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Note: Costs the KHA incurred because of the 4E TMDL agreement with the FDEP, estimated for the years 2016 through and including 2021. Submitted on June 30, 2021.

Category 4e TMDL for WBIDs 647C and 647F: Killarney and Kanturk

Proposed agreement between the City of Tallahassee and the Killearn Homes Association (KHA)

Date on document: January 29, 2016

Signatures: This document does not seem to have been signed. A document search by the author and the former KHA Lakes Committee Chair, Christine Deland, could not find a signed copy of the agreement or identify whom could have accepted this for the HOA. We met with Julie Espy, now in charge of the program at FDEP, whose husband works for the city, said that nobody signed it except for the Administrator/Secretary at FDEP. Katheryn Bray is mentioned as the contact for the City of Tallahassee, no contact is listed for the KHA.

In this document, unsigned, the following activities were identified as being the KHAs responsibility.

- Planned Aquatic Plant Management – In Progress & Continued Through 4e Evaluation Cycle.

Aquatic plants were controlled within the Killearn Chain of Lakes (KCOL) during this time. They were controlled with biological and chemical methods. Grass Carp were stocked in the lake to control invasive exotic Waterhyacinth, Hydrilla verticillata, hydrilla and invasive exotic Alligator Weed with the Alligator Weed Flea Beetle, Agasicles hygrophila is a species of leaf beetle. Invasive exotic Water Hyacinths (Eichhornia crassipes) and Invasive exotic Cuban Bulrush (Oxycaryum cubense) with the aquatic herbicides 2-4D Amine and Diquat. Appropriate permits were acquired for both biological and chemical controls. The permit for stocking of the carp required carp barriers to be built in outlets and inlets to the KCOL.

These aquatic plant pests were in the lakes because of its impaired status. The nutrients rich stormwater from the COT, fills these lakes, fertilizes the plants, and causes them to grow uncontrollably. The City Stormwater Ponds contain and propagate this exotic vegetation which is washed into the KCOL after storm events.

Carp Fence Costs: \$32,000

Carp Stocking costs: \$11,000

Aquatic Plant Control Costs: \$70,000

- Water Quality Monitoring – In progress and will continue through the 4e evaluation cycle.

Limnological water quality monitoring is used by the KHA for its scientifically based lake management. The KHA samples and runs water quality tests quarterly.

Water Quality Monitoring costs \$50,000

- Public Education Campaign – Commence 90 Days Following FDEP 4e Approval & Continued Through 4e

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Evaluation Cycle.

Water Quality Grant, Killearn Estates Nonpoint Source Pollution Education 319 Grant, DEP Grant #LP37130. This grant focused on the Total Maximum Daily Load (TMDL) program in the KCOL and was evaluated according to Florida's Numeric Nutrient Criteria (NNC). Water quality was monitored three years before and after the educational program. The data includes the entire data set, from 12/08 to 9/19, the post-grant period, 9/16-9/19 and the pre-grant period, 08/13 through 06/16. This water quality data showed an improvement in the health of the KCOL due to this educational grant.

Cost of Educational Program, \$85,000

- Geotechnical Evaluation – Commence 90 Days Following FDEP 4e Approval.

In 2017 we met with retired assistant State Geologist, Dr. Tom Scott, and he recommended we do a ground penetrating radar survey of the lake bottoms to identify paleo sinks and other karst features that might be in the lake bottom. The study was to cost \$35,000. The board never funded this study..

- Supplemental Augmentation – Pending Further Feasibility Study & Board Approval (augmentation would begin when water levels stabilize).

In 2017 and 2018 we explored ways to augment the lake level by pumping groundwater into the lakes as the City of Tallahassee directed. We had meetings with permittees and field trips to the wells, we had the existing wells examined by geotechnical engineers, both wells are inoperable and would need extensive rebuilding. Electrical costs were estimated to exceed \$35,000 per year and Jim Stevenson, the father of spring restoration in Florida said we should never take this water from the qualifier as it would hurt Wakulla Springs. Furthermore, the current Lake Chair, Danielle Irwin, representing the KHA, met with the WMD, concerning augmentation, multiple times this year, to explore the feasibility of Individual or General Permits for pumping, The WMD stated that augmentation would not meet the conditions for permit issuance and that the wells needed to be plugged and abandoned based on their new rules.

Cost of Supplemental Augmentation Program investigation, \$9,000

The 4E-TMDL agreement with the COT cost of the KHA \$260,000.

Sincerely,

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