



## Solid Waste Management Department

2725 Judge Fran Jamieson Way  
Building A, Room 118  
Viera, Florida 32940

BOARD OF COUNTY COMMISSIONERS

## Inter-Office Memo

DATE: April 4, 2019

TO: Board of County Commissioners

THROUGH: Frank B. Abbate, County Manager 

THROUGH: John P. Denninghoff, Assistant County Manager  
Development and Environmental Services Group 

FROM: Euripides Rodriguez, Department Director, CIA  
Solid Waste Management Department 

SUBJECT: US 192 Future Landfill Site Project History Report

This project conceptually started in 1982 with a report which stated that while the existing solid waste disposal system was in mechanically good shape, an expensive program of rehabilitation, repair, replacement (RRR), and expansion would soon be needed to maintain the level of service. The option to identify and consider a south county waste facility was undertaken as such a facility would have postponed or eliminated some of the above referenced RRR projects. Early on in the process of evaluation, one plan of action that was pursued was to build a class I landfill. This plan however, evolved over the years as the project for a new facility has been postponed.

The Brevard County Solid Waste System has two different types of landfills, a Class I landfill located near the City of Cocoa and a Class III landfill located in the City of Melbourne. A Class I landfill is permitted to receive regular garbage (municipal solid waste or MSW) and Class III waste. A Class III landfill can only accept waste such as yard trash, construction and demolition debris, processed tires, asbestos, carpet, cardboard, paper, glass, plastic, furniture other than appliances, or other materials approved by the Florida Department of Environmental Protection (FDEP), that are not expected to produce leachate that poses a threat to public health or the environment.

Landfills have a limited life which is calculated in a manner that takes into consideration various factors. Landfill life is measured in terms of the cubic yards of volume remaining to the build out of the landfill to the FDEP approved design, and then converted to years of life. This calculation takes into consideration the estimated population projections and can be influenced by the state of the economy and any natural disasters that can use the remaining capacity at rates different than projected. These calculations are updated every year as part of the Financial Responsibility Closure and Long-Term Care Cost Estimates provided to FDEP. The estimated permitted life is less than one year for the Class I (Slurry Wall) landfill, five years for Cell 1 of the South Landfill at the Central Disposal Facility and either one year (without City of

Melbourne height variance) or four years (with height variance) for the Class III facility as of the report dated August 2018. The Class I facility has an expansion area that is estimated to add thirty more years of disposal capacity.

Sarno Road Landfill (Class III) is limited by FDEP permit and the FAA to a buildout height of 104 feet. The City of Melbourne currently limits the height of the Sarno Landfill to 40 feet in the northern expansion area. These limits restrict the life expectancy of the landfill. To avoid added costs associated with transporting waste to the Class I landfill or out of county, one option would be for the County to have a replacement Class III site built at least one year prior to the closure of the existing Sarno site. In order to stay within this timeline our staff met with the City of Melbourne staff on February 21, 2019 to inform them of our intension and to discuss the proper procedure to follow. After obtaining all the required engineering documentation staff will submit the request this month, City staff will present the variance request to the Council the following month. It is important to emphasize that it is not only the landfill that will run out of space, but the yard waste, tires and metal goods that are currently handled on the top of the landfill will no longer have the area necessary to process without the City height variance being granted. The area needed to process these materials is currently on the top of the landfill; these materials have to be moved continuously in order to finish the filling sequence. This has created an operational problem since the area to move the materials are constantly being diminished in size and containment berms have to be constructed with every move.

### **Alternative Site Studies**

Throughout the years, several alternative site studies and various types of other studies have been undertaken regarding the US 192 Site, as well as studies for disposal alternatives for the South Brevard Service Area. As part of the current permitting requirement, the Department commissioned an updated alternative site study.

The types of constraints listed below were considered in the alternatives analysis undertaken and the current analysis. They have been grouped into several major categories, based on regulatory and other requirements:

1. FDEP Rules 62-701.300 and 62-701.320, F.A.C., collectively provide that a landfill may not be placed within the following areas:
  - Within 500 feet of an existing or approved potable water well or within 1,000 feet of a potable water well serving a community water supply system.
  - Within 200 feet of contiguous wetlands or contiguous surface waters, other than those constructed for the project.
  - Within 3,000 feet of a Class I surface water.
  - Within an area subject to frequent or periodic flooding.
  - Within a sinkhole-prone area.
  - Within any area open to public view from any major thoroughfare without proper screening.
2. Brevard County Land Use Requirements.

3. **Neighborhood Community Acceptability Requirements:** As a practical matter, a new landfill must be located in an area where its impacts on local residents are minimized. The following requirements were utilized to ensure that the practicable alternatives would have minimal impacts on neighboring areas:
- Landfill site should be in an area with a population density of ten or fewer persons per square mile.
  - Landfill site restricted to areas where surrounding land uses and planned uses are compatible.
  - Within any area open to public view from any major thoroughfare without proper screening.
4. **Economic Practicability Requirements.** A landfill must be located where its use is economical and practicable. Several requirements were imposed to assure that the site would be viable:
- The primary haul route must be a highway built to handle commercial truck traffic (trucks weighing 80,000 lbs.), and the landfill footprint must be within a reasonable distance from that highway. The primary haul route must be able to handle heavy truck traffic. Further, the haul route must be reasonably accessible to the landfill footprint. By minimizing the amount of new roadway that needs to be built to reach the landfill, the County can minimize the environmental impacts associated with the construction of an access road. Accordingly, the footprint of the landfill was restricted to being within three miles of major highways.
  - The site should minimize, to the extent feasible, the distance from the population to be served and the solid waste transfer stations in Brevard County. This criterion is intended to minimize fossil fuel use, wear and tear on roadways, the cost of hauling solid waste, air pollution from vehicles, and the number of homes and businesses that the trucks must pass.
5. **Environmental Practicability Criteria.**
- Adequate uplands (i.e., at least 600 contiguous acres in a simple configuration) must exist outside of the FEMA 100-year floodplain.
  - The footprint of the landfill (600 contiguous acres) must be outside of the 100-year flood zone (FEMA Zone AE).
  - Undisturbed uplands should be avoided.
  - Critical listed species' habitats should be avoided.
  - Areas within or immediately adjacent to county and state-owned conservation lands were eliminated. The specific requirement was that the landfill footprint be at least one mile from conservation lands.
  - Construction of the landfill should not impact a significant historical or archeological site.
  - The site should be more than five miles from any airport. Under FDEP Rule 62-701.320(13), F.A.C., an applicant must notify the FAA and the Florida Department of Transportation if a proposed solid waste management facility will be located within five miles of the end of an airport runway. Consistent with FAA Advisory Circular

150/5200-33, the FAA opposes the construction of Class I landfills within five miles of the end of an airport runway.

- Areas draining to Class I surface water. Class I surface waters are those used for public water supply. Areas within 3,000 feet of Class I surface waters were excluded from consideration.
- Site should be more than two miles from the coastline. This criterion was used to protect the economic and environmental values of coastal areas. It also protects the landfill against potential hurricane storm surges and extreme high winds.
- To further protect the environment, the site was required to have at least 1,000 contiguous acres (minimum 600 acres for the landfill footprint and support facilities). This acreage is minimal both in comparison to other landfills and in terms of Brevard County's preferences. The 1991 Alternatives Analysis was based on a minimum of 1,500 and maximum of 3,000-acre preference of upland habitat (e.g., pasture) where the landfill and supporting services could be developed without directly affecting valuable native uplands. A relatively large site provides a variety of environmental and practical benefits; such as, large on-site buffers, the ability to avoid wetlands and productive upland habitat, and the flexibility to create wetland mitigation areas on the site. Additional evaluations were conducted in 2009 and 2017. With each evaluation, the number of potential sites was reduced. In 1991, four sites were identified that meet all criteria; in 2009 only two sites were identified and one was already approved for a large residential development; in 2017 the same two sites were identified, with the US192 Site being the only County-owned undeveloped site.

The 2017 Alternatives Analysis, performed by Cardno, as part of the permitting process, concluded that the "U.S. 192 Property satisfied all of the screening criteria identified in the 1991 and 2009 Alternatives Analyses, including the FDEP criteria in Chapter 62-701, F.A.C., the Brevard County Land Use Requirements, the Social Acceptability Requirements, the Economic and Practicability Requirements, and the Environmental Criteria. In 2017, the U.S. 192 Property continues to meet those requirements, while all of the other potential sites continue to have one or more fatal flaws... No other site in Brevard County could be reasonably obtained, utilized, expanded or managed to fulfill the basic project purpose while having less adverse impact on wetland ecosystems."

### **Historical Summary:**

The main events in the last twenty-five years regarding a future landfill site are listed below:

- November 30, 1983 - Barker, Osha & Anderson, Inc. (BOA) conducted an "Alternative Sites Evaluation of a South County Processing & Disposal Facility" that had, as a first selection, a site south of US 192 adjacent to the west line of Brevard County. Two years after that, the statute that administers the solid waste facilities was amended to prohibit the construction of a landfill within 3,000 feet of a class I surface water. This site was located within the prohibited distance and had to be eliminated from consideration.



- September 15, 1986 - In view of that prohibition, the study dated November 30, 1983 was updated to consider the new requirement and changed the selection to a site north of US 192 adjacent to the Osceola County line. This site (the current US 192 Site) was recommended by BOA for further evaluation.
- April 14, 1987 - BOA completed an updated Alternative Site Evaluation taking into consideration the impact of the rule changes. The conclusion of this study was that the current US 192 Site was the first "candidate" for a future south county solid waste facility.
- 1988 – The Solid Waste Management Department applied for a permit to build a Class III landfill at the US 192 Site. The Florida Department of Environmental Protection gave "Notice of Intent to Issue" (the permit); but, Brevard County withdrew the application. One reason was that Brevard County did not own the site at that time.
- June 1991 - BOA and Camp, Dresser & McKee, Inc. (CDM) conducted a (second) Alternative Site Study. After the publication of this study, the County started proceedings for the purchase of the US 192 Site. The property was purchased by a stipulated settlement with the owner, under threat of condemnation. Shortly after that, the engineering work started on permitting the site as a Class III landfill.
- January 5, 1993 – A Budget Change Request was sent to the Board to transfer monies from operating to capital to continue to pay for engineering services on the US 192 Project. After much discussion and a motion to stop the work for 90 days, a decision was made to table the item for two weeks.
- January 19, 1993 - The Budget Change Request was approved and discussion followed regarding entering into conversations with Deseret and Osceola County to establish a joint facility west of the current facility, with the understanding that if nothing was resolved, the County would go back to the original site. This motion was approved.
- January 18, 1995 - There was a joint meeting with the Osceola County Commission to discuss a regional approach to solid waste disposal; but, to the best of my knowledge, no decision was ever made on this idea. Sometime later Osceola County decided to approve the development of a private landfill to take care of their solid waste needs.
- January 9, 1996 – The Board of County Commissioners approved initiating a Request for Proposal regarding "Solid Waste Disposal Services within the South Brevard Disposal Area".
- May 21, 1996 through September 17, 1996 – The Board did not select any of the proposals submitted.
- October 8, 1996 – The Board directed the Solid Waste Management Department to work with Deseret on identifying a site suitable for exchange with the US 192 Site and for Deseret personnel to enter into conversations with Osceola County if a suitable site was identified. No suitable site was selected.
- 2005- 2006 – During various workshops, the Board received a presentation by the engineering firm of S2Li demonstrating a difference of \$100 million in a twenty-year period between developing the US 192 Site and shipping the waste to a facility located in Osceola County. The Board gave instruction to the Solid Waste Management Department to pursue the least costly option. As such, the development of the US 192 Site as a solid waste facility was pursued. The US 192 site was determined to be the lowest cost option at a savings of \$100,000,000 in comparison with taking the Class III waste to the JED landfill located in Osceola County.

- 2009 – As part of the permitting efforts, Entrix conducted an alternative Site Analysis and concluded that the best site for a solid waste facility in the south end of the county would be the US 192 Site.
- 2009 – Solid waste construction and operation permit and Environmental Resource Permit (ERP) applications for the US 192 Site submitted to FDEP.
- 2011 – The solid waste construction and operation permit for Cell 1 of the Class III landfill on the US 192 site was issued by the FDEP.
- 2014 – Biological Opinion issued by the US Fish and Wildlife Service which did not find any nesting Caracara and advised some restriction during construction to protect indigo snakes and caracaras if encountered during these activities.
- January 15, 2016 – FDEP issues Notice of Intent to Issue Environmental Resource Permit (ERP). However, the permit issuance is pending issuance of the Army Corps of Engineers ERP.
- March 3, 2016 – The Board conducted a Landfill and Budget Workshop. No motion was made in regards to the development of US 192.
- November 21, 2016 – FDEP renews the solid waste construction and operation permit for Cell 1 of the Class III landfill on the US192 Site.
- February 7, 2017 – A settlement Agreement is signed between Farmland Reserve, Inc. (DBA Deseret Ranches of Florida), Deer Park Ranch, Ltd. and Brevard County regarding Deseret and Deer Park's petition for an Administrative Hearing in which they challenged the Florida Department of Environmental Protection's decision to issue a Construction Permit and a Conceptual Permit to Brevard County. The following are relevant points in the agreement:
  1. The Florida Department of Environmental Protection issued a revised Construction Permit based on the agreement.
  2. The County committed to not seek a Class I landfill on the US 192 site before 2036 unless the Central Disposal Facility used the airspace. There are notifications that are required if this happens.
  3. The County committed to build a fence separating an area to the north of the property and continue to lease it to Deseret.
- In exchange for these and other commitments in the agreement, Deseret and Deer Park each agreed to not oppose the issuance of any permit regarding a construction of a Class III facility on the site.
- August 2017 – As part of the permitting process, Cardno, Inc. conducted an Alternative Analysis to reconsider potential alternative landfill sites. The analysis concluded that the US 192 Site is the only practicable alternative.
- August 22, 2018 – Final response to Request for Information submitted to the Army Corps of Engineers.
- March 15, 2019 – The Army Corps of Engineers issued a draft permit for US 192 and staff has 30 days in which to request changes in the draft permit. The draft has been reviewed by Staff and the consultants and no objections to the permit are deemed to be needed. The Army Corps permit next step is for staff to sign or execute the permit. No time constraints are associated with the signing by staff of the permit.
- Ongoing – Assuming the County executes the Army Corps permit, the next steps are to apply for a Florida Department of Transportation permit for the entrance, local permits and the FAA permit. These permits are not expected to be especially difficult to obtain and may require about six months. Once these permits are obtained the County could start site construction which is expected to take two years for the Class III landfill

## **Cost Incurred**

In October 24, 1991 the county acquired the current US 192 site under the threat of condemnation at a cost of \$8,250,000 for the 2,980.38 acres. The following is a summary of the cost associated with the acquisition and the first attempt for permitting the site, along with the permitting efforts that have been undertaken.

Acquisition	\$ 8,250,000.00
Defendant Attorney Fees	1,080,098.00
County Attorney Fees	<u>717,608.51</u>
Initial Acquisition Cost	\$10,047,706.51
Initial Permitting Process	1,404,707.02
Current Permitting Process	<u>12,727,545.73</u>
Total Cost Incurred	\$24,179,959.26

## **Recent Developments**

During the 2006 workshops with the Board of County Commissioners, the engineering consultants (S2L, Inc.) presented a report (see attached) titled: "Master Planning and Feasibility of the US 192 Site" dated February 3, 2006, which demonstrated a cost differential between developing the US 192 Site and sending the waste to the JED Landfill in Osceola was \$100,000,000 for a 25 year period of time (in favor of developing the US 192 Site).

On this basis, the Board at that time authorized the Solid Waste Management Department to seek the permits needed to develop the US 192 site. In 2009 a solid waste permit was applied for and the three requests for additional information have been received and responses were submitted. The solid waste permit was received From FDEP in 2011 and renewed in 2016. In addition, the FDEP has issued an initial Intent to Issue an ERP. The permit is contingent upon issuance of an ERP by the Army Corps of Engineers, which has issued a draft to the permit as of March 15, 2019.

## **Alternatives**

Throughout the years the County has looked at various alternatives to the use of US192. The Central Disposal Facility was expanded and an expansion area was created to the south of the slurry wall landfill to serve the future needs for class I disposal. This area commenced receiving materials in cell 1 and with additional cells to be built in the future will serve as the main depository for municipal solid waste for an expected thirty years. The Sarno Road Transfer Station was replaced in 2004 to provide a collection point to deliver the municipal solid waste to the Central Disposal Facility. These additions to the system will take care of class 1 needs for several decades.

The Sarno Road Landfill, which serves as the depository for class III materials in the south area of the county, was redesigned and expanded. The road serving the landfill was moved to an area that allows improved use of the airspace. The terraces were eliminated and the

slopes were steepened to provide more airspace without affecting the footprint of the landfill. With the south class III airspace not sufficient to meet the timeline needed for the US 192 project, the stormwater system was redesigned. A stormwater lake to the north was greatly reduced in size by expanding the capacity of the lake in the south and redirecting the flow of stormwater to take advantage of the increase capacity. This allowed the landfill to expand its footprint to the north by ten acres. This area is limited to a height of 40 feet by the City of Melbourne. Staff received the draft application from our engineers on April 2, 2019 and will be applying for height variance and life extension from the City of Melbourne on April, 2019. The request for the variance is expected to be presented to the City of Melbourne Council during May. This height variance will give us about four more years of capacity.

In 2005 the Board reviewed a report examining the possibility of sending the materials to the JED Landfill in Osceola County and building a disposal site on the US192 property. This comparison was updated in 2016 and there was a difference between both options of approximately \$27,000,000 over a 25 year period with the US 192 being the less expensive option. This differential could be greater today because of the increase tonnage being received at the Sarno Road Landfill.

Also during 2016 Staff examined the option of the department hauling the class III materials to the Central Disposal Facility. At that time it was concluded the landfill at the Central Disposal Facility would lose about thirty percent of its life based on the tonnages being received at that time. A yard waste facility for the south end of the county would have to be constructed as well as a citizen drop-off center to keep the residents from having to use the transfer station to drop off their waste. This is a safety measure to avoid mixing commercial traffic with residential traffic. The transfer station would need to be "hardened" in order to receive a type of waste that is more abrasive than municipal solid waste. Transporting class III material would entail expanding our transportation fleet by at least six employees (depending on the waste stream), adding six over the road tractors (\$800,000) and an equivalent number of trailers with two additional spares (\$460,000). Other capital expenditures such as hardening the transfer station, building a yard waste area and a citizen drop off center would have to take into account the estimated tonnage, land available to be able to estimate the construction cost.

It is important to note that landfill life expectancy forecasts have been extremely inaccurate over time due to many variables that must be estimated in that process. Some of these variables are the economy, construction activity, and the number of and the severity of hurricanes. Thus, even when these estimates come from experienced consultants they often prove to be significantly "off", either high or low.

Staff has also presented to the Board via a Report the possibility of expanding Sarno through the purchase of the Florida Recyclers Landfill located to the north of our landfill. The report contains the details known up to this point regarding that alternative.

Additionally, the Board directed staff to develop a Request for Proposals regarding new technology that may help in the Sarno situation. We have contracted with an engineering firm that is preparing a draft request. This was received by staff on March 30, 2019 and will be reviewed in the next week. After proper review, including Board review of the draft RFP, staff will proceed to advertise for this technology.



In conclusion, the current status is that staff has obtained a construction permit from FDEP for class III landfill, the Environmental Resource Permit was submitted to FDEP and issuance is pending the USACOE's similar permit. The draft of this permit was received on March 15, 2019 and was reviewed by our engineers as well as our staff. The USACOE regulation allows us 30 days in which to submit changes to the draft, which staff does not have any changes, and there is no definite time in which staff has to sign the permit accepting the same unless the Board provides an alternative direction.

To ascertain the Board's interest in further discussion on the items discussed herein, the County Manager will be seeking Board direction during his report at the April 9<sup>th</sup> Board meeting on whether the Board would like an agenda item or Board workshop scheduled on this report.