UCF Board of Trustees

Facilities and Infrastructure Committee

April 16, 2025

Agenda Item

FACC-1: Campus Water Treatment Plant Approval

Proposed Action

The Facilities and Infrastructure Committee is asked to recommend to the Board of Trustees, on its consent agenda, approval of $4 million for the design and test well construction for the new campus water treatment plant (WTP).

Authority for Board of Trustees Action

Florida Statutes s. 1001.73. University board empowered to act as trustee.

Supporting Documentation Included
Attachment A: Campus Water Treatment Plant Presentation
Facilitators/Presenters
Jon Varnell, Vice President for Administrative Operations and Chief Infrastructure Officer Duane Siemen, Associate Vice President, Utilities and Engineering Services

Summary of Key Observations/Recommendations

After significant background work for the past 18 months, the Board of Trustees has been asked to approve $4 million for the first phase of the new water treatment plant (WTP). This initial $4 million budget includes design of new potable water wells, well installation, and design development for the WTP.

The university must address the 1960's water plant to be able to ensure compliance with Environmental Protection Agency (EPA) future water quality regulations and enhanced water quality standards. The new WTP would continue to serve as the primary source of potable drinking water for the UCF community, including the main campus, Siemens, Celeste Hotel, and the Central Florida Research Park. The anticipated total project cost for all five phases of the new WTP is $26 million including the $4 million first phase.

Additional Background

UCF's investment in the WTP is crucial to maintaining compliance with new and upcoming EPA water quality standards, particularly regarding:

- Per- and Polyfluoroalkyl Substances (PFAS) – The EPA's 2024 standards mandate monitoring by 2027 and full compliance by 2029. The new WTP will incorporate Granular Activated Carbon (GAC) filtration, which has been proven effective in PFAS removal, ensuring safe and clean drinking water.
- Disinfection Byproducts – Addressing high total trihalomethane concentrations that exceed future regulatory limits due to water age issues in UCF's distribution system.

Additionally, the new WTP can enable additional research partnerships, allow for easier access to future energy solutions such as green hydrogen, reduce potential future water price volatility and allow for continued main campus development under UCF's consumptive use permit.

Implementation Plan

The WTP project needs to be executed in three phases, each targeting a key aspect of UCF's potable water supply:

1. New potable wells, well design, and design of WTP
2. Retention basin, expanded storage capacity, and improved distribution infrastructure
3. Advanced treatment systems, GAC filtration, ozone treatment, and high-capacity pumps

This approach aligns with constructability and regulatory requirements for building the WTP.

Resource Considerations

UCF leadership has put in place a funding strategy that breaks up both the timing and sources of needed resources to keep this project moving. Funding considerations have also included accounting for auxiliary and direct support organizations as required by regulation.

The overall funding categories include:

- Energy savings from Combined Heat & Power utility efficiencies and absorption chiller
- Self-funding through operational savings
- Interconnection fees via University Policy 3-303.1 and Florida Statutes s. 163.3180

The WTP project follows a five-year phased approach, with the following key milestones:

- FY2025-26 Test Well Design/ Construction/ WTP Design ($4M)
- FY2027 – WTP Construction Phase 1
- FY2028 – WTP Construction Phase 2
- FY2029 – Final Testing & Commissioning
- FY2030 – WTP Fully Operational

After the first phase is approved, the remainder of the project will need to return to the Board for approval based on design and pricing.