



AGENDA REPORT
January 22, 2019

Request Option Regarding RFP for Solid Waste Emerging Technologies

SUBJECT:

Board Direction Regarding Soliciting a Request for Proposal (RFP) for Solid Waste Emerging Technologies

FISCAL IMPACT:

There would be a need for staff to obtain help in properly developing the RFP (estimated at about \$50,000.00 for an engineering firm) as well as a preliminary contract (estimated at \$20,000.00). Other impact(s) will not be known until a vendor is selected and negotiations are concluded with the same.

DEPT/OFFICE:

Solid Waste Department

REQUESTED ACTION:

Request the Board give direction to staff regarding the next step after receiving the results of the Request for Information on Using New Technology in Disposal of Solid Waste.

SUMMARY EXPLANATION and BACKGROUND:

On May 8, 2018 the Board of County Commissioners approved an agenda authorizing Staff to solicit a Request for Information (RFI) on Using New Technology in Disposal of Solid Waste and forming an evaluation committee composed of :

- John Denninghoff, Assistant County Manager
- Euripides Rodriguez, Solid Waste Director
- Jill Hayes, Budget Office Director

The Board also approved the following parameter to be included in the RFI:

- Ability to scale to at least 500,000 tons per year.
- Have an option for 10 facilities for the County to have options for reducing trucking cost and road wear.
- Eliminate the need for the County to purchase a new or to expand existing landfill.
- Not requiring the County to buy or donate land.
- Reduce or not increase smells or other negative impacts in comparison to traditional waste facilities.
- The facility must be bonded.
- Can process all non-hazardous waste.
- Must emit substantially less pollution in comparison with traditional waste facilities.
- Guidelines of other countries, geography and environments must meet the United States Environmental Protection Agency (EPA) in the State of Florida.

With those parameters in mind, staff developed a RFI and advertised the same. There were four respondents to the RFI, SACYR, Muba Energy, Boss Alliance and Clearsky. Presentations by all respondents were made on September 28, 2018. Between the day of the invitation and the presentation day SACYR and Muba Energy partnered and made one presentation. Also, Clearsky changed their approach to the RFI and was superseded by B&D Developments which made the presentation. This left three respondents with one change in name.

The presentation from SACYR covered these points:

- Recyclables would not have to be in a separate collection, but would be collected in the same container as the garbage. Recycling materials would be separated from the garbage at their plant and sold.
- They proposed composting materials and anaerobic digestion, which is a process in which microorganisms break down organic materials. Anaerobic digestion happens in closed spaces where there is no air (or oxygen).
- Electricity generated will be sold.
- Biogas is generated during the process. This can be converted to additional electricity, used in vehicles or sold to a gas company.
- The business model is based on a single site located on the Central Disposal Facility.
- Would need the following facilities open:
 - Titusville Transfer Station

- Sarno Transfer Station
- Sarno Road Landfill
- Central Disposal Facility
- US 192 kept for future potential use.
- Prefer a Design-Build-Finance-Operate-Maintain approach.
- A put or pay (this means that the County would guarantee a minimum number of tons delivered to the facility or would make a payment to make up for the shortfall) requirement would facilitate the financing of the project.
- Any rejects (residuals) from the process is intended to be landfilled.
- Ash produced by the process is intended to be landfilled.
- Cost per ton is estimated by the respondent to be at least \$70.00.

The presentation by Boss Alliance covered these points:

- The process proposed is a waste to energy project.
- Municipal Solid Waste (MSW) will be the primary feedstock.
- The process will produce electricity by gasification of the waste.
- Actual quantities will be determined by a feasibility study.
- Number of acres/sites will depend on information gathered during the feasibility study.
- Create new jobs and retrain existing landfill personnel.
- Landfill to continue operations at a reduced rate.
- Some residual materials that are not suitable for the process will be landfilled.
- Grass or other high moisture waste is not suitable for this process.
- Electricity generated during the process is intended to be sold to Florida Power & Light.
- Cost per ton is estimated by respondent at \$29.00 per ton. This assumes revenue from the sale of electricity at \$0.04 per KW.

The presentation by B&D Developments covered these points:

- Recyclables would not have to be in a separate collection, but would be collected in the same container as the garbage. Recycling materials would be separated from the garbage at their plant and sold.
- Would not cost the citizens more than the current payments for services.
- Would maintain the same price for twenty (20) years.
- Significant reduction of waste going to the landfill.
- Process will eliminate the need for additional landfills.
- Would construct, operate and manage each facility built.
- Handle up to 850,000 tons of class I and III waste per year.
- Handle up to 300,000 tons of vegetative waste per year.
- Plant(s) would be operational within 30 months of signed contract.
- Operating over 50 plants in 7 nations (mostly European) over the past 20 years.
- First plant in the United States has not started construction.
- County would commit a minimum of 90,000 tons per year for a small plant.
 - Plant size will depend on commitment.
 - Number of plants will depend on commitment and location of the waste.
- Would prefer building on current landfills if 6-10 acres are available.
- The project eventually plans on mining the existing landfill.

After deliberations the committee decided to bring to the Board a synopsis of the presentations made. All the presenters made clear that there would be a residue from the process as well as unsuitable materials that would have to go to the landfill. The amount of this unsuitable material is not clear at this point except that the majority of the MSW material could be processed. There was one process that would increase the price to the rate payers, while the other two presenters said that they could do it for about the same price that we currently charge for our services. In conclusion, the processes, based on the presentation would meet most, but not all, of the requirement that the Board established. The matrix below serves to summarize the responses to the RFI in comparison to the requirements requested by the Board. Bonding is not mentioned as this should be a non-negotiable requirement.

	Process > 500K Per Year	Option for 10 Facilities	No Purchase or Expansion of Landfill	No County Purchase or Donation of Land	Reduce Negative Impacts	Process All Non Hazardous Waste	Emit Substantially Less Pollution	Meet US EPA Requirements in Florida
SACYR	X		1	X	X	X	X	X
Boss Alliance	X		1	X	X		X	X
B&D	X	2	1	X	X	X	X	X

1. All of the respondents state that any residuals would be landfilled. Depending how far into the future you project, a landfill will have to be expanded or mined.

2. Used the word "plant(s)" which implies that the plants would be constructed according to need.

In conclusion, the respondents met most of the requirements.

If the Board desires to continue the process through a RFP, the Board should be aware of the timeline for the same. Staff estimates about forty-five to sixty days to select and contract an engineering firm and less for contracting for legal assistance. We are estimating three (3) months for completion of a RFP, four (4) months to select a vendor and two (2) months for negotiations. If successful, the selected vendor would need permitting and construction time. The last part of this timeline would be determined by the vendor.

The committee respectfully requests guidance on the next step to take. Options include:

1. Solicit a Request for Proposals (RFP). The RFP will have more details regarding the proposals solicited thereby requiring the assistance of an Engineering firm.
 - a. Need to develop a preliminary contract. The preliminary contract will have to be well developed to avoid any potential disagreement in the negotiations.
 - b. Need to develop a RFP based on the guidelines from the Board stated above.
 - c. The RFP will be brought back to the Board for their review and approval.
2. Change the initial RFI requirements in consideration of the comments received during this process and incorporate the following items in the new RFP:
 - a. Change the option of ten facilities to five facilities. These facilities must be a certain size in order for them to be economically viable.
 - b. All the presentations required some sort of landfilling for the residue or materials that could not be processed. This will not eliminate the need for a landfill(s) and this landfill(s) would need to be expanded when dictated by operational needs.
 - c. There should be financial guidelines regarding the cost to the citizens of Brevard County. In the RFP we should state our cost of operations broken down by areas and guide the respondents towards what cost would be acceptable to Brevard County.
 - d. A market analysis and feasibility study should be required to ascertain that the product being developed is economically viable. This market analysis and study should be developed and paid for by the vendor.
3. Discontinue the RFI/RFP process.
4. Any other direction that the Board directs staff to develop.

ATTACHMENTS:

Description

No Attachments Available



January 23, 2019

M E M O R A N D U M

TO: Euri Rodriguez, Solid Waste Management Director

RE: Item I.1., Request of Option Regarding Request for Proposals (RFP) for Solid Waste Emerging Technologies

The Board of County Commissioners, in regular session on January 22, 2019, approved Option 4, to remove the facilities number requirement, to have no net increase to Landfills, to add a requirement that any proposal does not increase the cost to the citizens of Brevard County by adjusting for an annual Consumer Price Index (CPI), to publish the County's cost as part of the RFP, and to provide a market analysis and feasibility study at the end, pursuant to a contract, and to Chapter 119 of Confidentiality; and directed you to provide an analysis on the potential of purchasing additional property and the capacity of recycling construction waste and yard waste that adds to the life period of the exiting Landfills.

Your continued cooperation is greatly appreciated.

Sincerely yours,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe

Tammy Rowe, Deputy Clerk

/ds

cc: Each Commissioner
County Manager
County Attorney

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RFP for Solid Waste
Emerging Technology
1/22/19

Brevard County Sarno Landfill Expansion Executive Summary

When purchased by Brevard County and merged with the Sarno Landfill the subject property will provide up to 20 years of additional life at current county storage rates. The property can be acquired for significantly less than it would cost to build commensurate storage at a new location. The subject property is a fully permitted, 45± acre C&D landfill

Subject Property Location

Florida Recyclers of Brevard, LLC
3351 Sarno Rd. Melbourne, FL 32934
Parcel IDs: 27-36-24-00-507 and 27-36-24-00-508

Surrounded on three sides by Brevard County Government owned solid waste facilities including The Sarno Transfer station, Sarno Landfill, and the current Dredge Material Management Area.

Recycling

Florida Recyclers of Brevard, LLC operates as a Construction and Demolition (C&D) Landfill, receiving concrete and mixed rubble, wood, drywall, cardboard, asphalt roofing, metals, bricks, and plastics. Nearly 100% of vegetative waste is recycled onsite and turned into organic mulch and soil products. Concrete, metal, drywall, cardboard, and plastics are also removed from the waste stream and recycled offsite.

Storage

There are 1,850,000± CY of storage remaining on the Florida Recyclers of Brevard subject parcel.

The Valley Gap (see exhibit A)

When the subject property is combined with the Sarno Landfill to the south, it will create an additional 1,330,000± CY of storage at a height of 80 feet above ground level.

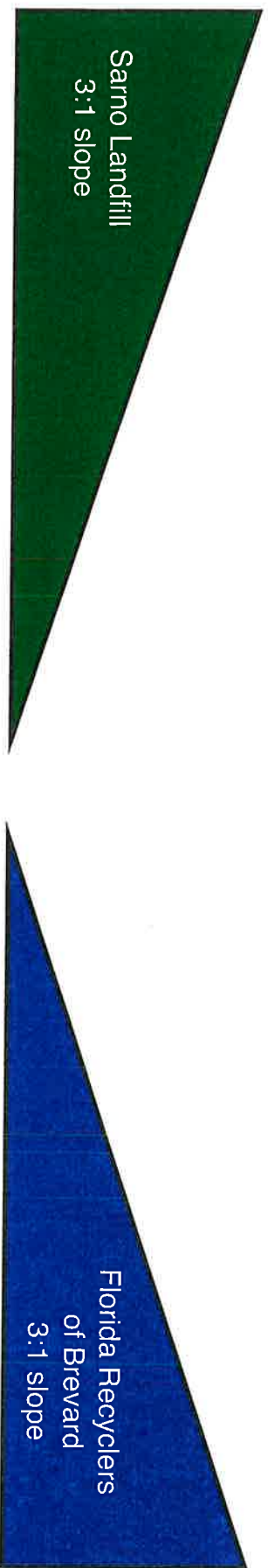
This will give a total storage of 3,180,000± CY. In May 2018, Jones Edmonds estimated that at current usage levels the total storage available will provide the Brevard County's Sarno Landfill with 20 years of additional storage capacity.¹

80 feet above ground level provides 3,180,000 CY of storage or 20 years at current rate of Sarno Landfill.

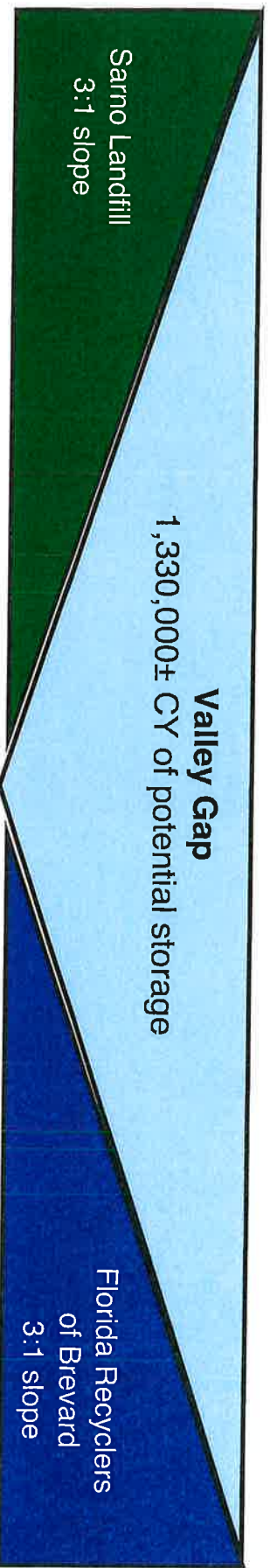
64 feet above ground level provides 1,400,000 CY of storage or 8 years at current rate of Sarno Landfill.

¹Jones Edmonds & Associates, *Melbourne Landfill and Recycling Center (AKA Florida Recyclers of Brevard, LLC) Landfill Evaluation* (Prepared for Brevard County Solid Waste Management Department, May 2018), Page 14

Currently, when both landfills reach capacity they must have a 3:1 downslope. This leaves an unused area between the properties.



When the properties are combined; the previously required down slope can be used as additional storage area greatly increasing the capacity.



For example only, not to scale.

