



**INDIAN RIVER COUNTY**  
**SOLID WASTE DISPOSAL DISTRICT**  
**BOARD MEMORANDUM**



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**Date:** January 14, 2019  
**To:** Jason E. Brown, County Administrator  
**From:** Vincent Burke, P.E., Director of Utility Services  
**Prepared By:** Himanshu H. Mehta, P.E., Managing Director, Solid Waste Disposal District  
**Subject:** CCNA-2018 Work Order No. 4 to Geosyntec Consultants for Engineering Services with a Focused Feasibility Study for Use of a Deep Injection Well for Disposal

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**DESCRIPTIONS AND CONDITIONS:**

The Indian River County Solid Waste Disposal District (SWDD) operates a Class 1 Landfill that is designed and permitted to capture leachate (liquid that passes through the waste) from the landfill. The Indian River County Department of Utility Services (IRCDUS) department operates a Residuals Dewatering Facility (RDF) on the landfill property. Currently, the leachate is combined with the centrate (liquid portion of the dewatering process) and is transmitted via a force main approximately five miles away to the West Regional Wastewater Treatment Facility (WRWWTF). The WRWWTF sends treated reuse water to various users (i.e., golf courses) and is permitted to discharge treated reuse water into the Lateral D Canal via the on-site created wetlands. However, the nutrient loading from the leachate and centrate are a concern since there are very stringent permit requirements at the WRWWTF. In addition, reuse water delivery is limited during wet weather conditions when the golf course sites' receiving ponds are typically full.

As a result, SWDD and IRCDUS want to explore other treatment and disposal options for leachate, centrate and wet-weather liquids. A preliminary leachate pretreatment evaluation by CDM Smith in 2018 concluded that pretreatment of the leachate will be necessary to meet local limits. In addition, it identified that most landfill facilities in the Florida Department of Environmental Protection (FDEP) Southeast District send leachate to wastewater treatment plants for disposal, while six of them treat/dispose of the leachate using a deep injection well. CDM Smith did state that disposal via a deep injection well, including the possibility of the one at the Indian River Eco-District, LLC (Eco-District) site next door, should be considered. Otherwise, on-site treatment using nano-filtration and reverse osmosis for peak flows to meet local limits would cost approximately \$700,000 in capital costs, with \$170,000 per year in annual maintenance costs.

The purpose of this agenda item is to evaluate the total costs of a new deep injection well, the purchase of an existing private deep injection well or an agreement to use the disposal capacity of an existing private deep injection well. Staff would return at a future Board meeting with the various options for Board consideration.

**ANALYSIS:**

As part of the Continuing Consulting Engineering Services Agreement (CCNA), entered into on April 17, 2018, SWDD staff requested Geosyntec submit a proposal to provide engineering and consulting

services for the subject project. Geosyntec’s lump sum proposal, including scope of work, schedule and budget, is shown in Attachment 1. Geosyntec’s proposal consists of four phases as follows:

<i>Phase</i>	<i>Description</i>	<i>\$ Amount</i>
1	General Consulting/Project Management	\$ 4,900
2	Review of Background Documents and Regulatory Requirements	\$ 8,000
3	Evaluation of Deep Injection Well Disposal Options	\$ 8,850
4	Technical Memorandum	\$ 5,750
	Total =	\$ 27,500

Geosyntec proposes to submit the technical memorandum within three weeks of the notice to proceed.

The first phase includes two meetings, one via conference call to reduce costs and a second meeting for a site visit to the Eco-District. The second phase includes reviewing background documents and regulatory requirements to better understand the requirements for permitting, constructing and operating a new deep injection well, or using an existing deep injection well to handle anticipated and future flows. The third phase will evaluate the following three options: 1) install a new deep well, 2) purchase the deep injection well on the Eco-District site and 3) enter into an agreement to allow disposal of leachate/centrate/wet weather disposal at the existing deep injection well on the Eco-District site. This analysis is to provide an estimate of the engineering, permitting, construction and operating/maintenance costs for each of these options. The final phase is a technical memorandum to summarize, rank and provide pros/cons for each of these options in order for staff to evaluate and present the findings to the Board at a future meeting.

**FUNDING:**

In the Capital Improvement Plan, we have budgeted \$100,000 in the current Fiscal Year 2018/19 and another \$900,000 for Fiscal Year 2019/20 for the Leachate Pretreatment System project.

<b>Description</b>	<b>Account Number</b>	<b>Amount</b>
Leachate Pretreatment System	411-169000-19507	\$27,500

**RECOMMENDATION:**

Solid Waste Disposal District staff recommends that its Board approve the following:

- a) Approve CCNA-2018 Work Order No. 4 with Geosyntec in the amount of \$27,500 to provide engineering services related to the Focused Feasibility Study for Use of a Deep Injection Well for Disposal.
- b) Authorize the Chairman to execute the same, as presented.

**ATTACHMENT(s):**

- 1) CCNA-2018 Work Order No. 4 – Geosyntec