

CITY OF TALLAHASSEE	
<u>CITY COMMISSION AGENDA ITEM</u>	
ACTION REQUESTED ON:	June 10, 2009
SUBJECT/TITLE:	Approval to Participate in Regional Study of Management Alternatives For Nitrate Load Associated with Septic Tanks.
TARGET ISSUE:	N/A

STATEMENT OF ISSUE

This item requests City Commission approval to participate with Leon and Wakulla counties in funding Phase I of a study to evaluate how to better manage the nitrate discharging from thousands of septic tanks in the Wakulla Springs recharge basin. When complete the multi-phase study will provide an assessment of management alternatives and associated costs along with functional capabilities and economic analyses. Depending on the management alternatives, if warranted, a financial plan and draft rate structure may be developed. The goals of Phase I of the study will be to assess existing data and prior research, identify the treatment systems and management options, and through a preliminary assessment, narrow a subset of options to be evaluated in greater detail in Phase II. The complete feasibility study will provide specific alternatives for elected officials to consider for implementation, either collectively as a region or on a coordinated local basis. Each of the three governments will contribute \$20,000 for Phase I of the study. It is anticipated that most, if not all, of Phase II will be grant funded. It is also probable the completed study and resultant decisions will play a role in the Basin Action Management Plan (BMAP) process associated with TMDLs for Lake Munson and Wakulla Springs.

RECOMMENDED ACTION

Option 1: Approve participation in Phase I of a regional OSTDS Alternatives and Management Feasibility Study and authorize funding in the amount of \$20,000 available in Wastewater Project No. 09057.

FISCAL IMPACT

The total funding required for the study (\$20,000) is available in Wastewater Project No. 09057.

 Mike Tadros, General Manager
 Underground Utilities

 Anita Favors Thompson
 City Manager

For information, please contact: John Buss, Water Resources Engineering, 891-6852

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SUPPLEMENTAL MATERIAL/ISSUE ANALYSIS

HISTORY/FACTS & ISSUES

1. Wakulla Springs, a natural resource of great ecological and recreational value, is suffering from decline due to excess nitrate loading in the spring recharge basin or springshed. Because the Wakulla Springshed is regional, the long-term success of restoration efforts for the Wakulla Springs will require coordinated regional efforts.
2. In May 2005, a Hydrogeology Conference was held to explore what the science could explain about the nitrate problem at Wakulla Springs. The science pointed at a couple of major sources of nitrate loading. One of these was the City of Tallahassee treated wastewater reuse spray field. A second major source identified was the cumulative discharge of thousands of septic tanks (On-site Treatment Disposal Systems or OSTDS) within the Wakulla Springshed. Following the 2005 conference the City of Tallahassee developed and funded a major capital improvement plan to address the spray field source. Those improvements are now underway, so the next major challenge to improve the health of Wakulla Springs is better management of the distributed nitrate load from septic tanks.
3. In February 2009, a follow-up regional conference was held on the Wakulla Springs nitrate problem. The science presented at this conference confirmed that septic tanks are likely the next largest nitrogen contributor to the Wakulla problem. The presentations also suggested that better management of both the installation as well as the ongoing operation and maintenance of OSTDS of all types, would be needed to abate this problem. One of the consensus recommendations of the conference was that a feasibility study be done to present alternative methods of implementing a program for better management of OSTDS.
4. The previous January the City Commission approved an Inter-local Memorandum of Understanding committing to work cooperatively with Leon County and Wakulla County to protect the shared regional Wakulla Springshed water resources. Among other commitments was an agreement to build upon recommendations derived from the February Wakulla Springs Restoration Conference.
5. The goal of the recommended feasibility study would be to develop specific alternatives for elected officials to consider for implementation, either collectively as a region or on a coordinated local basis. The alternatives developed would have to consider our local economic, social, and environmental conditions as well as our political and government structures. The core of the multi-phase study would be an assessment of alternatives and associated costs, functional capabilities, economic analyses, and, depending on the

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management alternatives considered, potentially a financial plan including structure.

6. It is anticipated that most of the study can be funded through grants; however, some initial work is needed to build the foundation to enable that to happen. A regional collaboration needs to be demonstrated and goals and potential alternatives narrowed. For this reason, it is proposed that the feasibility study be implemented in two separate phases.
7. Phase I is proposed to be funded jointly by the City and Leon and Wakulla counties. The goals for Phase I will be to assess existing data and prior research, identify the treatment systems and management options, and through a preliminary assessment, narrow a subset of options to be evaluated in greater detail in Phase II.
8. Phase II of the feasibility study will be more complex and detailed and accordingly will be more expensive; on the order of \$200,000 - \$300,000. Again, it is hoped that Phase II can be funded from grants based upon the investment and findings from Phase I. The complete study will likely include steps such as:
 1. A summary review of previous reports, studies, recommendations, maps, inventories and current practices. The objective being to identify, and where practical, fill informational data gaps that are needed for decision making.
 2. Descriptive outline of various service levels for alternative management structures and their respective effectiveness at addressing the on-site system nitrate-loading problem.
 3. Evaluation of alternatives for effective, efficient and equitable finance mechanisms. This would include:
 - a. Evaluation of affordability and ability and willingness of the customer base to pay in accordance with the necessary fee structure.
 - b. Evaluation of economic sustainability with particular attention to the initial and lifetime O&M and Replacement costs.
 - c. Fee collection authority and collection mechanisms.
 4. Evaluation of impact on existing local on-site system service companies and how they might be integrated into one or more of the alternatives.

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CHARITABLE CONTRIBUTIONS

N/A-This item seeks Commission approval to participate and cooperatively fund a feasibility study with Leon and Wakulla County. Charitable contribution preferences are not applicable.

OPTIONS

Option 1: Approve participation in Phase I of a regional OSTDS Alternatives and Management Feasibility Study and authorize funding in the amount of \$20,000 available in Wastewater Project No. 09057.

Option 2: Do not approve participation or funding and provide alternative direction.

ATTACHMENTS/REFERENCES

Wakulla Springshed Regional Partnership Memorandum of Understanding

**Wakulla Springshed Regional Partnership
Memorandum of Understanding**

WHEREAS, the Wakulla Springshed is a rich and bountiful ground water system that supplies drinking water to the region;

WHEREAS, the Wakulla Springshed contains unique ecosystems that are dependent upon sustaining a natural balance of dissolved chemicals in both the ground and surface water (nutrients in particular);

WHEREAS, the Wakulla Springshed provides sustained economic benefits to the region through human enjoyment of the natural springs and spring fed river that issue forth to the surface from this precious ground water system;

WHEREAS, the Wakulla Springshed includes natural wonders such as Wakulla Springs, the Leon Sinks Cave System and a vast network of navigable underwater caves unsurpassed in the United States;

WHEREAS, the Wakulla Springshed exhibits porous and rapid surface-to-ground water drainage south of the Cody Scarp and direct conduits to the ground water through surface drainage to lakes north of the Scarp;

WHEREAS, the Wakulla Springshed is easily polluted by land use changes and the associated human activities including wastewater disposal, stormwater management and fertilization practices that alter the natural balance of chemicals in the surface and ground waters;

WHEREAS, the degradation of water quality in the Wakulla Springshed has been documented to include increasing levels of nutrients and increasing algal and aquatic plant growth;

WHEREAS, this degradation of water quality in the Wakulla Springshed has been of concern for some time, and has been documented in numerous reports, including the May 2005 Peer Review Committee report on the workshop entitled, "Solving Water Pollution Problems in the Wakulla Springshed of North Florida";

WHEREAS, at the April 2003 meeting of affected local governments and interests the parties continued to express concern about pollution problems in the springshed and the stated need to consider joint efforts and solutions;

WHEREAS, it is in the best interest of Wakulla County, Leon County and the City of Tallahassee to protect our shared regional Wakulla Springshed water resources;

Therefore we agree to participate in the following inter-local efforts:

- To work cooperatively to investigate and consider methods to limit nutrient pollution inputs to surface and ground waters within the Wakulla Springshed;
- To work cooperatively to investigate and consider methods to lessen pollution inputs from both existing and new wastewater disposal systems;
- To work cooperatively to investigate and consider methods to explore the development of either a common regional entity or coordinated and consistently structured local entities to address management of the numerous septic systems in our area;
- To work cooperatively to identify and deploy the stormwater collections, management systems, and best management practices that reduce the generation of pollutants that enter stormwater.
- To allocate staff to jointly review and consider the recommendations derived from the February 25-26, 2009 Wakulla Springs Restoration Workshop and return with recommendations on appropriate follow-up actions by each respective government; and,
- To build upon the recommendations derived from the February 25-26, 2009 Wakulla Springs Restoration Workshop and jointly pursue regional, state and federal funding opportunities to further these recommendations.

I agree to the aforementioned statements and strategies	Date
City of Tallahassee <u>Deborah A. Lightsey</u>	<u>2-26-09</u>
Leon County <u>Bob Roubicek</u>	<u>2-26-09</u>
Wakulla County <u>[Signature]</u>	<u>2-26-09</u>