

**Indian River County, Florida
Solid Waste Disposal District
Board Memorandum**

Date: November 11, 2019

To: Jason E. Brown, County Administrator

From: Vincent Burke, PE, Director of Utility Services

Prepared By: Himanshu H. Mehta, PE, Managing Director, Solid Waste Disposal District

Subject: Approval of a Leachate Pilot Study by the Indian River Eco-District

Descriptions and Conditions:

On July 16, 2019, the Solid Waste Disposal District (SWDD) Board approved staff recommendation to further evaluate Thermal Evaporation Technology as a potential solution for leachate treatment via a pilot study. This was based on the results of a Focused Feasibility Evaluation of Landfill Leachate prepared by our consultant, Geosyntec Consultants (Geosyntec) that recommended that we pursue a pilot study using the Heartland Water Technology, Inc (Heartland) technology.

Staff requested and received the leachate pilot study proposal from the Indian River Eco-District, LLC (IREDD) using the Heartland Concentrator™ (Pilot Unit) provided by Heartland.

Analysis:

The following is a summary of the key components of the leachate pilot study proposal, as presented by IREDD and Heartland:

1. A turn-key, 5-day, leachate pilot study project to treat up to 1,000 gallons per day of leachate through the Pilot Unit at the Indian River County (IRC) Landfill. The technical objective will be to demonstrate the Pilot Unit's ability to evaporate 93% or more of the 1,000 GPD of the Facility's leachate that is fed into the Pilot Unit.
2. Provide pre-, during, and post-analytical testing of the parameters identified in the proposal via a third party laboratory.
3. Provide a portable on-site generator for the Pilot Unit.
4. Confirm that binding of the residual product of the Pilot Unit, via laboratory testing, can be safely disposed in the IRC Landfill and that it can pass the both the paint filter test and the Toxicity Characteristics Leaching Procedure testing criteria.
5. Provide on-site training for the Pilot Unit.

- 6. Upon successful demonstration of the Pilot Unit, provide projections of capital and operating costs for a full scale unit to treat IRC leachate.

IRED and Heartland have proposed a total cost estimate, including 3rd party expenses, of \$46,375. This includes the IRED/Heartland Price Component (five-day pilot effort) of \$20,900 and additional 3rd party expenses estimated at approximately \$25,475.

IRED and Heartland have proposed the following payment terms:

- Payment Terms. Invoicing at 1/3 total for Mobilization, 1/3 total at Pilot Test Completion and 1/3 total upon receipt of Final Report.

IRED and Heartland are ready to start the deployment logistics upon issuance of the notice to proceed.

Staff supports proceeding with the Leachate Pilot Study as proposed by IRED/Heartland as the verification of this technology and the understanding of the overall project costs can be factored into a long-term leachate solution for the Indian River County Landfill.

Staff is requesting that the SWDD Board waive the requirements for bids based on the evaluation of the Heartland technology by Geosyntec and approval by the SWDD Board on July 16, 2019. For reference, Geosyntec included cost comparison evaluation from another thermal evaporation technology vendor in their leachate feasibility evaluation.

Funding:

Funding for this work is budgeted and available in the Other Professional Services account number 41121734-033190, which is funded from SWDD assessments and user fees.

Description	Account Number	Amount
Other Professional Services	41121734-033190	\$46,375

Recommendation:

Solid Waste Disposal District staff recommends that its Board waive the requirement for bids and pending approval of the required insurance by the Risk Manager, after approval by the County Attorney as to form and legal sufficiency and approve the following:

- a) Approve the proposal by the Indian River Eco-District, LLC for the Leachate Pilot Study.
- b) Authorize the Chairman to execute the same.

Attachment:

- 1. IRED Leachate Pilot Study Proposal