 S.U. S.U.	2.8 mg/L mg/L	250 mg/L mg/L	10 mg/L mg/L	250 mg/L mg/L	500 mg/L mg/L	200 µg/L µg/L	6 µg/L µg/L	10 µg/L µg/L	2000 µg/L µg/L	4 µg/L µg/L	5 µg/L µg/L	100 µg/L µg/L	140 µg/L µg/L	1000 µg/L µg/L
Sarno Shallow Surficial Background Well																	
MW-10S	5 YR AVERAGE	675.3	6.49	0.30	7.0	2.3	34.6	431.2	Not Sampled	0.36	2.38	36.25	0.29	0.29	1.25	2.38	1.44
	std dev	87.7	0.19	0.25	2.0	2.62	9.5	39.3		0.19	0.40	6.55	0.11	0.11	0.00	0.40	0.59
	3x std dev	263	0.56	0.76	5.9	7.86	26.4	118		0.57	1.19	19.7	0.33	0.33	0.00	1.19	1.76
	upper range	938	7.05	1.06	12.9	10.17	53.0	549		0.93	3.56	55.9	0.62	0.62	1.25	3.56	3.19
Melbourne Surficial Compliance Wells																	
MW-2	5 YR AVERAGE	1370	7.03	2.29	130.0	0.089	62.1	865	42.2	0.76	6.55	71.94	0.53	0.51	2.25	1.05	1.10
MW-4R	5 YR AVERAGE	1780	6.97	5.77	198.9	0.041	128.5	1240	196.6	0.82	8.07	147.54	0.53	0.51	4.03	1.05	1.10
MW-5R	5 YR AVERAGE	2427	6.74	13.15	443.6	0.196	75.0	1830	37.8	0.76	6.39	130.16	0.54	0.51	4.89	1.24	1.10
MW-6R	5 YR AVERAGE	1801	6.77	8.53	206.7	0.202	69.77	1318	44.6	0.76	3.05	138.39	0.52	0.51	4.05	1.30	4.85
MW-7	5 YR AVERAGE	713	6.88	0.08	15.8	0.029	4.30	327	340.6	0.76	6.21	21.45	0.52	0.51	2.25	1.05	1.10
MW-8	5 YR AVERAGE	647	6.71	0.17	18.4	0.029	3.49	298	223.9	0.76	3.05	12.50	0.47	0.51	2.25	1.05	1.10
MW-9R	5 YR AVERAGE	771	7.11	0.34	37.4	0.029	38.10	452	115.4	0.76	3.05	34.07	0.52	0.51	2.25	1.05	7.09
MW-10	5 YR AVERAGE	833	7.00	1.08	29.5	0.026	21.13	457	59.1	0.76	3.05	41.49	0.47	0.51	2.25	1.05	1.65
MW-11	5 YR AVERAGE	744	7.27	0.30	21.0	0.026	55.14	461	331.9	0.76	3.05	24.82	0.47	0.51	2.25	1.05	1.45
MW-12	5 YR AVERAGE	654	7.07	1.78	44.0	0.031	25.22	511	133.4	0.76	3.37	30.74	0.52	0.51	2.25	1.05	5.41

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Bored = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	IRON	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD		300 µg/L**	15 µg/L*	2 µg/L*	100 µg/L*	50 µg/L*	100 µg/L**	150 mg/L*	2 µg/L*	49 µg/L**	5000 µg/L**
UNITS		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L
Sarno Shallow Surficial Background Well											
MW-16S	5 YR AVERAGE	436.69	2.32	0.05	1.63	4.35	1.25	8.93	0.28	10.71	4.75
	std dev	722	0.59	0.00	1.19	1.88	0.00	4.53	0.08	3.86	0.79
	3x std dev	2167	1.76	0.00	3.56	5.64	0.00	13.60	0.24	11.59	2.37
	upper range	2503	4.07	0.05	5.18	9.99	1.25	22.53	0.51	22.30	7.12
Melbourne Surficial Compliance Wells											
MW-2	5 YR AVERAGE	493.9	0.80	0.0224	2.64	3.25	0.15	80.9	0.29	7.26	8.0
MW-4R	5 YR AVERAGE	690.8	0.80	0.0158	3.42	3.25	0.15	114.3	0.29	8.10	8.0
MW-5R	5 YR AVERAGE	6270	0.80	0.0182	5.06	3.25	0.15	165.9	0.29	7.80	8.0
MW-6R	5 YR AVERAGE	582.4	0.80	0.0115	3.96	3.25	0.15	99.8	0.29	5.77	8.0
MW-7	5 YR AVERAGE	4453	0.80	0.0115	1.60	3.25	0.15	13.9	0.29	5.48	8.0
MW-8	5 YR AVERAGE	2497	0.80	0.0115	1.60	3.25	0.15	17.0	0.29	2.88	11.38
MW-9R	5 YR AVERAGE	5995	0.80	0.0115	1.60	3.25	0.15	22.5	0.29	2.48	8.0
MW-10	5 YR AVERAGE	12792	0.80	0.0115	1.60	3.25	0.15	25.8	0.29	1.75	24.21
MW-11	5 YR AVERAGE	2225	0.80	0.0115	1.60	3.25	0.15	18.1	0.29	1.72	63.47
MW-12	5 YR AVERAGE	1150	0.80	0.0133	1.98	3.25	0.15	24.7	0.29	3.20	19.44

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Boxed = Outside Applicable Groundwater Standard

**Table of Groundwater Data
5 Years Compiled**

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON
STANDARD UNITS		(1) uS/cm	6.5-8.5 S.U. S.U.	2.8 mg/L*** mg/L	250 mg/L** mg/L	10 mg/L* mg/L	250 mg/L** mg/L	500 mg/L** mg/L	200 µg/L** µg/L	6 µg/L** µg/L	10 µg/L** µg/L	2000 µg/L* µg/L	4 µg/L* µg/L	5 µg/L** µg/L	100 µg/L** µg/L	140 µg/L*** µg/L	1000 µg/L** µg/L	300 µg/L** µg/L
Sarno Shallow Surficial Background Well																		
MW-16S	6/4/2013	647	8.21	0.063	9.8	7.9	32.3	435		0.25	2.5	40.4	0.25	0.25	1.25	2.5	1.25	80.8
MW-16S	11/25/2013	473	8.36	0.01	9.6	5.9	26.5	329		0.25	2.5	33.5	0.25	0.25	1.25	2.5	1.25	234
MW-16S	6/11/2014	748	8.78	0.18	9.2	0.9	45	472		0.25	2.5	27.8	0.25	0.25	1.25	2.5	1.25	454
MW-16S	12/11/2014	627	8.37	0.24	7.8	0.32	*	437		0.54	2.5	27.8	0.25	0.25	1.25	2.5	1.25	117
MW-16S	6/18/2015	720	8.64	0.28	6.4	1	*	422		0.25	2.5	40.1	0.25	0.25	1.25	2.5	1.25	368
MW-16S	12/9/2015	653	8.32	0.17	5.4	3.4	*	443		0.25	2.5	39.6	0.25	0.25	1.25	2.5	1.25	146
MW-16S	5/15/2016	767	8.67	0.45	5.4	1.3	*	470		0.25	2.5	42.8	0.25	0.25	1.25	2.5	1.25	390
MW-16S	12/2/2016	685	8.65	0.26	5.1	1.2	*	433		0.76	2.5	35.2	0.25	0.25	1.25	2.5	1.25	82.3
MW-16S	6/14/2017	769	8.43	0.92	4.8	0.0125	*	435		0.58	2.5	32.8	0.25	0.25	1.25	2.5	1.25	2450
MW-16S	12/18/2017	654	8.47	0.37	6.5	1.2	*	436		0.25	2.5	32.8	0.25	0.6	1.25	2.5	1.25	44.8
AVERAGE	std dev	87.3	0.19	0.30	7.0	2.3	34.6	431.2	Not Sampled	0.38	2.38	39.25	0.29	0.29	1.25	2.38	1.44	426.69
	3x std dev	253	0.56	0.76	5.9	7.86	28.4	118		0.57	1.19	19.7	0.33	0.33	0.00	1.19	1.76	2167
	upper range	938	7.05	1.06	12.9	10.17	63.0	549		0.93	3.56	55.9	0.62	0.62	1.25	3.56	3.19	2603
Melbourne Compliance Wells - Shallow Surficial																		
MW-2	5/17/2013	1900	6.99	4.7	300	0.026	35	1200	34	0.55	3.05	69.9	0.47	0.55	2.25	1.05	1.1	81.1
MW-2	10/9/2013	1587	6.7	2.7	180	0.026	69	890	34	0.55	3.05	90.3	0.47	0.55	2.25	1.05	1.1	887
MW-2	4/9/2014	1083	6.69	3.3	180	0.026	7.4	710	34	0.55	12	75.1	0.47	0.55	2.25	1.05	1.1	1220
MW-2	10/6/2014	1480	6.4	0.71	180	0.13	52	1100	34	0.55	6.79	30.6	0.47	0.55	2.25	1.05	1.1	354
MW-2	4/23/2015	970	7.31	2.7	100	0.026	26	500	34	0.55	3.05	105	0.47	0.55	2.25	1.05	1.1	1220
MW-2	10/13/2015	1248	7.14	8.4	140	0.026	88	880	34	0.55	3.05	105	0.47	0.55	2.25	1.05	1.1	241
MW-2	4/16/2016	1916	7.65	3.9	100	0.026	7.4	540	72.3	0.55	3.05	53.3	0.47	0.45	2.25	1.05	1.1	115
MW-2	10/13/2016	1085	7.0	1.4	110	0.46	220	1100	77.6	1.25	16.4	104	0.47	0.45	2.25	1.05	1.1	118
MW-2	4/19/2017	1110	7.55	2.6	90	0.026	21	620	34	1.25	3.05	49.9	0.47	0.45	2.25	1.05	1.1	108
MW-3	10/18/2017	1324	6.84	1.1	130	0.12	75	910	34	1.25	12	72.8	0.47	0.45	2.25	1.05	1.1	595
AVERAGE		1370	7.03	2.29	150.0	0.089	65.1	865	42.2	0.76	6.55	71.54	0.53	0.51	2.25	1.65	1.1	493.9
MW-4R	5/17/2013	2800	6.8	5.4	450	0.026	2.7	1800	34	0.55	3.05	163	0.47	0.55	5.12	1.05	1.1	473
MW-4R	10/10/2013	1472	6.96	1.1	120	0.026	120	970	34	0.55	3.05	99.4	1.08	0.55	2.25	1.05	1.1	517
MW-4R	4/9/2014	1592	6.73	5.2	120	0.026	210	1100	34	0.55	3.05	107	0.47	0.55	2.25	1.05	1.1	325
MW-4R	10/9/2014	1319	6.66	1.8	120	0.18	130	860	209	0.55	7.42	133	0.47	0.55	2.25	1.05	1.1	278
MW-4R	4/23/2015	2142	7.21	14	230	0.026	230	1500	564	0.55	11.3	155	0.47	0.55	5.12	1.05	1.1	1300
MW-4R	10/13/2015	1642	7.27	4.7	200	0.026	140	1300	223	1.18	19	165	0.47	0.55	2.25	1.05	1.1	1280
MW-4R	4/19/2016	1437	6.95	10	200	0.026	150	1300	348	0.55	9.26	180	0.47	0.45	6.41	1.05	1.1	849
MW-4R	10/13/2016	1024	7.0	0.92	69	0.026	100	770	189	1.25	6.27	117	0.47	0.45	2.25	1.05	1.1	510
MW-4R	4/19/2017	2769	7.36	13	305	0.026	82	1700	147	1.25	8.72	226	0.47	0.45	10.1	1.05	1.1	554
MW-4R	10/18/2017	1589	6.77	0.82	160	0.026	130	1100	87.9	1.25	10.6	130	0.47	0.45	2.25	1.05	1.1	722
AVERAGE		1780	6.97	5.77	159.5	0.041	125.5	1240	196.6	0.82	8.97	147.54	0.53	0.51	4.03	1.05	1.10	680.8

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PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
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MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON
STANDARD UNITS		(1) 6.5-6.5 SU/°C	6.5-6.5 SU/°C	2.8 mg/L***	250 mg/L**	10 mg/L*	250 mg/L**	500 mg/L**	200 µg/L**	6 µg/L*	10 µg/L*	2000 µg/L*	4 µg/L*	5 µg/L*	100 µg/L*	140 µg/L***	1000 µg/L**	300 µg/L**
MW-6R	5/17/2013	2940	6.75	12	490	0.026	0.7	2000	34	0.55	3.05	133	0.47	0.55	2.25	1.05	1.1	2120
MW-6R	10/10/2013	3037	6.42	16	490	0.11	21	1900	34	0.55	3.05	150	1.14	0.55	5.91	1.05	1.1	4660
MW-6R	4/9/2014	2929	6.09	12	570	0.026	4.4	2200	71.5	0.55	3.05	166	0.47	0.55	5.1	1.05	1.1	3330
MW-6R	10/9/2014	1586	6.76	1.2	100	0.62	190	1100	34	0.55	6.71	58.9	0.47	0.55	2.25	1.05	1.1	361
MW-6R	4/22/2015	2867	6.57	12	530	0.026	37	2600	34	0.55	3.05	162	0.47	0.55	5.58	1.05	1.1	11600
MW-6R	10/13/2015	2507	6.61	9.5	530	0.13	61	2000	34	0.55	3.05	140	0.47	0.55	5.73	1.05	1.1	8990
MW-6R	4/19/2016	1757	6.6	28	730	0.026	1.2	2500	34	0.55	3.05	187	0.47	0.45	8.74	2.96	1.1	14900
MW-6R	10/13/2016	1077	7.03	1.5	36	0.44	270	1100	34	1.25	11.5	68.3	0.47	0.45	2.25	1.05	1.1	2040
MW-6R	4/13/2017	3982	7.27	37	890	0.026	4.7	2400	34	1.25	3.05	167	0.47	0.45	8.79	1.05	1.1	7800
MW-6R	10/18/2017	1584	7.13	2.3	160	0.53	160	1100	34	1.25	24.3	69.4	0.47	0.45	2.25	1.05	1.1	882
AVERAGE		2427	6.74	13.15	443.6	0.186	75.0	1830	37.8	0.76	6.39	130.16	0.54	0.51	4.89	1.24	1.10	6270
MW-6R	5/17/2013	1710	6.97	4.8	150	0.026	85	1100	34	0.55	3.05	107	0.956	0.55	2.25	1.05	1.1	556
MW-6R	10/10/2013	1815	6.58	7.1	150	0.026	57	1200	34	0.55	3.05	146	0.47	0.55	2.25	1.05	1.1	502
MW-6R	4/9/2014	2350	6.25	11	250	0.026	20	1700	79.5	0.55	3.05	164	0.47	0.55	4.56	1.05	1.1	514
MW-6R	10/9/2014	905	6.6	0.62	42	0.1	48	590	34	0.55	3.05	94.8	0.47	0.55	2.25	1.05	1.1	166
MW-6R	4/22/2015	3158	6.69	16	370	0.026	0.035	1900	34	0.55	3.05	147	0.47	0.55	6.72	1.05	1.1	1300
MW-6R	10/14/2015	1300	6.74	3.4	140	0.076	77	1000	34	0.55	3.05	133	0.47	0.55	2.25	1.05	1.1	491
MW-6R	4/19/2016	1079	6.79	21	480	0.36	0.65	2300	34	0.55	3.05	188	0.47	0.45	8.69	2.4	1.1	1140
MW-6R	10/13/2016	1491	6.92	0.36	83	0.66	240	640	34	1.25	3.05	134	0.47	0.45	2.25	1.05	1.1	114
MW-6R	4/19/2017	3076	7.41	21	350	0.026	20	1800	34	1.25	3.05	162	0.47	0.45	7	1.05	1.1	889
MW-6R	10/18/2017	1123	6.7	0.00365	62	0.69	150	750	94.9	1.25	3.05	108	0.47	0.45	2.25	1.05	1.1	132
AVERAGE		1801	6.77	8.53	206.7	0.202	68.77	1318	44.6	0.76	3.05	138.38	0.52	0.51	4.05	1.30	1.10	502.4
MW-7	5/19/2013	775	6.89	0.068	26	0.026	2	540	266	0.55	14.3	10	0.47	0.55	2.25	1.05	1.1	11500
MW-7	10/9/2013	453	6.62	0.013	6.3	0.026	4.7	310	132	0.55	3.05	24.4	0.982	0.55	2.25	1.05	1.1	1720
MW-7	4/8/2014	389	6.51	0.00365	8.7	0.026	5.4	280	216	0.55	3.05	26.6	0.47	0.55	2.25	1.05	1.1	481
MW-7	10/8/2014	313	6.4	0.057	2.6	0.026	0.47	200	87.9	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	11100
MW-7	4/22/2015	494	6.73	0.13	13	0.026	3	310	1900	0.55	13.6	10	0.47	0.55	2.25	1.05	1.1	721
MW-7	10/14/2015	295	6.69	0.00365	4.7	0.026	1.3	240	147	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	6550
MW-7	4/19/2016	978	7.2	0.062	11	0.026	4.3	330	321	0.55	3.05	45.6	0.47	0.45	2.25	1.05	1.1	1110
MW-7	10/12/2016	303	6.72	0.012	6.1	0.026	0.39	240	153	1.25	3.05	20.7	0.47	0.45	2.25	1.05	1.1	9690
MW-7	4/19/2017	2800	6.43	0.37	69	0.052	21	550	91.9	1.25	12.8	30.6	0.47	0.45	2.25	1.05	1.1	488
MW-7	10/17/2017	326	6.58	0.00365	11	0.026	0.48	270	91.1	1.25	3.05	26.6	0.47	0.45	2.25	1.05	1.1	488
AVERAGE		713	6.88	0.08	15.8	0.029	4.30	327	340.6	0.76	6.21	21.45	0.52	0.51	2.25	1.05	1.10	4453
MW-8	5/18/2013	762	7.11	0.38	54	0.026	17	490	77	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	6130
MW-8	10/9/2013	330	6.41	0.028	7.9	0.026	4.6	270	141	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	436
MW-8	4/9/2014	532	6.68	0.14	34	0.026	6.4	380	111	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	639
MW-8	10/8/2014	156	5.72	0.034	1.5	0.026	0.87	130	349	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	571
MW-8	4/22/2015	609	7.01	0.32	12	0.026	1.1	470	252	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	6390
MW-8	10/14/2015	153	6.15	0.14	6.5	0.026	1	180	252	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	914
MW-8	4/19/2016	1004	7.17	0.26	21	0.026	2.6	310	184	0.55	3.05	35	0.47	0.45	2.25	1.05	1.1	3640
MW-8	10/12/2016	189	6.3	0.01	6.1	0.026	0.8	210	384	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	1900
MW-8	4/18/2017	2558	6.51	0.43	29	0.052	0.09	360	85.4	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	3940
MW-8	10/17/2017	161	5.99	0.00365	12	0.026	0.42	180	242	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	406
AVERAGE		647	6.71	0.17	18.4	0.029	3.49	298	223.8	0.76	3.05	12.50	0.47	0.51	2.25	1.05	1.10	2497

LEGEND
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PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	CONDUCTIVITY (FIELD)	pH (FIELD)	AMMONIA NITROGEN	CHLORIDE	NITRATE NITROGEN	SULFATE	TOTAL DISSOLVED SOLIDS	ALUMINUM	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COBALT	COPPER	IRON
STANDARD UNITS		(1)	5.5-9.5 S.U./°C	2.8 mg/L***	250 mg/L***	10 mg/L*	250 mg/L**	500 mg/L***	200 µg/L**	6 µg/L*	10 µg/L*	2000 µg/L*	4 µg/L*	5 µg/L*	100 µg/L*	140 µg/L***	1000 µg/L**	300 µg/L**
MW-9R	5/16/2013	874	6.98	0.26	57	0.026	66	520	34	0.55	3.05	35.3	0.47	0.55	2.25	1.05	61	9950
MW-9R	10/9/2013	624	6.78	0.36	26	0.026	31	420	34	0.55	3.05	30.4	0.984	0.55	2.25	1.05	1.1	7170
MW-9R	10/9/2013	624	6.78	0.36	26	0.026	31	420	34	0.55	3.05	30.4	0.984	0.55	2.25	1.05	1.1	4570
MW-9R	4/9/2014	633	6.58	0.33	38	0.026	39	430	34	0.55	3.05	32.3	0.47	0.55	2.25	1.05	1.1	3220
MW-9R	10/8/2014	648	6.52	0.45	30	0.026	31	410	34	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	2040
MW-9R	4/22/2015	803	7.07	0.37	52	0.026	48	480	227	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	6830
MW-9R	10/13/2015	621	7.23	0.46	32	0.026	38	440	110	0.55	3.05	38.5	0.47	0.55	2.25	1.05	1.1	9280
MW-9R	10/12/2016	1400	7.35	0.58	21	0.026	28	370	498	0.55	3.05	57	0.47	0.45	2.25	1.05	1.1	5330
MW-9R	10/12/2016	570	7.05	0.42	23	0.026	22	390	115	1.25	3.05	42.5	0.47	0.45	2.25	1.05	1.1	7250
MW-9R	4/18/2017	749	8.51	0.5	34	0.052	49	480	34	1.25	3.05	39.9	0.47	0.45	2.25	1.05	1.1	4900
MW-9R	10/17/2017	783	7.05	0.04	51	0.025	35	550	34	1.25	3.05	44.8	0.47	0.45	2.25	1.05	1.1	5985
AVERAGE		771	7.11	0.34	37.4	0.029	36.10	452	115.4	0.76	3.05	34.07	0.52	0.51	2.25	1.05	7.09	
MW-10	5/16/2013	843	5.91	1.3	54	0.026	7.1	470	34	0.55	3.05	31.7	0.47	0.55	2.25	1.05	6.55	13300
MW-10	10/9/2013	626	6.63	1.4	34	0.026	24	490	34	0.55	3.05	43.9	0.47	0.55	2.25	1.05	1.1	14200
MW-10	4/9/2014	734	6.46	1.2	20	0.026	18	450	34	0.55	3.05	41	0.47	0.55	2.25	1.05	1.1	15500
MW-10	10/8/2014	866	6.36	0.87	41	0.026	53	520	34	0.55	3.05	33.7	0.47	0.55	2.25	1.05	1.1	8640
MW-10	4/22/2015	817	5.93	1.3	16	0.026	7.6	440	34	0.55	3.05	28	0.47	0.55	2.25	1.05	1.1	15500
MW-10	10/13/2015	819	7.06	0.56	36	0.026	57	550	89	0.55	3.05	46.3	0.47	0.55	2.25	1.05	1.1	8390
MW-10	4/18/2016	1471	7.23	1.2	27	0.026	2.1	400	146	0.55	3.05	61.2	0.47	0.45	2.25	1.05	1.1	13800
MW-10	10/12/2016	685	6.96	0.76	36	0.026	26	450	79.3	1.25	3.05	46.7	0.47	0.45	2.25	1.05	1.1	11300
MW-10	4/18/2017	647	5.44	1.6	12	0.026	1.5	360	34	1.25	3.05	39.1	0.47	0.45	2.25	1.05	1.1	17500
MW-10	10/17/2017	618	7.05	0.56	17	0.026	15	430	72.4	1.25	3.05	42.7	0.47	0.45	2.25	1.05	1.1	5490
AVERAGE		833	7.00	1.08	29.5	0.026	21.13	457	59.1	0.76	3.05	41.49	0.47	0.51	2.25	1.05	1.55	12792
MW-11	5/17/2013	441	7.03	0.16	16	0.026	3.1	290	170	0.55	3.05	10	0.47	0.55	2.25	1.05	4.56	3720
MW-11	10/9/2013	680	6.9	0.21	47	0.026	44	450	243	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	1490
MW-11	4/9/2014	563	6.58	0.35	27	0.026	27	380	204	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	3610
MW-11	10/8/2014	939	6.7	0.039	16	0.026	91	600	225	0.55	3.05	28.2	0.47	0.55	2.25	1.05	1.1	785
MW-11	4/22/2015	643	7.31	0.66	14	0.026	37	390	127	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	4270
MW-11	10/13/2015	975	7.41	0.1	27	0.026	160	710	681	0.55	3.05	47.1	0.47	0.55	2.25	1.05	1.1	1310
MW-11	4/18/2016	1083	7.59	0.73	10	0.026	22	330	639	0.55	3.05	33.1	0.47	0.45	2.25	1.05	1.1	2570
MW-11	10/12/2016	942	7.25	0.00365	25	0.026	130	440	844	1.25	3.05	49.4	0.47	0.45	2.25	1.05	1.1	520
MW-11	4/18/2017	577	6.62	0.68	6.8	0.026	7.3	290	109	1.25	3.05	10	0.47	0.45	2.25	1.05	1.1	2040
MW-11	10/17/2017	597	7.23	0.655	21	0.026	30	530	76.7	1.25	3.05	38.4	0.47	0.45	2.25	1.05	1.1	1830
AVERAGE		744	7.27	0.30	21.0	0.026	55.14	461	331.9	0.76	3.05	24.82	0.47	0.51	2.25	1.05	1.45	2225
MW-12	5/17/2013	1270	6.71	3.2	240	0.026	43	1300	105	0.55	3.05	89.7	0.47	0.55	2.25	1.05	44.2	5250
MW-12	10/9/2013	412	6.86	0.00365	5.6	0.026	14	300	136	0.55	3.05	10	0.992	0.55	2.25	1.05	1.1	243
MW-12	4/9/2014	443	6.64	0.00365	10	0.026	18	310	108	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	311
MW-12	10/8/2014	480	6.35	0.16	2.3	0.026	5.4	380	124	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	922
MW-12	4/22/2015	346	7.21	0.00365	4.7	0.08	11	250	109	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	941
MW-12	10/13/2015	413	7.19	0.013	1.4	0.026	7.9	310	129	0.55	3.05	10	0.47	0.55	2.25	1.05	1.1	220
MW-12	4/18/2016	1246	7.39	0.54	36	0.026	28	480	303	0.55	3.05	44.8	0.47	0.45	2.25	1.05	1.1	1820
MW-12	10/12/2016	409	6.98	0.00365	4.7	0.026	6.9	320	125	1.25	3.05	21.9	0.47	0.45	2.25	1.05	1.1	156
MW-12	4/18/2017	916	5.55	14	120	0.026	110	990	103	1.25	3.05	62	0.47	0.45	2.25	1.05	1.1	843
MW-12	10/17/2017	500	5.86	0.00365	15	0.026	8	470	91.5	1.25	3.05	39	0.47	0.45	2.25	1.05	1.1	595
AVERAGE		554	7.07	1.79	44.0	0.031	25.22	511	133.4	0.76	3.37	30.74	0.52	0.51	2.25	1.05	5.41	1150

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MELBOURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD UNITS		15 µg/L*	2 µg/L*	100 µg/L*	50 µg/L*	100 µg/L**	160 mg/L*	2 µg/L*	49 µg/L***	5000 µg/L**
Sarno Shallow Surficial Background Well										
MW-16S	6/4/2013	2.5	0.05	1.25	3.75	1.25	13.3	0.25	8	5
MW-16S	11/25/2013	2.5	0.05	1.25	3.75	1.25	6.9	0.25	13.2	5
MW-16S	8/11/2014	2.5	0.05	1.25	3.75	1.25	17.5	0.25	9.2	5
MW-16S	12/1/2014	2.5	0.05	1.25	3.75	1.25	14.3	0.25	11.6	5
MW-16S	6/19/2015	2.5	0.05	1.25	3.75	1.25	9.1	0.25	10.6	5
MW-16S	12/9/2015	2.5	0.05	1.25	3.75	1.25	6.9	0.25	14.9	5
MW-16S	5/19/2016	2.5	0.05	1.25	3.75	1.25	6.9	0.25	8.6	5
MW-16S	12/2/2016	2.5	0.05	1.25	3.75	1.25	4.8	0.25	15.6	5
MW-16S	8/14/2017	2.5	0.05	1.25	3.75	1.25	5.5	0.50	2.5	5
MW-16S	12/18/2017	0.65	0.05	5	9.7	1.25	4.3	0.25	13	2.5
AVERAGE		2.32	0.05	1.63	4.35	1.25	8.93	0.28	10.71	4.75
	std dev	0.59	0.00	1.19	1.88	0.00	4.53	0.08	3.86	0.79
	3x std dev	1.76	0.00	3.56	5.64	0.00	13.60	0.24	11.59	2.37
	upper range	4.07	0.05	5.18	9.99	1.25	22.53	0.51	22.30	7.12
Melbourne Compliance Wells - Shallow Su										
MW-2	5/17/2013	0.8	0.0115	1.6	3.25	0.145	147	0.29	3.45	8
MW-2	10/9/2013	0.8	0.0115	1.6	3.25	0.145	124	0.29	10.3	8
MW-2	4/9/2014	0.8	0.0115	1.6	3.25	0.145	91.1	0.29	7.24	8
MW-2	10/6/2014	0.8	0.0492	4.03	3.25	0.145	59.6	0.29	6.62	8
MW-2	4/23/2015	0.8	0.0115	1.6	3.25	0.145	64.4	0.29	5.51	8
MW-2	10/13/2015	0.8	0.0115	3.54	3.25	0.145	66.6	0.29	15.3	8
MW-2	4/18/2016	0.8	0.0115	1.6	3.25	0.145	64.8	0.29	6.66	8
MW-2	10/13/2016	0.8	0.0661	4.13	3.25	0.145	85.8	0.29	5.49	8
MW-2	4/19/2017	0.8	0.0115	1.6	3.25	0.145	63.3	0.29	3.34	8
MW-2	10/18/2017	0.8	0.0278	5.1	3.25	0.145	52.3	0.29	8.67	8
AVERAGE		0.80	0.0234	2.64	3.25	0.15	80.9	0.29	7.26	8.0
MW-4R	5/17/2013	0.8	0.0115	1.6	3.25	0.145	223	0.29	7.06	8
MW-4R	10/10/2013	0.8	0.0115	1.6	3.25	0.145	77.8	0.29	10.1	8
MW-4R	4/9/2014	0.8	0.0115	1.6	3.25	0.145	83	0.29	8.21	8
MW-4R	10/9/2014	0.8	0.0548	1.8	3.25	0.145	51.9	0.29	6.15	8
MW-4R	4/23/2015	0.8	0.0115	4.03	3.25	0.145	130	0.29	9.56	8
MW-4R	10/13/2015	0.8	0.0115	5.95	3.25	0.145	96.2	0.29	9.5	8
MW-4R	4/19/2016	0.8	0.0115	4.17	3.25	0.145	145	0.29	8.97	8
MW-4R	10/13/2016	0.8	0.0115	1.6	3.25	0.145	52	0.29	3.54	8
MW-4R	4/19/2017	0.8	0.0115	5.89	3.25	0.145	210	0.29	10.4	8
MW-4R	10/18/2017	0.8	0.0115	6.12	3.25	0.145	74.5	0.29	7.54	8
AVERAGE		0.80	0.0158	3.42	3.25	0.15	114.3	0.29	8.10	8.0

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MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD		15 µg/L	2 µg/L	100 µg/L	50 µg/L	100 µg/L	160 mg/L	2 µg/L	49 µg/L	5000 µg/L
UNITS		µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L
MW-5R	5/17/2013	0.8	0.0115	3.4	3.25	0.145	185	0.29	6.89	8
MW-5R	10/10/2013	0.8	0.0115	1.6	3.25	0.145	189	0.29	9.59	8
MW-5R	4/9/2014	0.8	0.0115	4.88	3.25	0.145	210	0.29	9.08	8
MW-5R	10/9/2014	0.8	0.0458	5.38	3.25	0.145	63.1	0.29	3.64	8
MW-5R	4/23/2015	0.8	0.0115	4.09	3.25	0.145	183	0.29	6.97	8
MW-5R	10/13/2015	0.8	0.0115	5.37	3.25	0.145	175	0.29	7.89	8
MW-5R	4/19/2016	0.8	0.0115	4.43	3.25	0.145	255	0.29	13.2	8
MW-5R	10/13/2016	0.8	0.0246	6.39	3.25	0.145	60.9	0.29	1	8
MW-5R	4/19/2017	0.8	0.0115	5.79	3.25	0.145	265	0.29	13.1	8
MW-5R	10/19/2017	0.8	0.0115	9.28	3.25	0.145	73.2	0.29	7.56	8
AVERAGE		0.80	0.0162	5.06	3.25	0.15	165.9	0.29	7.80	8.0
MW-6R	5/17/2013	0.8	0.0115	1.6	3.25	0.145	74.1	0.29	5.2	8
MW-6R	10/10/2013	0.8	0.0115	1.6	3.25	0.145	65.9	0.29	6.94	8
MW-6R	4/9/2014	0.8	0.0115	5.43	3.25	0.145	133	0.29	8	8
MW-6R	10/9/2014	0.8	0.0115	1.6	3.25	0.145	28.6	0.29	2.2	8
MW-6R	4/23/2015	0.8	0.0115	4.19	3.25	0.145	152	0.29	7.57	8
MW-6R	10/14/2015	0.8	0.0115	3.88	3.25	0.145	64.8	0.29	6.61	8
MW-6R	4/19/2016	0.8	0.0115	5.3	3.25	0.145	195	0.29	9.8	8
MW-6R	10/13/2016	0.8	0.0115	5.76	3.25	0.145	54.2	0.29	1	8
MW-6R	4/19/2017	0.8	0.0115	5.2	3.25	0.145	168	0.29	9.34	8
MW-6R	10/18/2017	0.8	0.0115	5.02	3.25	0.145	42.7	0.29	1	8
AVERAGE		0.80	0.0115	3.86	3.25	0.15	99.8	0.29	5.77	8.0
MW-7	5/16/2013	0.8	0.0115	1.6	3.25	0.145	36.1	0.29	11.3	8
MW-7	10/9/2013	0.8	0.0115	1.6	3.25	0.145	7.25	0.29	6.27	8
MW-7	4/8/2014	0.8	0.0115	1.6	3.25	0.145	8.53	0.29	5.67	8
MW-7	10/9/2014	0.8	0.0115	1.6	3.25	0.145	3.07	0.29	1	8
MW-7	4/22/2015	0.8	0.0115	1.6	3.25	0.145	13.4	0.29	19.6	8
MW-7	10/14/2015	0.8	0.0115	1.6	3.25	0.145	4.8	0.29	1	8
MW-7	4/19/2016	0.8	0.0115	1.6	3.25	0.145	15.6	0.29	6.94	8
MW-7	10/12/2016	0.8	0.0115	1.6	3.25	0.145	4.86	0.29	1	8
MW-7	4/19/2017	0.8	0.0115	1.6	3.25	0.145	36.6	0.29	1	8
MW-7	10/17/2017	0.8	0.0115	1.6	3.25	0.145	8.92	0.29	1	8
AVERAGE		0.80	0.0115	1.60	3.25	0.15	15.9	0.29	5.48	6.0
MW-8	5/16/2013	0.8	0.0115	1.6	3.25	0.145	39.4	0.29	2.67	8
MW-8	10/9/2013	0.8	0.0115	1.6	3.25	0.145	7.05	0.29	3.52	8
MW-8	4/9/2014	0.8	0.0115	1.6	3.25	0.145	32.3	0.29	2.33	8
MW-8	10/9/2014	0.8	0.0115	1.6	3.25	0.145	2.46	0.29	1	8
MW-8	4/22/2015	0.8	0.0115	1.6	3.25	0.145	23	0.29	10.8	8
MW-8	10/14/2015	0.8	0.0115	1.6	3.25	0.145	5.13	0.29	1	8
MW-8	4/19/2016	0.8	0.0115	1.6	3.25	0.145	18.7	0.29	2.91	8
MW-8	10/12/2016	0.8	0.0115	1.6	3.25	0.145	4.94	0.29	1	20.2
MW-8	4/19/2017	0.8	0.0115	1.6	3.25	0.145	30.6	0.29	2.18	8
MW-8	10/17/2017	0.8	0.0115	1.6	3.25	0.145	6.26	0.29	1	23.6
AVERAGE		0.80	0.0115	1.60	3.25	0.15	17.0	0.29	2.86	11.38

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Based = Outside Applicable Groundwater Standard

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
MELBURNE LANDFILL AND RECYCLING CENTER COMPARED TO SHALLOW SURFICIAL BACKGROUND AT SARNO LANDFILL
MAY 2013 THROUGH OCTOBER 2017

PARAMETER	SAMPLING DATE	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	SODIUM	THALLIUM	VANADIUM	ZINC
STANDARD UNITS	15 µg/L*	2 µg/L*	100 µg/L*	50 µg/L*	100 µg/L*	160 mg/L**	2 µg/L*	49 µg/L***	5000 µg/L**	
MW-9R	5/16/2013	0.8	0.0115	1.6	3.25	0.145	25.8	0.29	2.22	8
MW-9R	10/9/2013	0.8	0.0115	1.6	3.25	0.145	19.5	0.29	4.56	8
MW-9R	4/9/2014	0.8	0.0115	1.6	3.25	0.145	18.2	0.29	2.57	8
MW-9R	10/8/2014	0.8	0.0115	1.6	3.25	0.145	18	0.29	2.04	8
MW-9R	4/22/2015	0.8	0.0115	1.6	3.25	0.145	31.8	0.29	2.3	8
MW-9R	10/13/2015	0.8	0.0115	1.6	3.25	0.145	20	0.29	2.08	8
MW-9R	4/18/2016	0.8	0.0115	1.6	3.25	0.145	17.4	0.29	4.79	8
MW-9R	10/12/2016	0.8	0.0115	1.6	3.25	0.145	19.4	0.29	1	8
MW-9R	4/18/2017	0.8	0.0115	1.6	3.25	0.145	20	0.29	1	8
MW-9R	10/17/2017	0.8	0.0115	1.6	3.25	0.145	35.2	0.29	2.12	8
AVERAGE	0.80	0.0115	1.60	3.25	0.15	25.5	0.29	2.48	6.0	
MW-10	5/16/2013	0.8	0.0115	1.6	3.25	0.145	27.2	0.29	2.64	8
MW-10	10/9/2013	0.8	0.0115	1.6	3.25	0.145	29.2	0.29	3.5	24
MW-10	4/9/2014	0.8	0.0115	1.6	3.25	0.145	28.2	0.29	1	21.4
MW-10	10/8/2014	0.8	0.0115	1.6	3.25	0.145	32.2	0.29	1	27.6
MW-10	4/22/2015	0.8	0.0115	1.6	3.25	0.145	26.6	0.29	1	46.7
MW-10	10/13/2015	0.8	0.0115	1.6	3.25	0.145	35.7	0.29	1	17.5
MW-10	4/18/2016	0.8	0.0115	1.6	3.25	0.145	21.2	0.29	2.82	28.2
MW-10	10/12/2016	0.8	0.0115	1.6	3.25	0.145	25.3	0.29	1	16.9
MW-10	4/18/2017	0.8	0.0115	1.6	3.25	0.145	17.8	0.29	1	8
MW-10	10/17/2017	0.8	0.0115	1.6	3.25	0.145	14.4	0.29	2.57	42.8
AVERAGE	0.80	0.0115	1.60	3.25	0.15	25.5	0.29	1.75	24.21	
MW-11	5/17/2013	0.8	0.0115	1.6	3.25	0.145	13.9	0.29	1	8
MW-11	10/9/2013	0.8	0.0115	1.6	3.25	0.145	29	0.29	3.44	46.3
MW-11	4/9/2014	0.8	0.0115	1.6	3.25	0.145	18.4	0.29	1	41.3
MW-11	10/8/2014	0.8	0.0115	1.6	3.25	0.145	18.7	0.29	1	156
MW-11	4/22/2015	0.8	0.0115	1.6	3.25	0.145	15.9	0.29	1	58.2
MW-11	10/13/2015	0.8	0.0115	1.6	3.25	0.145	25	0.29	2.28	87.8
MW-11	4/18/2016	0.8	0.0115	1.6	3.25	0.145	12.1	0.29	3.22	42.9
MW-11	10/12/2016	0.8	0.0115	1.6	3.25	0.145	18.4	0.29	1	131
MW-11	4/18/2017	0.8	0.0115	1.6	3.25	0.145	9.39	0.29	1	8
MW-11	10/17/2017	0.8	0.0115	1.6	3.25	0.145	18	0.29	2.25	53.2
AVERAGE	0.80	0.0115	1.60	3.25	0.15	18.1	0.29	1.72	63.47	
MW-12	5/17/2013	0.8	0.0115	1.6	3.25	0.145	98	0.29	4.4	8
MW-12	10/9/2013	0.8	0.0115	1.6	3.25	0.145	6.09	0.29	3.82	8
MW-12	4/9/2014	0.8	0.0115	1.6	3.25	0.145	9.52	0.29	2.23	8
MW-12	10/8/2014	0.8	0.0295	1.6	3.25	0.145	3.8	0.29	2.68	22.2
MW-12	4/22/2015	0.8	0.0115	1.6	3.25	0.145	2.93	0.29	2.32	8
MW-12	10/13/2015	0.8	0.0115	1.6	3.25	0.145	2.51	0.29	1	8
MW-12	4/18/2016	0.8	0.0115	1.6	3.25	0.145	23	0.29	6.69	8
MW-12	10/12/2016	0.8	0.0115	1.6	3.25	0.145	3.37	0.29	1	39.1
MW-12	4/18/2017	0.8	0.0115	4.37	3.25	0.145	86.2	0.29	6.87	25.3
MW-12	10/17/2017	0.8	0.0115	1.6	3.25	0.145	12	0.29	1	58.8
AVERAGE	0.80	0.0133	1.86	3.25	0.15	24.7	0.29	3.20	19.44	

LEGEND
Yellow = Outside 3 Std Deviations of Background Average
Boxed = Outside Applicable Groundwater Standard

**Summary Table of
Surface Water Data
Over 5 Years**

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
SARNO ROAD CLASS III LANDFILL
JUNE 2013 THROUGH DECEMBER 2017

PARAMETER	CONDUCTIVITY (FIELD)	AMMONIA NITROGEN	UN-IONIZED AMMONIA	BIOCHEMICAL OXYGEN DEMAND	CHEMICAL OXYGEN DEMAND	CHLORIDE	NITRATE NITROGEN	TOTAL PHOS- PHORUS as P	SULFATE	TOTAL DISSOLVED SOLIDS
CLASS III (FRESH) SURFACE WATER STANDARD	<50 % increase or <1275 max	NA	0.02 mg/L	NA	NA	NA	NA	NA	NA	NA
GROUNDWATER STANDARD	(1)	2.8 mg/L***	(1)	(1)	(1)	(1)	10 mg/L*	(1)	250 mg/L**	500 mg/L**
UNITS	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sarno Surface Waters										
SW-1 / SW-1R	5 YR AVERAGE	942	0.43	7.3	133	NS	0.027	0.037	40.6	598
	std dev	83	0.54	1.9	17	NS	0.015	0.020	3.6	78
	3 x std dev	250	1.61	5.8	51	NS	0.044	0.061	10.7	234
	upper range	1192	2.04	13.1	185	NS	0.071	0.097	51.3	832
Melbourne Surface Water										
SW-1	5 YR AVERAGE	1586	6.47	18.4	323	174	0.030	0.79	125	1150
Sarno Surface Waters										
SW-2	5 YR AVERAGE	1041	3.24	5.0	105	NS	0.048	0.117	30	721
SW-3	5 YR AVERAGE	1036	0.67	8.1	153	NS	0.048	0.072	66	688
SW-4 / SW-4R	5 YR AVERAGE	845	0.78	4.5	47	NS	0.047	0.096	29	546
SW-7	5 YR AVERAGE	1118	2.40	NS	NS	NS	NS	NS	NS	NS

LEGEND

* = Primary Drinking Water Standard
** = Secondary Drinking Water Standard
*** = Chapter 62-777 Groundwater Cleanup Target Levels (GCTL)

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
SARNO ROAD CLASS III LANDFILL
JUNE 2013 THROUGH DECEMBER 2017

PARAMETER	TOTAL HARDNESS	TOTAL KJELDAHL NITROGEN	TOTAL ORGANIC CARBON	TOTAL SUSPENDED SOLIDS	ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CHROMIUM	COPPER
CLASS III (FRESH) SURFACE WATER STANDARD	NA	NA	NA	NA	4300 µg/L	50 µg/L	NA	0.13 µg/L	CALC	CALC
GROUNDWATER STANDARD	(1)	(1)	(1)	(1)	6 µg/L*	10 µg/L*	2000 µg/L*	4 µg/L*	100 µg/L*	1000 µg/L**
UNITS	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sarno Surface Waters										
SW-1 / SW-1R	200	4.89	32.1	30.1	0.59	3.1	51.1	0.028	1.25	0.47
5 YR AVERAGE										
std dev	19	0.53	6.0	5.9	0.25	1.3	9.1	0.008	0.00	0.00
3 x std dev	57	1.60	18.0	17.8	0.76	3.8	27.4	0.024	0.00	0.00
upper range	257	6.49	50.1	47.9	1.35	6.9	78.5	0.051	1.25	0.47
Melbourne Surface Water										
SW-1	451	15.1	79	14.4	3.39	18.4	68.8	0.047	4.40	2.23
5 YR AVERAGE										
Sarno Surface Waters										
SW-2	374	4.7	30	34.4	0.33	3.2	51.9	0.040	1.88	0.47
5 YR AVERAGE										
SW-3	276	4.2	42	22.0	0.28	3.3	41.4	0.035	1.77	0.47
5 YR AVERAGE										
SW-4 / SW-4R	299	1.3	13	47.2	0.29	2.5	58.0	0.055	1.61	2.09
5 YR AVERAGE										
SW-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

LEGEND
* = Primary Drinking Water Standard
** = Secondary Drinking Water Standard
*** = Chapter 62-777 Groundwater Cleanup Target Levels (GCTL)

PARAMETERS AT OR ABOVE THE LABORATORY DETECTION LIMIT
SARNO ROAD CLASS III LANDFILL
JUNE 2013 THROUGH DECEMBER 2017

PARAMETER	IRON	LEAD	MERCURY	SELENIUM	SILVER	THALLIUM	VANADIUM	ZINC
CLASS III (FRESH) SURFACE WATER STANDARD	1000 µg/L	CALC	0.012 µg/L	5 µg/L	0.07 µg/L	6.3 µg/L	NA	CALC
GROUNDWATER STANDARD	300 µg/L**	15 µg/L*	2 µg/L*	50 µg/L*	100 µg/L**	2 µg/L*	49 µg/L***	5000 µg/L**
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Sarno Surface Waters								
SW-1 / SW-1R	72	2.88	0.0047	0.796	0.0250	0.250	3.15	5.62
std dev	48	1.20	0.0012	0.372	0.0000	0.000	1.37	1.96
3 x std dev	143	3.60	0.0036	1.117	0.0000	0.000	4.12	5.88
upper range	215	6.48	0.0083	1.913	0.0250	0.250	7.27	11.50
Melbourne Surface Water								
SW-1	430	0.205	0.0101	0.325	0.0145	0.029	1.93	8.34
5 YR AVERAGE								
Sarno Surface Waters								
SW-2	2001	2.83	0.0027	0.250	0.0250	0.250	2.84	20.70
5 YR AVERAGE								
SW-3	328	3.05	0.0036	0.433	0.0305	0.250	3.80	5.76
5 YR AVERAGE								
SW-4 / SW-4R	2073	4.14	0.0037	0.285	0.0250	0.250	5.80	15.15
5 YR AVERAGE								
SW-7	NS	NS	NS	NS	NS	NS	NS	NS

LEGEND

* = Primary Drinking Water Standard
** = Secondary Drinking Water Standard
*** = Chapter 62-777 Groundwater Cleanup Target Levels (GCTL)

GRAY ROBINSON
ATTORNEYS AT LAW

321-727-8100

JACK.KIRSCHENBAUM@GRAY-ROBINSON.COM

July 22, 2020

VIA ELECTRONIC MAIL

David Smicherko, Environmental Manager
Central District
Florida Department of Environmental Protection
3319 Maguire Blvd.Suite232
Orlando, Florida 32803

Subject: **Draft Consent Order Comments**
Florida Recyclers of Brevard-Melbourne Landfill
WACS # 18444
3351 Sarno Road
Melbourne, FL 32934

Dear Mr. Smicherko:

The undersigned represents as attorney Florida Recyclers of Brevard (FRB). Please consider this a response to your draft Consent Order dated March, 2020 for the subject facility. Rather than commenting specifically on the consent order, it is our position that a consent order level of enforcement instrument is unwarranted to bring the facility into compliance with Department Rules. Therefore, we request a "Compliance Assistance Offer", commonly used by other Department Districts for minor violations such as alleged for this facility. The draft CAO, a copy of which is attached hereto, is based on the warning letter and consent order which state the following:

"A complaint inspection was conducted at your facility on January 23, 2020. During this inspection, possible violations of Chapter 403, F.S., 62-701, Florida Administrative Code (F.A.C.), and Chapter 62-709, F.A.C. were observed.

During the inspection Department personnel noted the following:

1. Objectionable odors were noted off-site beyond the property boundary.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
3. The facility failed to ensure there were 50 foot fire breaks in the piles of processed and unprocessed material.
4. Processed material has been stored on site for longer than 18 months."

1795 WEST NASA BLVD.
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MELBOURNE, FLORIDA 32901
TEL 321-727-8100
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gray-robinson.com

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DEP Central District

David Smicherko, Environmental Manager
July 22, 2020
Page 2

The draft COA has a list of recommended corrective actions that will address each of these potential violations and assure that the facility is brought into compliance. Many of these compliance items have been satisfied to date.

Again, it is our position that a COA is more applicable to the alleged minor violations.

The February 4, 2020 warning letter was the first notice to FRB of these alleged violations noted in the inspection. The site has been in operation for over 20 years, and this is the first time these types of issues have been noted in an FDEP inspection.

To address #1, FRB does not believe that their facility is the source on any off-site objectionable odors that may have been detected at New York Avenue, nor at the Westwood condos to the east. FRB has submitted an Odor Remediation Plan, conducted an on-site odor evaluation, and is conducting ongoing on and off-site odor monitoring to comply with the Department's rules for off-site odor prevention. Three months of odor monitoring supports that the FRB facility is not the source of off-site odors, or has remediated potential odor sources on site.

There are numerous potential odor sources surrounding the FRB facility: the Sarno Road Class III landfill (active working face directly west, at the end of New York Ave.); Brevard County Class I transfer station, and the dredge spoil disposal site, due west of the Westwood condos. All these sites have the potential of generating objectionable odors.

We disagree that the cumbersome variance process to Rules 62-701, or 62-709 FAC is required to allow the facility to store processed organic materials for more than 18 months. It is written in the rule: *62-709.330 (2) Processed material shall be removed from the facility within 18 months. However, if a yard processing facility is authorized under another Department solid waste management facility permit, then the department shall authorize on-site storage of processed material for longer than 18 months if the owner or operator demonstrates that there is a quantifiable use for such material for cover, erosion control, closure, or other similar activities at that permitted facility.* This statement allows the Department to authorize the longer storage thru a solid waste disposal facility demonstration, commonly completed thru an Operations Plan or permit modification. The draft COA offers this simpler solution to the organics storage issue.

The non-compliance items listed in the warning letter and consent order, according to the Departments' enforcement guidelines, are all "minor" deviations from the solid waste rules. These are FRB's first alleged violations, and they have shown good faith actions to comply. Therefore, fines, and a consent odor are not warranted to force compliance.

GRAYROBINSON
PROFESSIONAL ASSOCIATION

David Smicherko, Enviromental Manager
July 22, 2020
Page 3

FRB is committed to maintaining compliance with Department regulations. We are looking forward to your comments on this offer, or your offer to conduct a virtual meeting to discuss.

Very truly yours,

/s/ Jack Kirschenbaum

Jack Kirschenbaum

JAK/kf

Attachments

cc: James E. Golden, P.G.



FLORIDA DEPARTMENT OF Environmental Protection

Central District Office 3319 Maguire
Blvd. Suite 232 Orlando, FL 32803

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

July , 2019

Mr. Art F. Evans, Managing Member
Florida Recyclers of Brevard, LLC
1698 W. Hibiscus Blvd. Suite A
Melbourne, FL 32937
Art.finde@gmail.com

Re: Compliance Assistance Offer
Florida Recyclers of Brevard LLC.
WACS # 18444-Melborne Landfill
Brevard County

Dear Mr. Evans:

A solid waste management facility compliant inspection was conducted at the above referenced facility on January 23, 2020. During this inspection, potential non-compliance was noted. The purpose of this letter is to offer compliance assistance as a means of resolving these matters.

Specifically, potential non-compliance with the requirements of Chapter 403, Florida Statutes, Chapter 62-701 and Chapter 62-709, Florida Administrative Code (F.A.C.) were observed. Please see the attached inspection report (or Warning letter) for a full account of Department observations and recommendations. The following potential non-compliance items were observed during the inspection:

1. Objectionable odors were noted off-site beyond the property boundary.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
3. The facility failed to ensure there were 50 foot fire breaks in the piles of processed and unprocessed material.
4. Processed material has been stored on site for longer than 18 months."

A list of Recommendations for Corrective Action is attached to bring these items into compliance is attached.

We request you review the item(s) of concern noted and respond in writing within **30 days** of receipt of this Compliance Assistance Offer. Your written response should include one of the following:

<https://floridadep.gov/>

1. Describe what has been done to resolve the non-compliance issue(s) or provide a schedule describing how/when the issue(s) will be addressed.
2. Provide the requested information, or information that mitigates the concerns or demonstrates them to be invalid, or
3. Arrange for the case manager to visit your site to discuss the item(s) of concern.

It is the Department's desire that you are able to adequately address the aforementioned issues so that this matter can be closed. Your failure to respond promptly may result in the initiation of formal enforcement proceedings.

Please address your response and any questions to Ms. Mary Powers of the Central District Office at (407) 897-2921 or via e-mail at mary.powers@floridadep.gov. We look forward to your cooperation with this matter.

Sincerely,

David Smicherko, Environmental Manager
Central District
Florida Department of Environmental Protection

Enclosures: Inspection Report

cc:



Department of Environmental Protection Solid Waste Facility Inspection Report



Recommendations for Corrective Action

1.) Odor Remediation Plan

Objectionable odors were noted off-site that potentially could be attributed to the facility. An Odor Remediation Plan in accordance with Rule 62-701.530 (3)(b) must be developed for the facility by a Florida licensed Professional Engineer. Immediately take steps to reduce any objectionable odors. Such steps may include applying or increasing initial cover, reducing the size of the working face, increased turning of compost piles, and ceasing operations in the areas where odors have been detected. Submit to the Department for approval an odor remediation plan for the gas releases. The plan shall describe the nature and extent of the problem and the proposed long-term remedy. The remedy shall be initiated within 30 days of approval.

2.) Routine Odor Monitoring Program

The facility shall implement a routine odor monitoring program to determine the timing and extent of any off-site odors, and to evaluate the effectiveness of the odor remediation plan. Retain records of odor monitoring at the facility and submit monthly reports to the Department until the ORP has been proven effective.

3.) Maintain All-Weather Perimeter Road

A continuous 20-foot wide perimeter access road was not observed. Facility must maintain an all-weather perimeter access road, at least 20-feet wide at all times. The Operator must conduct a self-inspection of the road daily, and make immediate corrective action to maintain the road. Written records of the results of these inspections must be retained for a minimum of three years.

4.) Maintain Fire Breaks Between Organics Piles

50-foot fire breaks were not observed between all processed and unprocessed materials. The facility must maintain fire breaks between piles of processed and unprocessed organics to insure a maximum of 50 feet access from firefighting equipment. The Operator must conduct a self-inspection of the fire breaks daily, and make immediate corrective action to maintain the fire breaks. Written records of the results of these inspections must be retained for a minimum of three years.

5.) Demonstrate Need to Store Processed Organics for More Than 18 Months

Processed organics materials were observed to be stored more than 18 months. The yard trash processing is conducted on a permitted construction and demolition debris disposal facility. In accordance with Rule 62-709.330 (2), the facility shall provide the Department with a demonstration that there is a quantifiable use for such material for cover, erosion control, closure, or other similar activities at that permitted facility to allow the Department to authorize on-site storage of processed material for longer than 18 months. The facility shall submit the demonstration to the Department either in an Operations Plan and Closure Plan modifications, or minor permit modification.



**Florida Department of
Environmental Protection
Inspection Checklist**

FACILITY INFORMATION:

Facility Name: MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)
On-site Inspection Start Date: 01/23/2020
On-site Inspection End Date: 01/23/2020
WACS No.: 18444
Facility Street Address: 3351 SARNO ROAD
City: MELBOURNE
County Name: BREVARD
Zip: 32934

INSPECTION PARTICIPANTS:

(Include ALL Landfill and Department Personnel with Corresponding Titles)

Principal Inspector: Mary Powers, Inspector

Other Participants: Andrew Cannella, Manager;

INSPECTION TYPE:

Complaint Investigation Inspection for C&D Debris Disposal Facility

ATTACHMENTS TO THE INSPECTION CHECKLIST:

This Cover Page to the Inspection Checklist may include any or all of the following attachments as appropriate.

Note: Checklist items with shaded boxes are for informational purposes only.

10.0 - SECTION 10.0 - REGISTERED SOURCE-SEPARATED ORGANICS PROCESSING FACILITIES

MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

Page 2 of 9

Inspection Date: 01/23/2020

10.0 - SECTION 10.0 - REGISTERED SOURCE-SEPARATED ORGANICS PROCESSING FACILITIES

Requirements:

The requirements listed in this section provide an opportunity for the Department's inspector to indicate the conditions found at the time of the inspection. A "Not Ok" response to a requirement indicates either a potential violation of the corresponding rule or an area of concern that requires more attention. Both potential violations and areas of concern are discussed further at the end of this inspection report.

FACILITY TYPE(S)	MATERIAL(S) PROCESSED	PRODUCES	METHOD OF COMPOSTING
<input type="checkbox"/> Yard Trash Transfer Station	<input checked="" type="checkbox"/> Yard Trash	<input checked="" type="checkbox"/> Mulch	<input type="checkbox"/> Windrow
	<input type="checkbox"/> Manure	<input type="checkbox"/> Firewood	<input type="checkbox"/> Passive aerated windrows
<input checked="" type="checkbox"/> Yard Trash Recycling	<input type="checkbox"/> Animal byproducts	<input type="checkbox"/> Fuel	<input type="checkbox"/> Aerated static piles
	<input type="checkbox"/> Pre-consumer vegetative waste	<input type="checkbox"/> Compost	<input type="checkbox"/> In-vessel composting
	<input type="checkbox"/> Vegetative waste	<input type="checkbox"/> Soil Amendment	
		<input type="checkbox"/> Soil	
		<input type="checkbox"/> Other	

Item No.	REQUIREMENTS AND PROHIBITIONS APPLICABLE TO ALL REGISTERED SOURCE-SEPARATED ORGANICS PROCESSING FACILITIES	Ok	Not Ok	Unk	N/A
10.1	Unauthorized storage, processing, or disposal of solid waste except as authorized at a permitted or registered solid waste management facility or other exempt facility? 62-701.300(1)(a)		✓		
10.2	Have objectionable odors been caused or allowed in violation of Chapter 62-296, F.A.C.? 62-709.300(7)(a)		✓		
10.3	Unauthorized storage or processing in a way or location that violates air quality or water quality standards? 62-709.300(7)(b), 62-701.300(1)(b)	✓			
10.4	Do geological formations or subsurface features provide support for the facility? 62-709.300(7)(b), 62-701.300(2)(a)	✓			
10.5	Unauthorized disposal or storage prohibited, except yard trash, within 200 feet of any natural or artificial body of water, including wetlands without permanent leachate controls, except impoundments or conveyances which are part of an on-site, permitted stormwater management system or on-site water bodies with no off-site discharge? 62-701.300(2)(e), 62-709.320(3)	✓			
10.6	Unauthorized storage or processing in any natural or artificial water body (e.g. ground water and wetlands within DEP jurisdiction)? 62-709.300(7)(b), 62-701.300(2)(d)	✓			
10.7	Unauthorized storage or processing on the right of way of any public highway, road, or alley? 62-709.300(7)(b), 62-701.300(2)(f)	✓			
10.8	Unauthorized open burning of solid waste except in accordance with Department requirements? 62-709.300(7)(b), 62-701.300(3)	✓			
10.9	Unauthorized incorporation of CCA treated wood into material that will be applied as a ground cover, soil or soil amendment? 62-709.300(7)(b), 62-701.300(14)	✓			
10.10	Unauthorized unconfined emissions of particulate matter in violation of paragraph 62-296.320(4)(c), F.A.C.? 62-709.300(7)(b), 62-701.300(15)	✓			
10.11	Does the facility have the necessary operational features and equipment - unless otherwise specified? Including: 62-709.320(2)(a)				
10.11.1	Effective barrier to prevent unauthorized entry and dumping? 62-709.320(2)(a)1	✓			
10.11.2	Dust and litter control methods? 62-709.320(2)(a)2	✓			
10.12	Does the facility have the necessary fire protection and control provisions to deal with accidental burning of solid waste? Including 62-709.320(2)(a)3				
10.12.1	20-foot all-weather access road all around the perimeter? 62-709.320(2)(a)3.a.		✓		
10.12.2	No material mechanically compacted? 62-709.320(2)(a)3.b.	✓			

MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

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Inspection Date: 01/23/2020

Item No.	REQUIREMENTS AND PROHIBITIONS APPLICABLE TO ALL REGISTERED SOURCE-SEPARATED ORGANICS PROCESSING FACILITIES	Ok	Not Ok	Unk	N/A
10.12.3	No material more than 50 feet from access by motorized firefighting equipment? 62-709.320(2)(a)3.c.		✓		
10.13	Is the facility operated in a manner to control vectors? 62-709.320(2)(b)	✓			
10.14	Is the facility operated in a manner to control objectionable odors per with Rule 62-296.320(2), F.A.C.? 62-709.320(2)(c)		✓		
10.15	Are any installed drains and leachate or condensate conveyances kept cleaned? 62-709.320(2)(d)				✓
10.16	Is the received solid waste processed timely as follows? 62-709.320(2)(e)				
10.16.1	Is yard trash size-reduced or removed within 6 months or time needed to receive 3,000 tons or 12,000 cubic yards, whichever is greater? (Separated logs with 6 inch diameter or greater can be stored for up to 12 months before being size-reduced or removed.) 62-709.320(2)(e)1	✓			
10.16.2	Is putrescible waste (e.g. vegetative wastes, animal byproducts or manure) processed and incorporated into the composting material, or removed from the facility, within 48 hours? 62-709.320(2)(e)2	✓			
10.17	Is any treated or untreated biomedical waste; hazardous waste; or any materials having (PCB) concentration of 50 ppm or greater containerized and removed immediately? 62-709.320(2)(f), 62-701.300(4), 62-701.300(5), 62-701.300(6)	✓			
10.18	Have all residuals, solid waste and recyclable materials been removed and recycled or disposed and has any remaining processed material been properly used or disposed upon the facility ceasing operations? 62-709.320(2)(g)				✓
10.19	If temperature is used to show disinfection or vector attraction achieved, are records kept for at least three years? 62-709.320(4)(b)				✓
10.20	Is the registration for the facility current and on file with the Department? 62-709.320(3)(b)				✓
10.21	Are renewal applications for annual registration of the facility submitted to the Department by July 1st, if applicable? 62-709.320(3)(c)				✓
10.22	Are monthly records of incoming and outgoing material kept on-site or at another location as indicated on the registration form for at least three years? 62-709.320(4)(a)	✓			
10.23	Are Annual Reports, based upon the preceding calendar year, summarizing monthly records, submitted to the Department as required? 62-709.320(4)(a)	✓			
Item No.	REQUIREMENTS AND PROHIBITIONS APPLICABLE TO YARD TRASH ONLY FACILITIES	Ok	Not Ok	Unk	N/A
10.24	Unauthorized storage or processing within 100 feet from off-site potable water well that existed before facility registered? 62-709.300(7)(b) and 62-701.300(12)(a)	✓			
10.25	Unauthorized storage or processing within 50 feet from any body of water, including wetlands? (Does not include parts of permitted stormwater system, or water bodies totally within facility with no discharge to surface waters.) 62-709.300(7)(b), 62-701.300(12)(b)	✓			
10.26	Is processed material removed from facility within 18 months, unless longer storage authorized by permit? 62-709.330(2)		✓		
10.27	Is the facility accepting only yard trash, and bags used to collect yard trash and containerizing any other material? 62-709.330(3)	✓			
Item No.	REQUIREMENTS AND PROHIBITIONS APPLICABLE TO ONLY THOSE FACILITIES THAT BLEND MANURE OR COMPOST VEGETATIVE WASTES, ANIMAL BYPRODUCTS OR MANURE	Ok	Not Ok	Unk	N/A
10.28	Unauthorized storage or processing within 500 feet off-site potable water well that existed before facility registered? 62-709.300(7)(b) and 62-701.300(2)(b)				✓
10.29	Unauthorized storage or processing within 200 feet from any body of water, including wetlands? (Does not include parts of permitted stormwater system, or water bodies totally within facility with no discharge to surface waters.) 62-709.300(7)(b), 62-701.300(2)(e)				✓
10.30	Unauthorized storage or processing within 10,000 feet of any licensed and operating airport runway used by turbine powered aircraft, or within 5,000 feet of any licensed and operating airport runway used only by piston engine aircraft, unless applicant demonstrates that the facility is designed and will be operated so that it does not pose a bird hazard to aircraft? 62-709.300(7)(b), 62-701.320(13)(b)				✓

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Item No.	REQUIREMENTS AND PROHIBITIONS APPLICABLE TO ONLY THOSE FACILITIES THAT BLEND MANURE OR COMPOST VEGETATIVE WASTES, ANIMAL BYPRODUCTS OR MANURE	Ok	Not Ok	Unk	N/A
10.31	Is the carbon:nitrogen ratio of the blended feedstocks greater than 20? 62-709.350(2)				✓
10.32	Do piles exceed 12 feet in height? 62-709.350(3)				✓
10.33	Is all material removed within 18 months, unless longer storage authorized by permit? 62-709.350(5)				✓
10.34	Is there documentation showing that disinfection has been achieved? Note that this is not required if they are composting only pre-consumer vegetative waste with or without yard trash. 62-709.350(6)				✓
10.35	Is there vector attraction reduction controls that include one of the following? 62-709.350(7) <input type="checkbox"/> Temperature monitoring records showing the waste was composted for at least 14 days, with temperature no lower than 40 degrees Celsius and average temperature of the material being composted higher than 45 degrees Celsius. or 62-709.350(7)(a) <input type="checkbox"/> Results of testing showing the specific oxygen uptake rate (SOUR) for material being composted or blended equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius. 62-709.350(7)(b)				✓

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Inspection Date: 01/23/2020

Current Violations:

Rule: 62-709.320(2)(a)3.a.

Question Number: 10.12.1

Explanation: There shall be an all-weather access road, at least 20 feet wide, all around the perimeter of the site.

Specifically, Florida Recyclers does not have an all-weather access road, at least 20 feet wide, all around the perimeter of the site.

Corrective Action: Within 30 days of receiving this report, install an all-weather access road at least 20 feet in width around the perimeter of the facility.

Rule: 62-709.320(2)(a)3.c.

Question Number: 10.12.3

Explanation: None of the processed or unprocessed material shall be more than 50 feet from access by motorized firefighting equipment.

Specifically, Florida Recyclers failed to ensure none of the processed or unprocessed material was more than 50 feet from access by motorized firefighting equipment.

Corrective Action: Within 30 days of receiving this report, the owner/operator shall install 50 foot fire breaks through larger piles of debris to create adequately sized internal fire lanes. Within 5 days of completion of corrective activities please notify the Department so that a follow up inspection can be conducted.

Rule: 62-709.320(2)(c)

Question Number: 10.14

Explanation: The facility shall be operated in a manner to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C.

Specifically, Florida Recyclers failed to operate in a manner to control objectionable odors in accordance with subsection 62-296.320(2), F.A.C. Since off site odors were detected beyond the property boundary.

Corrective Action: Operate the facility in a manner so as to eliminate objectionable odors from leaving the site.

Rule: 62-701.300(1)(a)

Question Number: 10.1

Explanation: Unauthorized storage, processing, or disposal of solid waste except as authorized at a permitted or registered solid waste management facility or other exempt facility? 62-701.300(1)(a)

Corrective Action: Within 60 days of receiving this report, remove all processed material that has remained on site at the facility for longer than 18 months

MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

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Rule: 62-709.300(7)(a)

Question Number: 10.2

Explanation: No person shall cause or allow the discharge of air pollutants that cause objectionable odor in violation of Chapter 62-296, F.A.C.

Specifically, Florida Recyclers failed to control objectionable odors off site beyond the property boundary.

Corrective Action: See Corrective Actions listed for Question Number 10.14.

Rule: 62-709.330(2)

Question Number: 10.26

Explanation: Processed material shall be removed from the facility within 18 months. However, if a yard processing facility is authorized under another Department solid waste management facility permit, then the department shall authorize on-site storage of processed material for longer than 18 months if the owner or operator demonstrates that there is a quantifiable use for such material for cover, erosion control, closure, or other similar activities at that permitted facility. Specifically, Florida Recyclers has failed to remove processed material from the facility within 18 months. A longer period of storage is not authorized by their permit.

Corrective Action: Within 60 days of receiving this report, remove all processed material that has remained on site at the facility for longer than 18 months

Inspection Date: 01/23/2020

COMMENTS:

Permit 0133456-012-SO-MM Issued: 04/13/2017

Permit Renewal Application Due Date: 4/1/2024

Permit Expires: 6/1/2024

On January 23, 2020 at 8:17 A.M., no odor was detected at Ridgewood Club Condominium, which lies to the east of Florida Recyclers. At 8:20 A.M., a musty, earthy odor was detected on New York avenue located southeast of Florida Recyclers. At 8:31 A.M., Mary Powers of DEP met with Andrew Cannella, Manager of Florida Recyclers, and the on site inspection began.

A large compost pile exists in the southeast corner of the facility that Andrew Canella stated is approximately 5 years old (Fig. 1). This is a violation of Rule 62-709.330(2), F.A.C., listed above, which states that "processed material shall be removed from the facility within 18 months. However, if a yard processing facility is authorized under another Department solid waste management facility permit, then the department shall authorize on-site storage of processed material for longer than 18 months if the owner or operator demonstrates that there is a quantifiable use for such material for cover, erosion control, closure, or other similar activities at that permitted facility."

The compost pile is adjacent to the C&D working face of the facility (Fig. 2). An odor similar to the one detected off site was noted in this area.

Additionally, large piles of compost exist in the central part of the property (Fig. 3). Steam was observed emanating and dispersing from the piles of compost; most notably when a pile was being turned by use of an excavator (Fig. 4). Freshly ground yard waste is located next to the compost piles that exist in the central part of the property (Fig. 5).

ATTACHMENTS:

Fig. 1 Large compost pile



Fig. 2 C&D adjacent to compost



Inspection Date: 01/23/2020

Fig. 3 Central compost piles



Fig. 4 Steam off compost piles



Fig. 5 freshly ground yard waste



MELBOURNE LANDFILL (AKA FLORIDA RECYCLERS OF BREVARD)

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Inspection Date: 01/23/2020

Signed:Mary PowersInspector**PRINCIPAL INSPECTOR NAME****PRINCIPAL INSPECTOR TITLE**FDEP01/29/2020**PRINCIPAL INSPECTOR SIGNATURE****ORGANIZATION****DATE**Andrew CannellaManager**REPRESENTATIVE NAME****REPRESENTATIVE TITLE**NO SIGNATURE REQUIRED**REPRESENTATIVE SIGNATURE****ORGANIZATION**

NOTE: By signing this document, the Site Representative only acknowledges receipt of this Inspection Report and is not admitting to the accuracy of any of the items identified by the Department as "Not Ok" or areas of concern.

Report Approvers:**Approver:** David Smicherko**Inspection Approval Date:** 01/30/2020

March 2, 2020



VIA ELECTRONIC MAIL

Aaron Watkins, Director
Central District
Florida Department of Environmental Protection
3319 Maguire Blvd. Suite 232 Orlando, Florida 32803

Subject: **Florida Recyclers of Brevard-Melbourne Landfill**
WACS # 18444
3351 Sarno Road
Melbourne, FL 32934

Dear Mr. Watkins:

On behalf of Florida Recyclers of Brevard (FRB), Grove Scientific & Engineering Co., (GSE) would like to initially respond to your "warning letter" dated February 4, 2020. The subject letter states the following:

"A complaint inspection was conducted at your facility on January 23, 2020. During this inspection, possible violations of Chapter 403, F.S., 62-701, Florida Administrative Code (F.A.C.), and Chapter 62-709, F.A.C. were observed.

During the inspection Department personnel noted the following:

1. Objectionable odors were noted off-site beyond the property boundary.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
3. The facility failed to ensure there were 50 foot fire breaks in the piles of processed and unprocessed material.
4. Processed material has been stored on site for longer than 18 months."

The February 4, 2020 letter was the first notice to FRB of these alleged violations noted in the inspection. The site has been in operation for over 20 years, and this is the first time these types of issues have been noted in an FDEP inspection.

To address #1, FRB does not believe that their facility is the source on any off-site objectionable odors that may have been detected at the Westwood condos to the east. FRB has conducted odors surveys in the mornings and evenings at the Westwood condos for the last 3 weeks, with no odor detections, except from the full dumpsters in their parking lots.

6140 EDGEWATER DRIVE • SUITE F • ORLANDO, FLORIDA 32810-4810
PHONE (407)298-2282 • FAX (407)290-9038 • www.grovescientific.com

There are numerous potential odor sources surrounding the FRB facility: the Sarno Road Class III landfill (active working face directly west, at the end of New York Ave.); Brevard County Class I transfer station, and the dredge spoil disposal site, due west of the Westwood condos. All these sites have the potential of generating objectionable odors.

GSE conducted an on-site odor evaluation survey on March 2, 2020, and found only very faint, barely perceptible, organic type odors. These odors were not objectionable per ASTM-n-butanol reference scale, or an n-1, and only detected within the center of the FRB site, near freshly turned mulch piles. These very faint odors do not have the strength to travel off site and create the alleged violations. The results of the GSE evaluation will be submitted to the Department by March 11, 2020.

FRB requests that they be provided the FDEP (Mary Powers) inspection report that allegedly detected off-site odors attributed to the FRB site. We would also like the names and addresses of the Westwood condo complainants', to be able to better understand their complaints.

On items #2 and 3, a 20-foot wide perimeter road does exist at the site. During the January 23, 2020 inspection, a piece of broken heavy equipment was blocking the road at one point, which has since been removed to clear the road. Additional 50-foot fire brakes have also been cut thru the mulch piles. These breaks and perimeter road will be maintained open.

On # 4, the FRB facility is not only a C&D disposal facility, it is also a yard waste processing facility, and retail sales of recycled rock, colored mulch, and soils location called Simply Organics. It is not your typical mulching facility. Ms. Powers has requested, in her February 28, 2020 email, that we supply additional information on how the yard waste is managed, stored, processed, and estimated quantities moved thru the retail business. This information will be supplied to the Department by March 11, 2020.

We met with the Department concerning this warning letter on February 28, 2020. In attendance was David Smicherko, Mary Powers, and Nathan Hess, FDEP, David Smith and Andrew Cannella, FRB, and myself. We appreciate that the Department requested the meeting to "receive any facts you may have that will assist in determining whether any violations have occurred", and that it was a "preliminary agency action". As we stated at the meeting, FRB wants to assist the Department in determining the source of the supposed objectionable odors, and thus offered to conduct an odor evaluation on-site, continued off-site monitoring (especially after a complaint call) and to draft an Odor Remediation plan, to immediately prevent, or remediate any on site odors.

However, at the meeting, Mr. Hess threatened penalties, and a Consent Order to enforce compliance on FRB for the alleged violations. With all due respect to Mr. Hess, FRB strongly objects to this tactic, when it has not been proven that the FRB site is the source of any off-site odors. All of the non-compliance items listed in the warning letter are "minor" deviations from the rules, since this is FRB's first alleged violations, and they have shown good faith actions to comply. Therefore, fines, and a consent order are not warranted to force compliance.

FRB is committed to maintaining in compliance, and to working with the Department to determine the source of the area objectionable odors, if they exist.

Sincerely,

Grove Scientific & Engineering

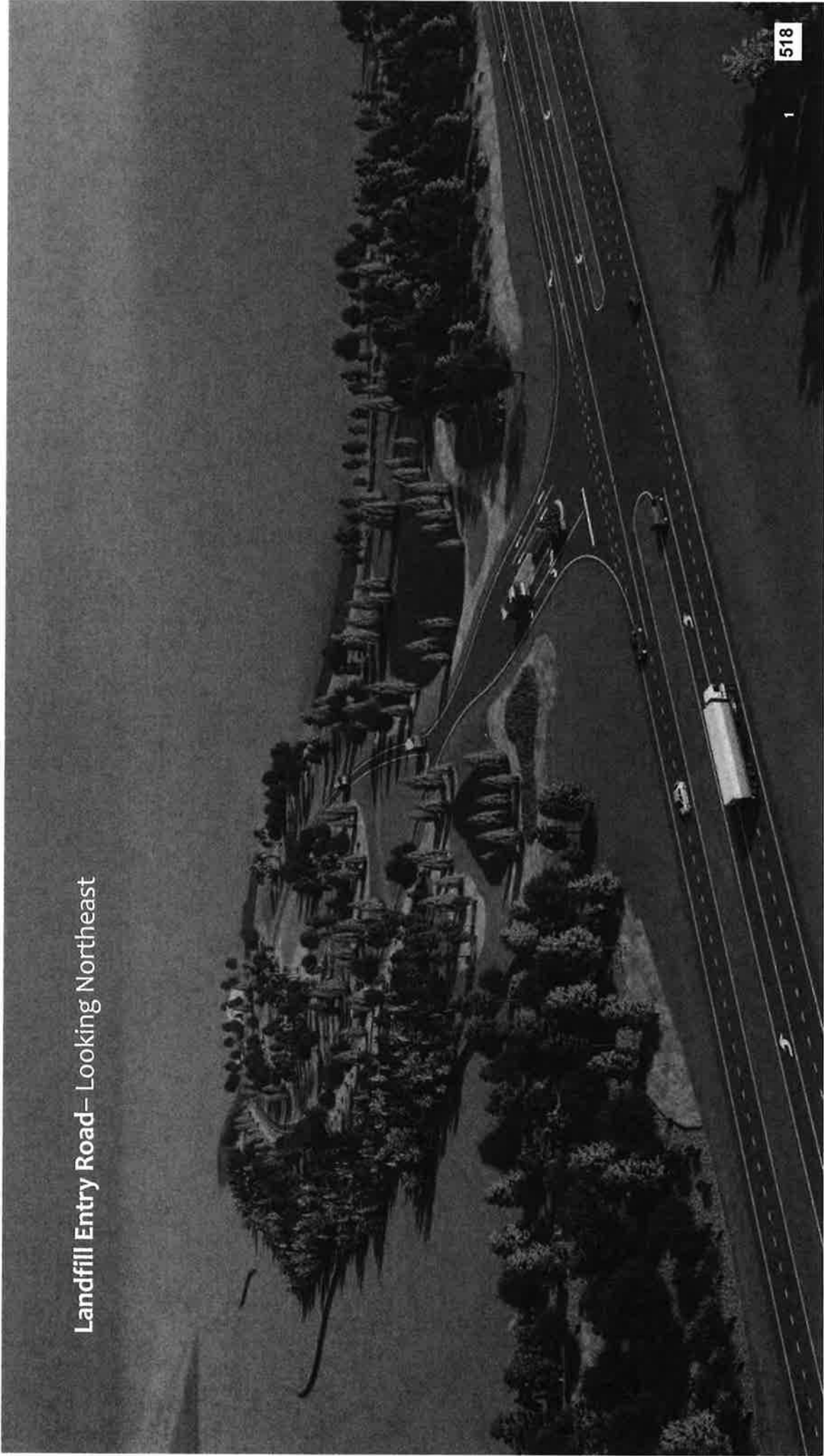
A handwritten signature in black ink, appearing to read 'J. E. Golden', written in a cursive style.

James E. Golden, P.G.

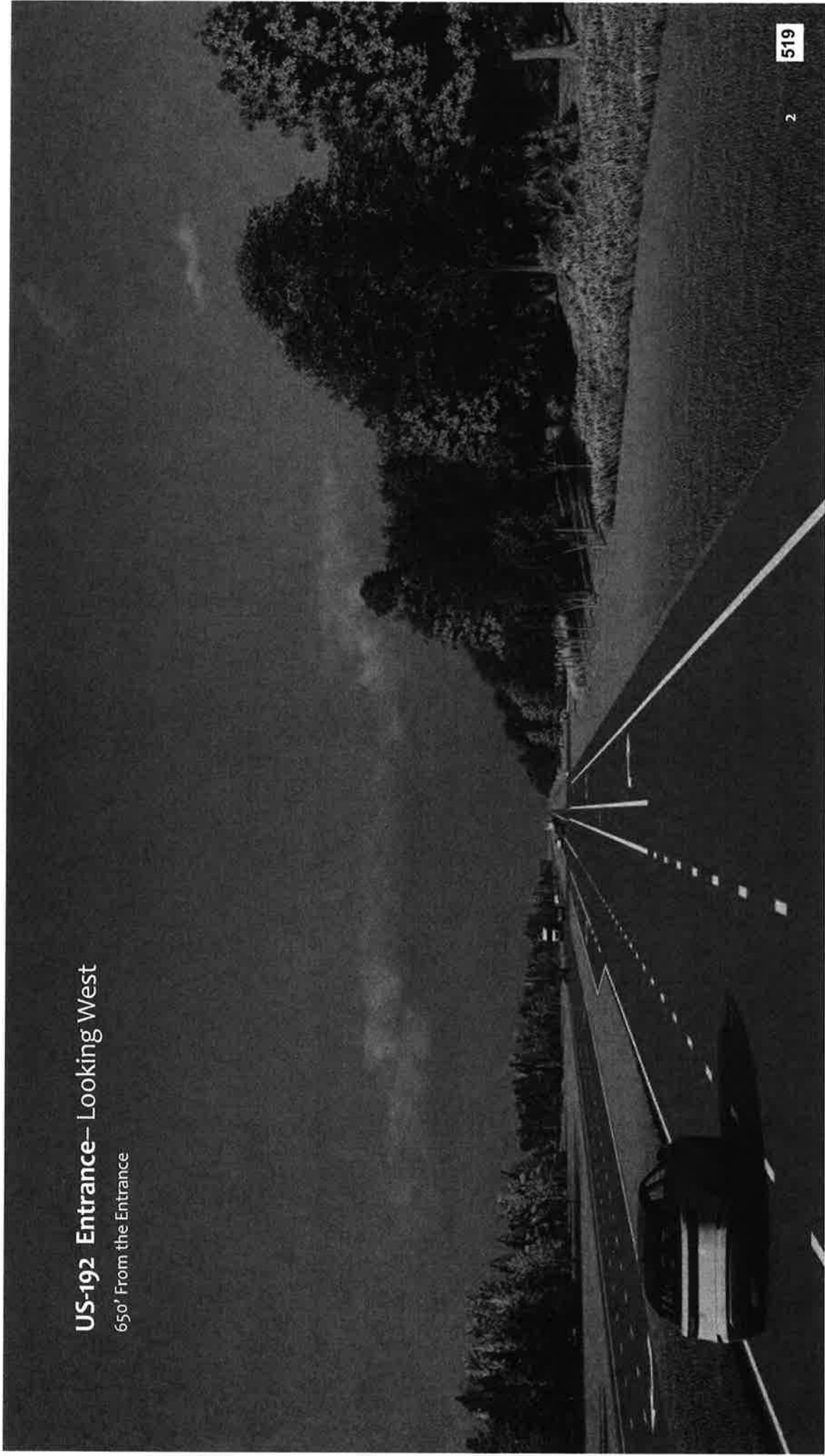
Vice President, Principal Hydrogeologist

Cc: David Smith, Andrew Cannella, Nathan Hess, Mary Powers, David Smicherko, Jack Kirshenbaum

Landfill Entry Road- Looking Northeast



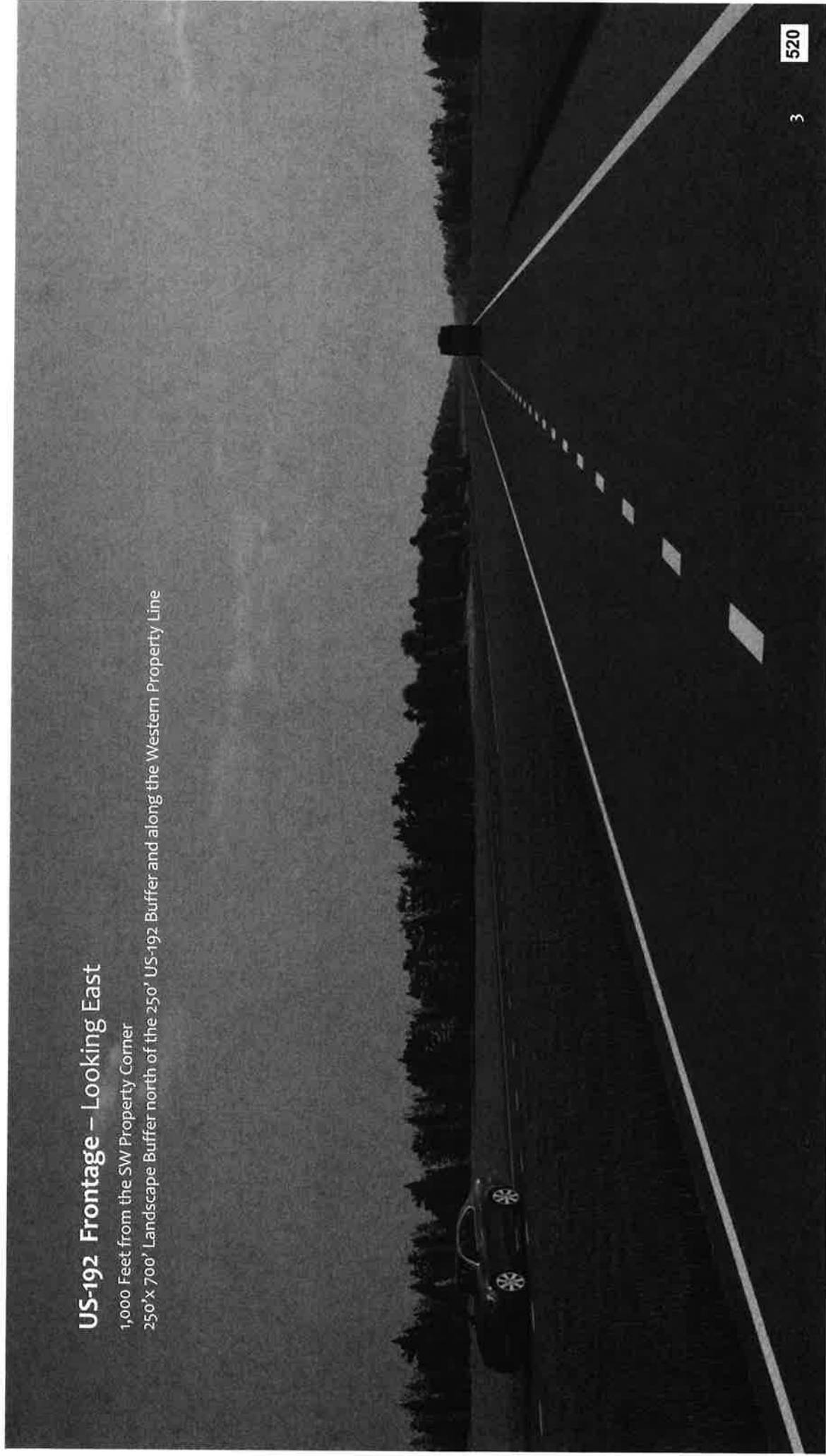
US-192 Entrance– Looking West
650' From the Entrance



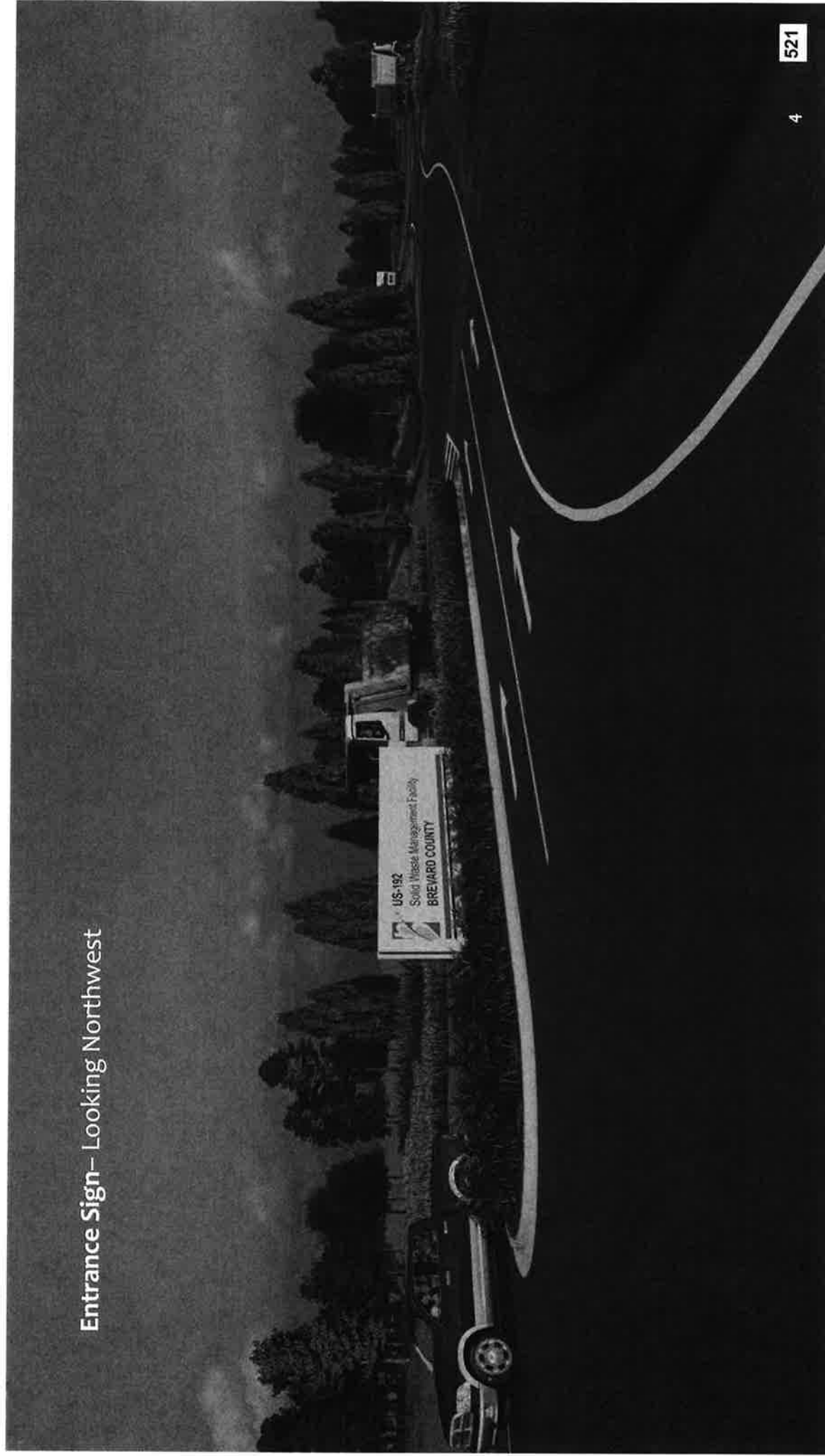
US-192 Frontage – Looking East

1,000 Feet from the SW Property Corner

250'x 700' Landscape Buffer north of the 250' US-192 Buffer and along the Western Property Line



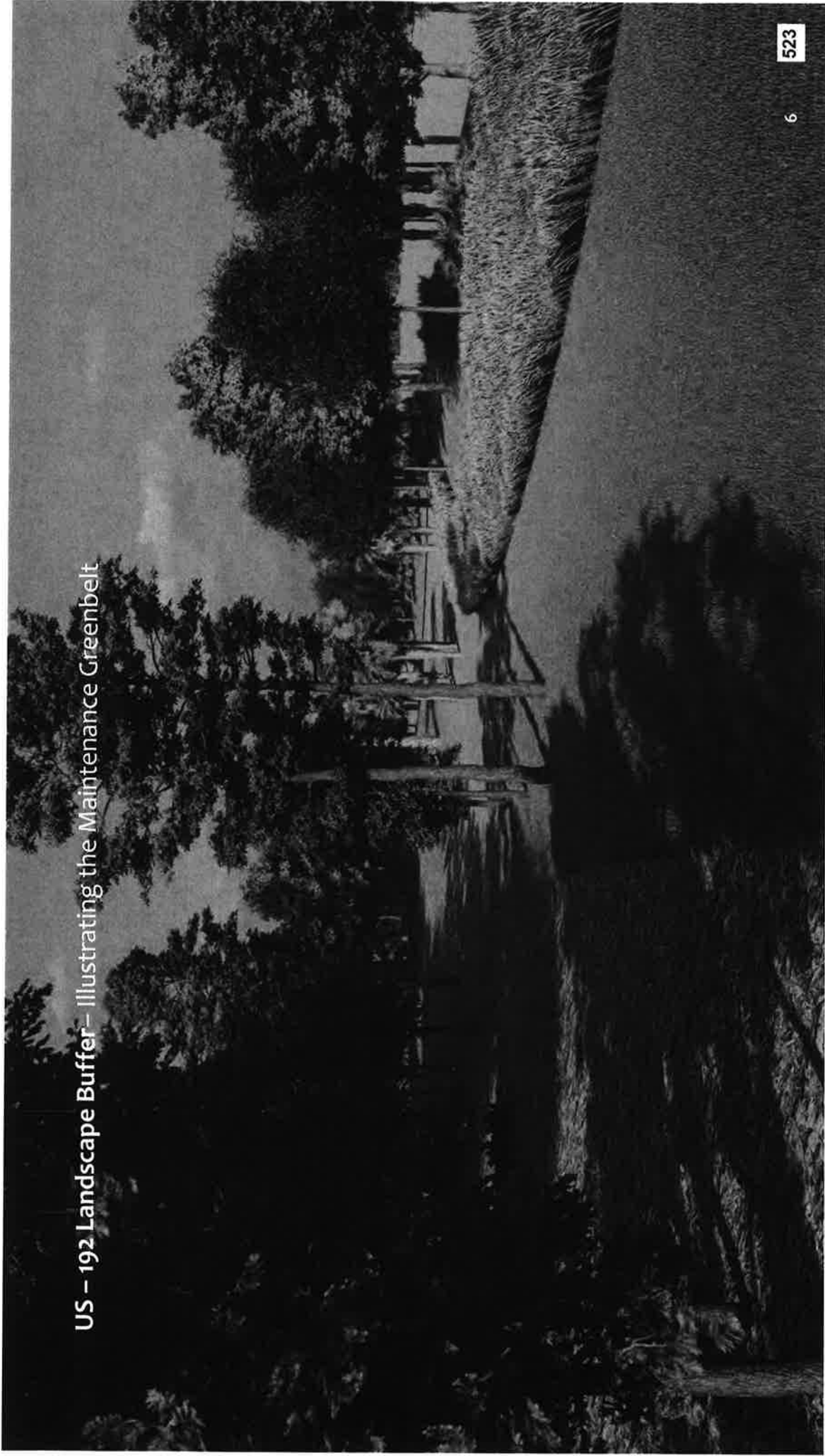
Entrance Sign– Looking Northwest



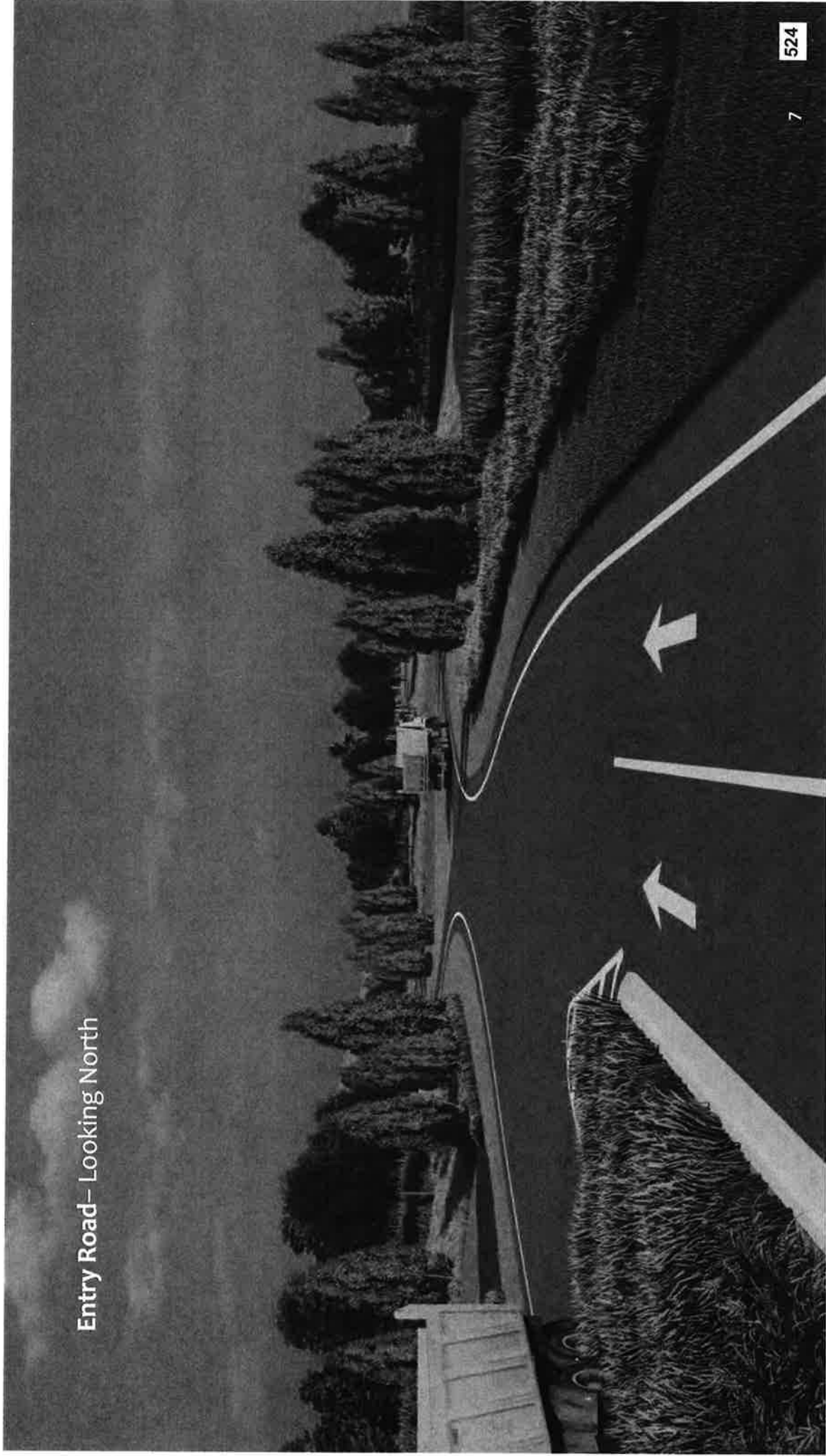
Entrance Sign– Looking Northwest



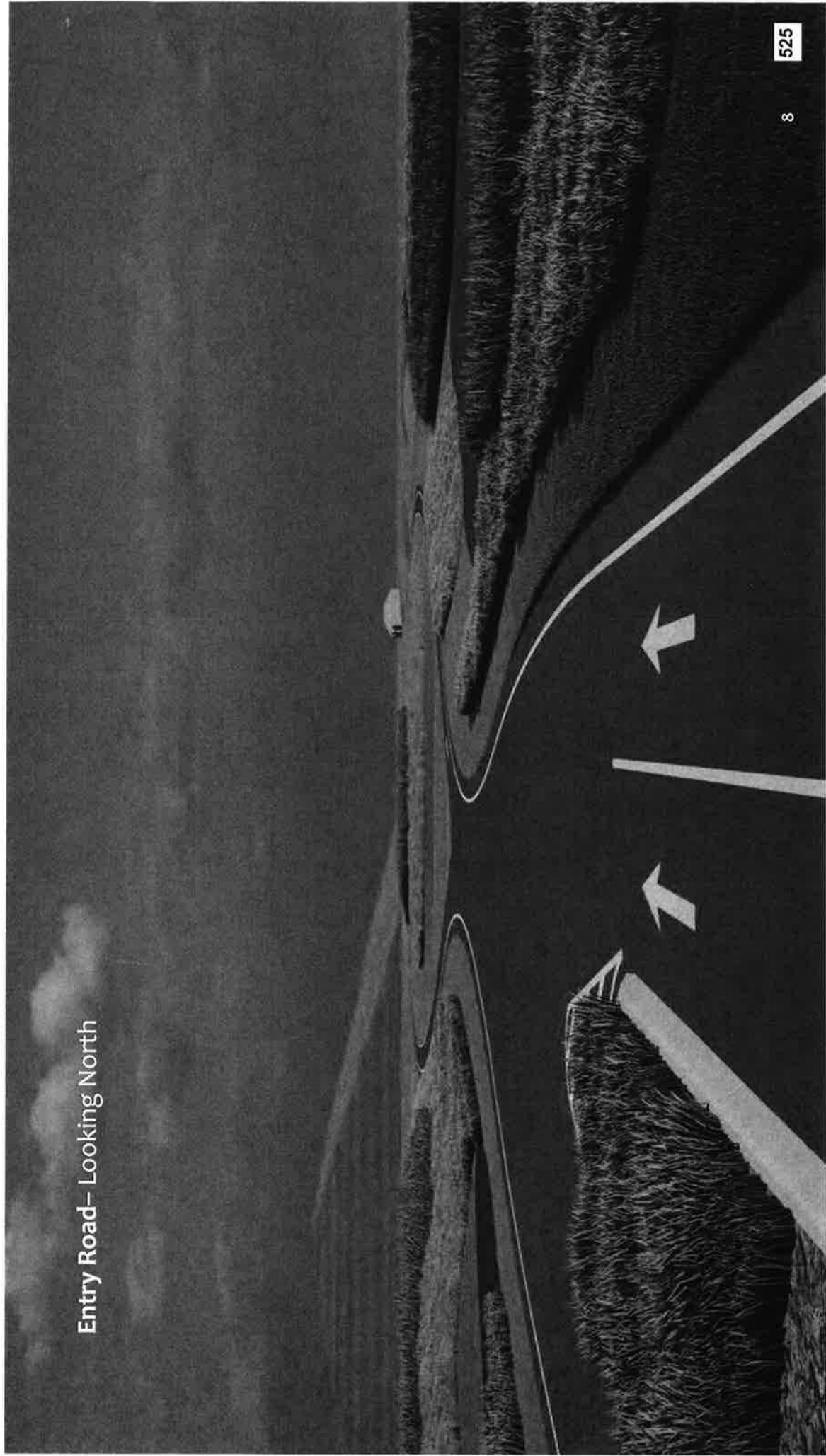
US - 192 Landscape Buffer - Illustrating the Maintenance Greenbelt



Entry Road— Looking North



Entry Road- Looking North



**Florida Recyclers of Brevard-Responses to January 6, 2021
Report to The Board on Melbourne Landfill from Euripides
Rodriguez, Director, Solid Waste Management Department.**

Dear Commissioners, this is a hurried response to the subject report. We understand from this report, that your Sarno Road Class III landfill (SRL) will run out of capacity by 2023. Therefore, it is incumbent on the Board to make the decision on which option to select to dispose of class III solid wastes in the County. We believe that the Melbourne C&D landfill is the obvious choice. Hereafter, on behalf of Florida Recyclers of Brevard (FRB), we restate the main points of the Report and respond accordingly.

Appraisals:

"Based on the three appraisals attached to the report, the value range is quite significant with the average of Brevard County funded appraisals being \$4,050,000. How the privately held trust/escrow fund is handled in any transaction is a fundamental factor affecting the Florida Recyclers Landfill value. Additional information is needed regarding the trust/escrow fund and other factors that will affect the actual cash outlay before the County could begin utilizing the private Landfill if the County were to pursue purchasing the Florida Recyclers property."

Response: The average of all appraisals is \$5,505,333. The privately held trust fund, as it is a private financial instrument, like an insurance policy, would be dissolved if the site were acquired, and not transferred to the County. This has no effect on the actual cash outlay to purchase the site, as the County would be required to cover any new landfill site with an Escrow account for site closure.

The second appraisal done by Pinel & Carpenter, Inc., dated October 9, 2020 (for a valuation of \$2,700,000 with a forty-foot height elevation limit) was never shared with FRB, as was the previous Roper Appraisal. The Roper appraisal valued the 2 scenarios of a 40 -foot, and an 80-foot landfill, which is most reasonable. The Pinel appraisal only valued the lower scenario.

Closure Trust/Escrow Fund:

"If the County were to purchase the private landfill the regulatory expectation is that the County would establish a properly funded Escrow Account. As such, there is a financial impact to the County since we would have to make a deposit to compensate for the shortfall (approximately \$2,094,081) if the private Trust Fund is included in the land transfer to the County. However, the required deposit amount would increase to \$3,011,654 if Florida Recyclers were to maintain possession of the existing trust fund as their proposed selling price is structured. These amounts are approximations since the capacity of a landfill changes every day in any operating landfill.

There is another major cost that could affect the monetary outlay in this potential transaction. The Florida Recyclers site contains a high quantity of mulch. This mulch

holds no economic value to the Solid Waste System. The cost of removing the mulch (loading, hauling and current disposal) from the site is estimated to be \$2,196,700, subject to final survey of the quantity of mulch. Additionally, it is currently unknown how much time and cost (additional hauling and disposal) will be involved with finding a final resting place for the mulch.”

Response:

The FRB site has an FDEP approved financial assurance trust fund that is only applicable to the current owners. These funds are never transferred to a purchaser of a landfill. This is NOT a cost issue for this transaction, as the County would have to finance any new landfill with an Escrow account to cover closure. The SRL has a current Escrow to cover closure of approximately \$14,000,000. Once the landfill is closed, these funds can be transferred to the FRB site, and easily cover the \$3-4M escrow for the 35-acre closure of the Melbourne landfill.

The mulch is another made up cost issue. FRB has always offered to remove the mulch prior to the County's move to the site. In addition, the mulch/compost/top soil on the FRB site does have a great economic value to any landfill operator. Specifically, to the County, as over 200,000 cubic yards of top soil will be needed to be purchased to cover and close the Sarno Rd. landfill.

Environmental Conditions

“On January 29, 2020 staff received the Phase I and Phase II Environmental Site Assessment Report from PPM Consultants. These reports revealed no evidence of recognized environmental conditions in connection with the property except for the following:

- Groundwater Cleanup Target Level (GCTL) exceedances in site monitoring wells. Per the most recent Florida Department of Environmental Protection review of the groundwater data, no regulatory action was requested to address the GCTL exceedances, only continued groundwater monitoring.
- Two of the three used-oil stained ground areas.
- The current diesel fueling area (aboveground storage tank at north property line and historic fueling and vehicle maintenance area).

These conditions noted above are not an area of major concern. However, in the process of obtaining the various samples and tests referenced above, the consultant also sampled surface water for PFAS presence at the Landfill's point of discharge. The test results did find evidence of the existence of PFOA at 0.0152 ug/L and PFOS at 0.0138 ug/L at the point of stormwater discharge for Florida Recyclers, as well as for the Sarno Road Landfill. Currently, FDEP and the EPA has not established a standard for PFAS. However, such a standard is expected in the future. Current provisional surface water screening levels for PFOA and PFOS are 0.015 ug/L and 0.004 ug/L respectively. The provisional cleanup target level for PFOA in groundwater is 0.07 ug/L. It is noted that in studies conducted statewide, there was evidence of the presence of this

chemical in all landfills sampled. The concern regarding PFAS is more an area of concern for unlined landfills such as the Melbourne and Sarno Road Landfills (the Cocoa Landfill (CDF) is lined)."

Response:

As the Report points out, the due diligence Phase I/II ESA report from PPM Consultants recommended no further assessment after testing all areas of concern on the FRB site. Therefore, the opinion of the County's contracted Environmental Professionals was that the site has a low environmental risk.

The PFAS contaminant concern is also blown way out of proportion. The testing results show that the FRB surface water has the same trace levels of PFAS as the adjacent Sarno Road landfill, so no real added risk to what the County already has. There are NO surface or groundwater standards set for PFASs in Florida. Going forward, this will be a risk at any landfill, including the US 192 site, so it should not be a significant concern for this site.

Landfill Height

"The height that a landfill can be built as well as the slope and base area is a major factor that contributes to the calculation that results in the airspace available for use by the landfill.

Airspace is a principal factor in the values and determination of the life expectancy of a landfill. The City of Melbourne granted the County a variance through Ordinance 2019-37, that allowed the Sarno Road Landfill to increase the height of the north expansion to 104 feet above sea level. This increased the life of this landfill to January 2023. This variance was granted under various conditions that Staff did not request, but were included at the request of the City. The two that have the most bearing being:

- The County shall, no later than December 31, 2024, submit a plan for the closure of the landfill, for such closure to occur on or before December 31, 2030, on which date the landfill shall be closed unless the County has applied for and received additional approval from the City before that date.
- Once the new US Highway 192 solid waste management facility is permitted and constructed, the county will halt all non-transfer station activities at the Sarno Road Landfill site and permanently close the landfill according to FDEP permits.

Florida Recyclers is currently requesting the City of Melbourne grant a height variance to increase the potential height of the Melbourne Landfill to 104 feet elevation. The City of Melbourne conducted an on-site visit to the property on November 9, 2020 and several issues were identified. The height application to the City was expected to be heard by the City's Planning & Zoning Board on November 19, 2020 but that hearing did not take place. The current application status is not known."

Response:

The City Ordinance for the Sarno Rd. landfill can be modified to allow the expansion to the FRB site, especially, since it is a currently approved landfill within the City.

FRB are far along in the in the City's review process toward the variance for the 104-foot height approval. Currently, the agent Engineering firm, MBV is responding to the final staff comments, and we expect a staff report to that will recommend approval of the variance.

Observations:

"With this background information we will proceed with observations relating to the potential purchase of Florida Recyclers Melbourne Landfill facility.

1. Depending on several factors, to some extent, the acquisition of this site would extend the life of the Sarno Road Landfill by:
 - a. 3 years -Without using the valley and without a height variance from the City of Melbourne.
 - b. 7 years - Using the valley and without the height variance from the City of Melbourne.
 - c. 10 years - Without using the valley and with a height variance from the City of Melbourne.
 - d. 19 years - Using the valley and with the height variance from the City of Melbourne.

Response: Scenario d., the 19 years of landfill life is the most probable scenario, if the County supports this site.

2. In comparison, the US192 site has a projected life of 66 years.

Response: Selection of this option means 66 years of commitment to a "disposal" only for class III wastes. More progressive counties are efficiently recycling, class III wastes and promoting options that do not include disposal only. Deciding for Disposal as the only option for Brevard will be judged harshly by future BCCs.

3. The existing Florida Recyclers Landfill Trust Fund for closures is underfunded in comparison to our most recent closure projects. This shortfall would have to be accounted as an additional expense for the valuation of the Florida Recyclers property to fully evaluate and determine if a purchase is advisable. Since Florida Recyclers has requested to keep the trust fund, as a part of their proposal, the County would be responsible for funding all of the required escrow after acquiring the property.

Response: This is another moot point, that has been made to seem significant by this report. The County would have to fund their own Escrow account for any landfill that it has responsibility to close. Again, this trust fund is a private fund, that would always be maintained by the seller of a landfill, so not real surprise here. The County has an approximate \$14,000,000 escrow fund on the SRL and a \$47,000,000 escrow fund on the US 192 landfill, that isn't even built, seems a horrible waste of funds.

4. Using the valley as a landfill will eliminate one County stormwater pond and necessitate the creation of a replacement pond, plus the existing ditches would have to be regraded to convey the stormwater to the new pond. It would also eliminate the Florida Recyclers Landfill stormwater ditch to the south of the property which is part of their stormwater retention system. The

engineers have estimated the cost of stormwater improvements at \$2,122,275.

Response: This is an operational cost that will be accrued at any expanding, or new landfill. These funds will be costed over a period of about 10-15 years, and should not be reasonably applied to this transaction.

5. **While the environmental assessment performed for the County did not find existing issues** it should be understood that the sampling and testing results do not assure that either there are no contaminants now nor do they assure that the Landfill could start producing measurable contaminant levels in the future. Thusly, the environmental impact of the Florida Recyclers Landfill is not clear but the County's purchase of this facility would mean assuming whatever the environmental risks the current owners have, including future potential environmental liability from PFAS contamination should pending regulation require remediation. Further, this situation is applicable regarding any other contaminants which although not detected at this point, should they be determined to exist in the future.

Response: The PPM phase I/I ESA report made clear that there were no environmental concerns with the FRB site. This is one of the cleanest landfills that I have ever seen. The report's concerns are unfounded and contrary to expert opinions.

6. The appraisals of the Florida Recyclers site as performed for the County do not assume that a City of Melbourne height variance has been or will be granted. Should such a variance be granted the appraised value can be expected to go up.

Response: Agreed.

7. The purchase of this property without a height variance, but using the valley, from the City of Melbourne would provide an additional 7 years of capacity. This capacity would come at a cost of \$11.00⁴ a cubic yard, for a single composite liner. This compares unfavorably with the cost of building Cell 1, which has a double composite liner, at the Central Disposal Facility of \$5.01⁵ a cubic yard (the cost per cubic yard decreases as other cells are built as the landfill can be built higher and the valleys in between the cells are filled). The same is true for the cost per cubic yard of \$4.88 which is the estimate for the first cell of US 192.

Response: These cost comparisons are not apples to apples. They do not consider the large transportation and infrastructure costs of going to the CDF and the US 192 landfills. These costs will not be accrued by the FRB site.

8. Assuming Florida Recyclers or, if purchased, the County, is granted a height variance, the cost to use Florida Recyclers property would decrease to \$4.88 per cubic yard (see footnote 4). However, note the following additional information.

Response: This is the most likely scenario, if the site is supported by the County.

9. The cost per cubic yard for all options mentioned above does not include the

cost of a leachate collection and pre-treatment system, acquiring the "new" property, stormwater ponds or ditches, existing land, or any other construction cost not strictly related to the building of the liner. These costs would have to be added to arrive at a more rigorous cost estimate. (As a side note for clarification, the Central Disposal Facility also did not include the cost of a leachate tank because one is already in place.)

Response: Again, the costs of constructing these infrastructure items would be orders of magnitude higher for the CDF and the US 192 sites.

10. The City of Melbourne would have to approve any option regarding this site with the exception of using it as a stand-alone landfill (see the 3-year extension in 1.a. above).

Response: Agreed.

11. There is an existing berm along Sarno Road that the City of Melbourne CUP required of Florida Recyclers. This berm resides in properties that belong to the City of Melbourne and Liberty Investments of Brevard, LLC. This is a pending issue which will impact the life expectancy and the costs of all options associated with acquiring the Florida Recyclers Landfill.

Response: The movement, or transfer ownership of this berm can easily be accommodated in any acquisition agreement. In no way will it affect the landfill air space, or life of the landfill.

12. Time is critical and there are no assurances that the replacement option for the Sarno Road Landfill will be in place when it runs out of space. These delays could be in the negotiations to purchase the Melbourne Landfill, required City of Melbourne permits, construction delays, hurricanes and other similar issues.

Response: Again, another non-issue. We understand that time is of the essence to decide on a replacement for the SRL. Much of the due diligence to purchase the Melbourne landfill has been completed, and thus the typical 180-day DD and negotiations time can be reduced. The fabricated potential delays can happen at any of the optional landfills, so these are not unique to the subject site. It would likely take longer to complete permitting and construction at the US 192 site.

13. An Invitation to Bid for the hauling and disposal of Class III waste generated from natural disasters was advertised by the County on November 12, 2020. Bid opening on December 10, 2020 showed three statements of No Bid. The inability to dispose of disaster related Class III debris elsewhere has the potential to greatly shorten the lifespan of the Sarno Road landfill in the event of a hurricane or other disaster.

Response: This is another non-issue. Class III wastes can be staged, and burned under a Governor's Executive Order applied to hurricane recovery. Therefore, these wastes would not necessarily need to be disposed at the SRL. Regardless, the FRB site acquisition and permitting would be the most rapid of the options.

14. Any option selected that increases the demand on the Cocoa Landfill (CDF) such as using a portion of it for Class III or other non-Class I needs will reduce the capacity and life expectancy of the CDF for Class I material disposal. This use results in accelerating the long term need to replace the

Class I CDF with a new facility. The relative cost of Class I disposal is always higher than Class III material disposal. In effect, such a proposal reduces the benefit of the existing CDF to the rate payers.

Response: Again, the FRB acquisition would be the most rapid, and avoid the use of the CDF.

15. In the event the County were to use the CDF for Class III disposal the life expectancy of the CDF would be reduced by 10 years.

Response: Agreed.

Odor Consent Order

"The Florida Department of Environmental Protection (FDEP) has issued a draft consent order dated March, 2020. On this draft Consent Order FDEP listed four issues that resulted in the draft Consent Order being issued. On July 22, 2020, Florida Recyclers responded to the same by stating that the issues be treated as minor violations. The violations with Florida Recyclers responses to the same are listed below:

1. Objectionable odors were noted off-site beyond the property boundary.
 - a. They state that they are not the source of any off-site objectionable odors. They go on to state that there are other potential odor sources such as the Sarno Road Transfer Station, the Sarno Road Landfill and the dredge spoil site, all having the potential of generating odors⁶.
2. The facility did not have an all-weather access road, at least 20 feet wide, around the perimeter of the site.
 - a. In a letter from James E. Golden, P.G. from Grove Scientific & Engineering dated March 2, 2020⁷ it is stated that the road does exist.
3. The facility failed to ensure there were 50 feet fire breaks in the piles of processed and unprocessed material. This refers to the piles of mulch and vegetative debris located in the facility.
 - a. The letter from Mr. Golden states that additional 50-foot fire breaks have been cut through the mulch piles.
4. Processed materials have been stored on site for longer than 18 months.
 - a. The response states that FDEP can authorize a longer storage period.

These matters have not been resolved to our knowledge. The appraisals did not account for these matters and the cost of resolving them has not been included in any of the cost estimates. The perimeter road can have a financial impact on the purchase if the County were required to assume the responsibility of construction of the same. Further, installation of a perimeter road may reduce the area of actual landfill thus reducing the life expectancy benefits coming to the County if the Melbourne Landfill were to be acquired.

Response: All of the consent order matters listed in this report have been resolved with the FDEP. A final CO was executed on December 1, 2020. The CO actions include on going odor monitoring, reporting and approval for long term storage of mulch and top soils for use in landfill closure actions. A perimeter road was always in place. It had been blocked by equipment on the day

of the initial inspection, but has since been approved by a follow-up FDEP inspection.

The costs to the County to comply with this CO are low, and expire within one year.

Mulch

Florida Recyclers runs a yard waste business that converts the green waste into a commercially viable mulch and top soil. This mulch is kept in inventory at the site and would have no value to the County. In fact, the County currently pays to have our mulch hauled away and disposed of. We are estimating the cost of disposal for this mulch at \$2,196,700 based on our current contract rates. If the County were to acquire this property, one of the conditions should be that it is free of mulch and other organic materials such as composting. Not having this condition would add the \$2,196,700 to the cash needed to be able to use this property to construct a Class III landfill.

Response: The stored mulch and top soils on the FRB site have been agreed by the owners to be removed prior to the County's move to the site, say within 6 months of acquisition. Costs of removal of these materials seems a waste of a valuable resource. The SRL will require an approximate 250,000 cubic yards of top soil cover to close the landfill. Rather than pay \$20.00 per cubic yard, the County could use the mulch and top soils on site in the closure of the SRL just next door.

Financial Impacts

Purchasing the Melbourne Landfill from Florida Recyclers will have a major financial impact on the disposal system. The impact will come in three phases: the purchase of the landfill, the deposit to the escrow account, and the construction needed for the county to utilize the landfill. This impact on the escrow deposit will be from \$2,094,081 (with the trust fund turned over to the County) to \$3,011,654 (no trust monies). This estimate will be adjusted once a final survey is conducted. The most recent appraisals commissioned by the County varies from \$5,400,000 to \$2,700,000. These appraisals would need to be updated and can be expected to go up should a height variance be granted by the City of Melbourne. Construction estimates vary from \$14,145,481 to \$19,421,181 (includes removal of mulch), depending on the options available such as construction as a stand-alone landfill to using the valley as a landfill (with City of Melbourne permits). These items combined will cause an outflow of between \$18,939,562 to \$27,832,835. Also, the cost of construction of an All-Weather perimeter road around the Melbourne Landfill should FDEP require one is expected to add another \$700,000 to this cost and reduce the life expectancy of the facility at any allowable height and configuration (option 1a, 1b, 1c, or 1d). The reduced life expectancy has not been evaluated thus the needed rate charged to the rate payers has not been determined but it would increase relative to if the road is not required.

The Solid Waste CIP fund 4011 contains \$4,967,496 in CIP reserves for future capital expenditures and \$5,824,557 for the US 192 project for a total available of \$10,792,053. This funding balance does not take into consideration the \$25,000,000 expected to be needed for construction of Cell 2 in the Central Disposal Facility and other CIP Projects.

When money is borrowed for a project the life of the payback should not exceed the life of the project the borrowed money is used for. As such, any funds borrowed should not exceed the life of the asset being purchased. On the Florida Recyclers stand-alone option, the life of the asset would be expected to be three (3) years and the loan would have to be paid in three years or less. Using all of the funds available would require a loan of about \$8,000,000 which just the principal payment would be \$2,666,666 plus interest and it would require floating a bond for all related Cell 2 costs at the Central Disposal Facility. The maximum use of the asset would be filling in the valley and going to an elevation of 104 feet above sea level. This option would, as stated above, need the City of Melbourne approval and would result in a 19-year life for the asset. The life of the asset would allow us to get bonds and the payback would be longer thus requiring a lower increase in the disposal assessment.

Response: Again, the Trust fund, escrow account issue is moot. The \$3-4 M escrow would need to be placed on all the options, not just the FRB site. Infrastructure costs at the US 192 site will far exceed the FRB site. The increased air space, and thus life of the SRL is a great value to the County, and will reach more than \$100 M over the 19 years of life. So, these supposed cost overflows' will be far outstripped by the value of the potential landfill space. There is a high potential to realize the 19-years of added SRL life, resulting in a good payback of expensed funds. The perimeter road is in place at the landfill, so nothing has to be constructed.

Summary

1. Appraisals - Vary from the Florida Recyclers Investment Value Consulting Report of \$8,416,000 to our appraisals of \$5,400,000 and \$2,700,000.
Response: Average is \$5,505,333.
2. Escrow Deposit - The deposit is estimated at \$3,011,654 without the Florida Recyclers Trust Fund which they have proposed to keep.
Response: Sellers always kept a trust fund. This deposit estimate is far below the current +\$14,000,000 escrow for the SRL.
3. Environmental Conditions - The presence of PFAS is a concern.
Response: PFASs are everywhere. This is a low risk, already placed on the County.
4. Land Fill Height - Florida Recyclers has not obtained a height increase from the City of Melbourne which greatly reduces the utility to the Disposal System.
Response: The City's variance height approval is forthcoming.
5. Mulch - There is mulch present at the site that has no value to Brevard County. The estimate cost of disposal of the mulch is \$2,196,700 if the County were to purchase the property with the mulch on site.
Response: Mulch will be removed by FRB, or can be left as a valuable closure material for the SRL.
6. Financial Impacts - The financial impacts vary from a low of \$18,939,562 (for a three- year life) to \$28,132,835 (for a 19-year life).
Response: these are expenses realized at any expanding landfill, and are

- expected to be much higher for the US 192 landfill.
7. Additional immediate financial impacts of \$700,000 may be realized should FDEP require the construction of an All-Weather perimeter road. In this event the life cycle and rate expense to the rate payors would increase by an amount not yet identified due to the reduced life expectancy of the facility.
Response; Not an issue.
8. The FDEP draft consent order has additional cost implications for either Florida Recyclers or the County in the event the County completes a purchase.
Response: Issue Settled with the FDEP. Low odor monitoring costs only for the next year.

Workshop Request

Since these issues are very complex, FRB requests that the BCC consider a workshop to evaluate all the various options for the expansion of the SRL. Thank you for your time to review this response.

Sincerely,

Grove Scientific & Engineering Company



James Golden, P.G.

Vice President – Senior Scientist Project

January 12, 2021