

**Indian River County, Florida
Department of Utility Services
Board Memorandum**

Date: November 15, 2022

To: Jason E. Brown, County Administrator

Through: Sean C. Lieske, Director of Utility Services

Prepared By: Richard Meckes, Operations Manager

Subject: Unincorporated Indian River County Lagoon ArcGIS Nitrogen Load Estimation Tool (ArcNLET) Model, Tetra Tech, Inc., Work Order No. 12

Background/Analysis:

On April 17, 2018, the Board of County Commissioners (BCC) approved the Continuing Contract Agreement for Continuing Engineering Services with Tetra Tech, Inc. for professional water resource engineering support services. The original contract was for three (3) years with an option for one (1) two-year extension at the County's discretion. This contract was renewed on May 18, 2021 for the two (2) year extension

Indian River County (IRC) remains committed to its ongoing efforts focused at improving the health of the Indian River Lagoon (IRL), while continuing to pursue additional activities to further IRC's lagoon programs. A summary of IRC's programs related to water quality improvements for the lagoon is maintained and updated annually by the Florida Department of Environmental Protection (FDEP) and contained within the Central Indian River Lagoon Basin Management Action Plan (CIRL BMAP). This report is used to track Total Maximum Daily Load (TMDL) reductions of nitrogen and phosphorus as 'credits' for IRC's efforts against the required reductions for IRC contained in the CIRL BMAP.

As IRC continues to provide annual updates to the FDEP in accordance with their reporting requirements, IRC's efforts at septic tank abandonment (septic to sewer (S2S) conversions) have yet to provide IRC with any FDEP-recognized TMDL 'credits'. Instead, these S2S projects are tabulated annually with 'credit' amounts that are to be determined (TBD).

S2S projects within the CIRL BMAP are expected to account for significant reductions of nitrogen from reaching IRL. IRC continues to pursue opportunities for these types of projects, and now is seeking a way for these completed projects to account for TMDL 'credits' recognizable by the FDEP in their annual reports.

FDEP has accepted the use of the ArcGIS Nitrogen Load Estimation Tool (ArcNLET) model to quantify nitrogen load reductions to the IRL from these S2S conversion projects. Tetra Tech, under Work Order No. 11, will be able to provide IRC with a calibrated ArcNLET model for the portion of unincorporated IRC that falls within the CIRL BMAP basin. With the calibrated model, IRC can then provide the FDEP with verifiable values for the current S2S projects that have been completed in order to receive TMDL 'credits', as well as use the model to potentially support future S2S projects.

Consent Item

The proposed Work Order No. 12 from Tetra Tech provides professional services required to provide IRC with the ArcNLET model for unincorporated IRC within the CIRL BMAP basin. Once this model is created, it can be used to quantitate IRC's TMDL nitrogen reduction 'credits' that currently remain as TBD on the FDEP's annual reports. This will increase IRC's TMDL 'credits' for nitrogen and, more accurately, reflect IRC's IRL water quality improvement efforts as reported in the CIRL BMAP and its updates.

The cost for Work Order No. 12 is a lump sum amount of \$45,867.00. The anticipated completion date for a final ArcNLET model report is approximately two months after notice to proceed.

Funding:

Funding in the amount of \$45,867.00 for professional water resource engineering support services is budgeted and available in the Utilities/Gen & Eng/Other Professional Services account, number 47123563-033190.

ACCOUNT NAME	ACCOUNT NUMBER	AMOUNT
Utilities/Gen & Eng/Other Professional Services	47123536-033190	\$45,867.00

Recommendation:

Staff recommends the Board of County Commissioners (BCC) approve Tetra Tech, Inc., Work Order No. 12 in the amount of \$45,867.00 for professional engineering support services associated with the development of an unincorporated Indian River County ArcNLET model. In addition, staff recommends that the BCC authorize the Chairman to execute Work Order No. 12.

Attachments:

- 1. Tetra Tech, Inc. Work Order No. 12