

# Key Largo Wastewater Treatment District Board of Commissioners Meeting Agenda Item Summary

Meeting Date:

October 15, 2024

Agenda Item Number: N-1

Action Required:

No

Department:

Engineering

Sponsor:

Lexi Connor

Subject:

## **FY25 FDEP Grant Applications**

Summary of Discussion:

The FDEP grant program was recently changed for FY25. The program is the Florida Keys Area of Critical State Concern grant. Rather than distributing grant funds through the existing Interlocal Agreement between the stakeholders, the FDEP has required individual grant applications for each project. Each entity is required to submit applications for grant funding for each project. WEC staff prepared and submitted grant applications as described in the attached memo.

### Reviewed / Approved

Operations: \_\_\_\_\_  
Administration: \_\_\_\_\_  
Finance: \_\_\_\_\_  
District Counsel: \_\_\_\_\_  
District Clerk: \_\_\_\_\_  
Engineering: \_\_\_\_\_

### Financial Impact

\$ 3,853,533.68  
Income  
Funding Source:  
Grant(s)  
Budgeted:  
N/A

### Attachments

1. WEC Memo

Approved By: \_\_\_\_\_

General Manager

Date: \_\_\_\_\_

10/10/2024



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## MEMORANDUM

**To:** Peter Rosasco, KLWTD General Manager

**From:** Lexi Connor, Project Manager

**Date:** October 1<sup>st</sup>, 2024

**Re:** Florida Keys Area of Critical State Concern Grant - WEC Summary of Work

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### Overview of the Florida Keys Area of Critical State Concern (FKACSC) Grant

This grant is available to local governments located in the Florida Keys Area of Critical State Concern or the City of Key West Area of Critical State Concern. Eligible projects will improve water quality to protect and restore natural resources. Funds may be used for wastewater; protecting, restoring or enhancing nearshore water quality and fisheries, such as stormwater or canal restoration projects; eligible land acquisition, with increased priority given to the acquisitions that achieve a combination of conservation goals, including protecting Florida's water resources and natural groundwater recharge; and other projects that protect water resources in the Florida Keys. This grant program has replaced the Stewardship grant procedures of allocating available grant funds for FY25.

### KLWTD's Projects Applied

1. Collection System Monitoring Project
2. Headworks, Screening, and Equalization Tank Upgrades
3. Effluent Filtration Upgrade
4. Enhanced Odor Management System
5. Power Conditioning, Electrical Upgrades and Lightning Protection

KLWTD Project Name	Description	Requested Amount
Collection System Monitoring	This is the Flovac project, which allows for continuous assessment of vacuum pressure levels, sewage flow rates, and the operational status of key components like vacuum valves and pumps. Additional funds are needed to complete the project with grant funding. It is partially funded with Stewardship and ACOE grants.	\$ 791,991.89

Headworks, Screening, and Equalization Tank Upgrades	This project includes the upgrades of the headworks by installing new high-efficiency center flow screens and the construction of a 1.0 million-gallon influent EQ tank. These improvements will enhance debris removal and help manage peak wastewater flows. The project is currently in the design phase is partially funded by the existing Stewardship grant, with additional funding being requested for construction costs.	\$ 1,198,680.72
Effluent Filtration Upgrades	This project involves installing a third disc filter to enhance filtration capacity, reduce TSS in the effluent, and for redundancy. Construction began in October 2023 and is expected to be completed by November 2024. The project is currently partially funded by the existing Stewardship Grant, with additional funding being requested for construction and project management.	\$ 379,661.07
Enhanced Odor Management System	This project's goal is to reduce odor control downtime and risks associated with hazardous gas leaks in confined spaces through the installation of new dual carbon filter systems. At two vacuum stations this includes the relocation of the odor control system. This project is under design. This project has not yet been awarded grant funding.	\$ 1,208,700.00
Power Conditioning, Electrical Upgrades and Lighting Protection	This project aims to stabilize the power supply through the installation of a power conditioning transformer and improve lightning protection to safeguard against direct strikes and associated surges as well as improve resilience of electrical conduit by relocating them above grade. This project is planned to move into construction in October 2024 with an anticipated completion date of late October 2025. It is partially funded by the previous Stewardship Grant but requires additional funding.	\$ 274,500.00

**TOTAL \$3,853,533.68**

This FDEP grant program implements new procedures for applying for FDEP grants. Previously, the Stewardship grant program had its annual funding allocations distributed to the Florida Keys participants in an ILA that set up percentage allocations for each entity based on total project costs. Under this new procedure, each Florida Keys entity is

required to submit applications for funding for each project. For more details on the grant application process, see the following pages.

## Summary of the Applications

The application was divided into six sections, each containing targeted questions about the proposed project. Most questions require applicants to select multiple-choice answers or input numerical values, with limited opportunities for additional explanation. Below summarizes the sections of the online application:

### 1. Project Details

- Contact information, project location, and project title were asked as project details.
- This section prompted a project description (limit of 750 words) which provided a clear and concise overview of the project, including its purpose and scope. Each project description included the following details:
  - Activities to be funded by the grant
  - How best management practices (BMPs) will be involved
  - Size of the project, including the geographic area and infrastructure involved
  - Anticipated benefits, such as improved water quality and enhanced environmental protection

### 2. Project Funding and Readiness

- This section outlined the total funding requested and specified how the funding would be allocated (e.g., land acquisition, design/permitting, construction, project management, and/or other uses).
- Included the total estimated project cost, along with details on local contributions and third-party funding sources.
- In addition to the project's overall start and completion dates, the design status and its expected or actual completion date were included.
- The section also addressed the required permits and their status.

### 3. Project Benefits

- The Project Benefits section detailed the total reductions in nitrogen and phosphorous levels and how these reductions were calculated (if applicable to the project).
- In addition to water quality improvements, the section highlighted other anticipated project benefits, such as environmental protection, improved public health, and long-term economic advantages.

### 4. Project Type

- All submitted projects fell under the project type of *Water Treatment Facility Improvements*.
- Within this type, the projects were further classified based on whether they involved *enhanced nutrient reduction, expansion of facility capacity, construction of a new facility, or other type of facility upgrade*.
  - Enhanced Odor Management System: *Other type of facility upgrade*
  - Power Conditioning, Electrical Upgrades and Lightning Protection: *Other type of facility upgrade*
  - Collection System Monitoring Project: *Other type of facility upgrade*
  - Effluent Filtration Upgrades: *Enhanced nutrient reduction*

- Headworks, Screening, and Equalization Tank Upgrades: *Enhanced nutrient reduction*
  - This section then detailed the specific upgrades that were proposed.
5. Facility Specific Questions
- This section focused on the facility's average daily flow, annual average nitrogen concentration, and annual average phosphorus concentration before and after proposed upgrades. Historic data was used to determine previous annual averages while future averages were calculated using methods explained in the project benefits section.
6. Additional Information
- The end of the application provided an email to send additional information or supplemental documents that would be beneficial in evaluating the project.

### **Summary of the Reports Submitted as “Additional Information”**

WEC prepared comprehensive reports, ranging from 10 to 14 pages, for each of the five projects. These reports were submitted to the FDEP email specified as “Additional Information” with each grant application. They offered an opportunity to elaborate on the multiple-choice and numerical input questions that lacked space for explanation. Figures, tables, and appendices (listed below) were included in the reports to provide the grant reviewer with a clear understanding of how the funding will be utilized.

#### **1. Collection System Monitoring Project**

##### **Figures:**

- Map of Wastewater Service Providers in the Florida Keys
- Flovac's Remote Monitoring System Diagram
- Diagram of a Flovac Collection Pit
- Diagram of a Flovac Vacuum Valve

##### **Tables:**

- Project Information Summary
- Funding Overview
- Current Facility Standards at KLWTD's WWTP

##### **Appendices:**

- Existing DEP Funding Agreement (LPA No.)/Current Amendment
- Basin Map for KLWTD Service Area
- FloVac Proposal

#### **2. Headworks, Screening, and Equalization Tank Upgrades**

##### **Figures:**

- Location Map (WWTP)
- Map of Wastewater Service Providers in the Florida Keys

##### **Tables:**

- Project Information Summary
- Funding Overview
- Current Facility Standards at KLWTD's WWTP

Appendices:

- Existing DEP Funding Agreement (LPA No.)/Current Amendment
- Screen Hydraulic Performance Profile
- Best Management Plan
- Proposed Site Plan

3. Effluent Filtration Upgrade

Figures:

- Map of Wastewater Service Providers in the Florida Keys
- Photo Inside the Existing Disc Filter from Aqua-Aerobics
- Diagrams of the Inside of the New Disc Filter
- Site Photo of the Elevated Platform at WWTP with New Disc Filter

Tables:

- Project Information Summary
- Funding Overview
- Current Facility Standards at KLWTD's WWTP

Appendices:

- Existing DEP Funding Agreement (LPA No.)/Current Amendment
- New Evoqua Forty-X Disc Filter Spec

4. Enhanced Odor Management System

Figures:

- Map of Wastewater Service Providers in the Florida Keys
- Diagram of a vapor phase activated carbon odor control system
- Project Area A

Tables:

- Project Information Summary
- Funding Overview
- Current Facility Standards at KLWTD's WWTP

Appendices:

- HICARB Product

5. Power Conditioning, Electrical Upgrades and Lightning Protection

Figures:

- Map of Wastewater Service Providers in the Florida Keys
- Map of FKEC Power Lines connecting to the KLWTD WWTP

Tables:

- Project Information Summary
- Funding Overview
- Current Facility Standards at KLWTD's WWTP

Appendices:

- Existing DEP Funding Agreement (LPA No.)/Current Amendment
- Surge Suppression Device
- Lightning Protection System