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Wakulla Springs Alliance

"Protecting and restoring water quality, spring flow and ecological health of Wakulla Spring"

June 5, 2021

Commissioner _____
Wakulla County Commission
P.O. Box 1263
Crawfordville, FL 32327

Dear Commissioner _____:

The Wakulla Springs Alliance Executive Committee, on behalf of the Alliance Board, urges you to vote no on item #24, "Request Board Approval of the Jones Edmunds & Associates Work Authorization No. 21-21 . . ." on the agenda for the June 7th County Commission meeting and to provide direction to staff to prepare a revised scope of services.

We recommend that you direct county staff to develop a revised scope of services that provides parallel levels of site suitability and preliminary design analysis for both the former Moore parcel and the Wildwood golf course for reusing/disposing of the total 1.2 MGD of treated effluent that will require management by 2040 in addition to the 0.6 MGD capacity of the Otter Creek spray fields. We also recommend that you direct county staff to convene a public workshop upon completion of that work prior to selecting a site for final design, engineering, and permitting.

We believe this level of analysis is required to make a fully informed comparison of the two sites based on capacity limits, site suitability, and nitrate-nitrogen attenuation potential.

- Capacity limits
 - As we pointed out in our March 8, 2021, letter to David Edwards, figure 1 in the December 2, 2020, Jones Edmonds and Associates "Preliminary Evaluation of the Moore Property for PAR Disposal" depicts floodplains covering 50 percent or more of the 100-acre parcel. Wetland Solutions Inc.'s Lake City wetland system exemplar comprises 120 acres treating approximately 1.2 MGD. Given the need for a rapid infiltration basin to dispose of the discharge from the wetland treatment

system and the necessity to manage stormwater volumes onsite equivalent to what is held by existing floodplains, detailed site analysis and preliminary design work are needed to demonstrate that this property parcel could provide a constructed wetland-RIB system with sufficient holding capacity to achieve nitrate-nitrogen attenuation levels comparable to those attained at other facilities.

- County staff has argued that the golf course cannot accommodate the full 1.2 MGD needed by 2040, citing the June 2019 golf course application rate technical memo prepared by Baskerville-Donovan Inc. which is based on soil map information, FDEP's LandAp2010 method, and an assumed irrigation area of 88 acres. A close reading of that memo reveals that the predominant soils on the site appear to have a vertical hydraulic conductivity sufficient to manage 1.2 MGD. Staff has argued, however, that other constraints must be considered including "playability," which concerns how much water is applied and at what time of day relative to when the golf course is played, and water uptake limits of the turf. Those limitations must be quantified for the Wildwood golf course to properly assess its capacity.
- Site suitability
 - Detailed hydrogeologic investigations are needed at both sites:
 - On the former Moore parcel to determine the infiltration capacity of the soils to dispose of the daily discharge from the proposed wetland treatment system through the planned RIB and the need for liners for the wetland treatment cells;
 - On the golf course to supplement the estimate produced by BDI based solely on soil map data.
 - More detailed topographic data are needed for the former Moore parcel, such as the LIDAR imaging in the proposed scope of services, to better define floodplain boundaries and to identify dry and wet sinkholes that could pose threats to maintaining the structural integrity of the wetland-RIB treatment and disposal system and associated threats of discharging effluent to the aquifer that has not been fully treated from a compromised wetland cell. Similar imaging may be needed to assess the presence of incipient sinkholes on the golf course property.
 - Additional geotechnical analyses are needed at both sites to assess the potential for future sinkhole development that could compromise the integrity and proper functioning of the treated effluent management systems, especially holding ponds at the golf course and wetland cells and the RIB at the former Moore parcel.
- Nitrate-nitrogen attenuation potential
 - Site assessments and preliminary design should be conducted to determine the range and annual average nitrate-nitrogen attenuation that could be achieved by the treatment and disposal systems to be deployed at each site.
 - Wetlands Solution Inc. engineer Scott Knight has stated that a constructed wetland system can be designed to reduce the nitrate-nitrogen concentration in treated effluent from the Otter Creek WWTF to at least 0.35 mg/L and potentially as low as or lower than 0.25 mg/L as measured at the surface in individual wetland cells. The scope of

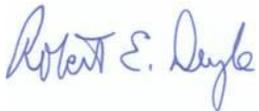
services should stipulate that a constructed wetland system should be designed to achieve that level of nitrate-nitrogen attenuation.

- We have been unable to locate information on the typical nitrate-nitrogen attenuation that can be achieved through golf course irrigation. Site-specific soils analysis and preliminary design should be completed to estimate what level of attenuation can be achieved at the Wildwood golf course taking account of factors such as turf type and condition, the irrigation application rate, and the effects of seasonal climate variation.

A separate scope of services should be prepared to cover final design and permitting only after one or more public workshops are convened to present findings from this first round of site suitability and preliminary design work and the County Commission has determined which site can provide the greatest protection of public health and the environment while meeting the projected need for treated effluent disposal.

Thank you for considering our recommendations.

Sincerely,



Robert E. Deyle, Chair
Wakulla Springs Alliance

cc: David Edwards, Wakulla County Administrator
Adam Blalock, Deputy Secretary, FDEP Ecosystem Restoration
Julie Espy, Director, FDEP Division of Environmental Assessment and Restoration
Benjamin Melnick, Director, FDEP Division of Water Resource Management
Eric Draper, Director, FDEP Division of Recreation and Parks
Amy Conyers, Park Manager, Wakulla Springs State Park
Grant Gelhardt, Chair, Big Bend Sierra Club
Don Lanham, President, Friends of Wakulla Springs
Paul Owens, President, 1000 Friends of Florida
Phillip Pollock, President, Friends of St. Marks National Wildlife Refuge
Preston Robertson, President, Florida Wildlife Federation
Ryan Smart, Executive Director, Florida Springs Council
Rob Williams, Apalachee Audubon Society