

Indian River County, Florida
Department of Utility Services
Board Memorandum

Date: June 13, 2023

To: Indian River County Board of County Commissioners

Through: John A. Titkanich, Jr., County Administrator
Sean C. Lieske, Director of Utility Services

From: Howard Richards, P.E., Manager, Capital Projects

Prepared By: Michael Loveday, Wastewater Superintendent

Subject: Budget Amendment for Online Phosphorus Analyzers

Background/Analysis:

Indian River County Department of Utility Services (IRCDUS) owns and operates the West Regional Wastewater Treatment Facility (WRWWTF). Florida Statute, Section 403.086, requires facilities that discharge into the Indian River Lagoon meet Advanced Waste Treatment (AWT) standards beginning July 1, 2025. AWT is defined as a nutrient reduction process that *“contains not more, on a permitted annual average basis, than the following concentrations”*:

1. Biochemical Oxygen Demand (CBOD5) - 5mg/l
2. Suspended Solids - 5mg/l
3. Total Nitrogen, expressed as N - 3mg/l
4. Total Phosphorus, expressed as P - 1mg/l

In December of 2022, the Florida Department of Environmental Protection (FDEP) issued the WRWWTF a new operating permit. As anticipated, the new permit required increased limitations on the concentrations of the nutrients, nitrogen and phosphorus. In order to demonstrate the plant is able to meet the reduction requirements, continuous online monitoring of the specified nutrients (nitrogen and phosphorus) will be necessary. The WRWWTF currently has a continuous online monitoring analyzer for nitrogen, but lacks an online analyzer for phosphorus. Upon request, IRCDUS received the attached quotation from Hach Company, dated April 12, 2023, for two (2) continuous online phosphorus monitoring analyzers in the amount of \$78,570.35. In order to properly integrate the phosphorus analyzers into the WRWWTF system and allow adequate time for process adaptation and system troubleshooting, IRCDUS believe it is our best interest to add these analyzers to the facility operations proactively by installing the analyzers as soon as possible.

To meet the more stringent FDEP operating permit compliance requirements for phosphorus, IRCDUS is requesting a budget amendment for unbudgeted capital items for the continuous online phosphorus monitoring analyzer. The analyzers will allow WRWWTF operations staff to monitor levels of phosphorus at various stages of the treatment system. With the data provided by the phosphorus analyzers, staff will be able to make changes proactively to help maintain FDEP operating permit compliance. The rationale behind purchasing the equipment now is to allow time for a robust set of concerns including equipment lead time, process integration, system adjustment and the troubleshooting of any issues that may arise. This will allow IRCDUS to have the treatment system process adjustments ready before new regulations are imposed.

Funding:

Expenses in the amount of \$78,570.35 for this purchase will be recorded in the Utilities/Other Equipment account, number 471-166002. Since this is a Utilities operating capital purchase, the funds will come from fund balance. Utilities operating funds are derived from water and sewer sales.

ACCOUNT NAME	ACCOUNT NUMBER	AMOUNT
Utilities/Other Equipment	471-166002	\$78,570.35

Recommendation:

Staff recommends that the Board of County Commissioners (BCC) approve the budget amendment for the purchase of two (2) continuous online phosphorus monitoring analyzers in the total amount of \$78,570.35.

Attachments:

- Hach Company Quotation dated April 12, 2023