

SALES TAX PROJECTS

Project Number: 39

Project Name: Alternative Sewer Solutions: Creating Comprehensive Wastewater Management for Leon County Unincorporated Area

Total Project Cost: \$2,800,000

Total Project Cost Notes

This project consists of three components, which are listed below:

Part I: Wastewater Management Plan and Execution (\$2.8 million)

Part II: Wastewater Treatment Facilities Plan Execution (\$50 million – \$62.2 million)

Part III: Connection Assistance Funding for existing Sewer (\$2.0 million)

Executive Project Summary:

This project involves developing alternative methods of domestic wastewater treatment and disposal, rather than on-site sewage treatment and disposal systems (septic tanks) or connection to the City of Tallahassee central sewer system. Implementation of cluster disposal systems or package treatment and disposal facilities requires modification to the Tallahassee/Leon County Comprehensive Plan as directed by the Board of County Commissioners.

Actions Taken by the Committee:

March 28, 2013: Moved the project to a second round for consideration.

April 26, 2013: Moved the project to Priority Level 1.

June 13, 2013: Moved to only fund Part 1 of this project (Wastewater Management Plan and Execution Study), reducing the project cost from \$67 million to \$2.8 million, and placed into Project #49 Water Quality/Stormwater Funding for funding consideration.

Themes

- | | |
|---|---|
| <input type="checkbox"/> Regional Mobility/Transportation | <input checked="" type="checkbox"/> Economic Vitality |
| <input type="checkbox"/> Sense of Community | <input type="checkbox"/> Ecotourism/Parks |
| <input checked="" type="checkbox"/> Environmental/Water Quality | <input type="checkbox"/> Vertical Infrastructure |
| <input type="checkbox"/> Connectivity | <input type="checkbox"/> Gateways |

Detail Project Description

On November 29, 2012, the Water Resources Committee (WRC) and the Wakulla Springs Alliance presented options on the alternatives to central sewer to the Committee. Subsequently, Robert Scanlon, the Chair of the WRC distributed a project proposal to the Committee for consideration. In the January 31, 2013 letter, Mr. Scanlon notes that the document has not been approved by the entire WRC but that the proposed project does represent a restatement of the previous presentation to the Committee. This project consists of three components, which are listed below:

Part I: Wastewater Management Plan and Execution (\$2.8 million)

Part II: Wastewater Treatment Facilities Plan Execution (\$50 million – \$62.2 million)

Part III: Connection Assistance Funding for existing Sewer (\$2.0 million)

Note: During the Leon County Board of County Commissioner's January 29, 2013 workshop on "Septic System Management Options," the Board provided the following direction to staff, which was ratified by the Board on during the February 12, 2013 meeting:

1. Direct staff to continue to pursue proposed sales tax extension project #10, Woodville Water Quality.
2. Direct staff to bring back a proposed amendment of the Code of Laws to establish an Advanced Wastewater Treatment nitrogen standard for new construction within the PSPZ, with means for managing those systems not on central sewer.
3. Direct staff to remain actively engaged in the BMAP process for the Upper Wakulla River and support

further sampling to identify sources' relative nitrate loads, particularly from Inflow north of the Cody Scarp and at the state line, the scope of which will be established as part of the BMAP process.

4. Direct staff to include \$50,000 in funding in the FY 2013/14 budget for the Leon County Health Department to complete an inventory of all septic systems within Leon County, in coordination with TLC-GIS.
5. Direct staff to take no action at this time to institute a county-wide level 4 or 5 RME or Wastewater/Nutrient Management Utility.
6. Direct staff to pursue an amendment of the Code of Laws to require a county-wide 24-inch separation, between the bottom of the drainfield and wettest season water table, for the repair of failing septic systems.
7. Direct staff to initiate a Comprehensive Plan amendment in the 2014-1 cycle which maintains the goal of spring protection, but removes the technical specificity by which this can be achieved with respect to wastewater treatment.

In addition, on March 12, 2013, the Board approved modifications to amend the 2030 Sewer Masterplan, which deletes the requirement to include the additional area west of the Woodville Rural Community. The Board's priority/focus has been the development of the Woodville Rural Community node as a vibrant economic center. Central sewer is a key factor to allow the crucial density to occur. This area has been designated in the City's Sewer Masterplan for decades for connection to its system. The Woodville Urban Fringe area, due to its more rural character, has not historically been included in the Masterplan, and staff recommends that the City not be required to amend its Masterplan to include this more rural area. The removal of the request to amend the Sewer Masterplan to include the Woodville Urban Fringe area is consistent with all of the Board's actions to date. The Sales Tax Project #10 had three components, flood study, Woodville Rural Node Sewer, Woodville Urban Fringe Sewer. The project description is consistent with the approach being recommended in this agenda item to remove the urban fringe area from the City's 2030 Sewer Masterplan: provide central sewer to the Rural Community node and allow other AWT alternatives to be considered for the urban fringe area. This project can be found on page 36 of the Leon County Proposed Sales Tax Projects booklet.

Cost By Themes

	Regional Mobility/Transportation
	Sense of Community
\$2,800,000	Environmental/Water Quality
	Connectivity
	Economic Vitality
	Ecotourism/Parks
	Vertical Infrastructure
	Gateways

Previous Project Information for:

Project #39
**Alternative Sewer Solutions: Creating
Comprehensive Wastewater Management for
Leon County Unincorporated Area (Nitrogen
Reduction and Infill Development)**

Note: Based on direction from the Committee at the March 28, 2013 Sales Tax Committee meeting, below is a list of previous project(s) that were merged or modified to create a holistic project for the Committee's consideration.

Project Name: Alternative Sewer Solutions (*Previously Project #43*)

Proposed Sales Tax Projects by the Community

Project Name: Alternative Sewer Solutions (Project #43)

Project Themes:

- | | |
|---|---|
| <input type="checkbox"/> Regional Mobility/Transportation | <input checked="" type="checkbox"/> Economic Vitality |
| <input type="checkbox"/> Sense of Community | <input type="checkbox"/> Ecotourism/Parks |
| <input checked="" type="checkbox"/> Water Quality | <input type="checkbox"/> Vertical Infrastructure |
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Description of Alternative Sewer Solutions:

Cluster Disposal Systems:

Cluster systems are where the discharge sewage from several individual homes is piped to a single larger septic tank and drainfield located separately from the homeowners' property. The septic tank and drainfield are sized to accommodate the number of homes connected. The goal would be to have economies of scale for several connected systems in order to provide a higher level of nitrogen treatment. While many studies are underway, there is currently no septic system that has been certified by the Department of Health to meet the 3mg/l treatment standard for nitrogen. Due to property acquisition and other concerns, cluster systems are not considered a good retrofit option, but could be considered for new development where the land for the common tank/drainfield can be designed into the overall layout of the development.

Package Treatment and Disposal Facilities:

Package plants are small centralized sewer systems where the sizing is customized specifically for a development or a small area. These plants are permitted by either the Department of Health or Florida Department of Environmental Protection depending on the capacity. The plants tend to have a small footprint, are capable of treating to advanced wastewater treatment (3 mg/l nitrogen) standards. They must be actively managed and maintained to achieve the required treatment levels.

Water Resources Committee:

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- Part I: Wastewater Management Plan and Execution (\$2.8 million)
- Part II: Wastewater Treatment Facilities Plan Execution (\$50 million – \$62.2 million)
- Part III: Connection Assistance Funding for existing Sewer (\$2.0 million)

Note: During the Leon County Board of County Commissioner's January 29, 2013 workshop on "Septic System Management Options," the Board provided the following direction to staff, which was ratified by the Board on during the February 12, 2013 meeting:

Project #43: Alternatives to Central Sewer

Page 2

1. *Direct staff to continue to pursue proposed sales tax extension project #10, Woodville Water Quality.*
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7. *Direct staff to initiate a Comprehensive Plan amendment in the 2014-1 cycle which maintains the goal of spring protection, but removes the technical specificity by which this can be achieved with respect to wastewater treatment.*

In addition, on March 12, 2013, the Board approved modifications to amend the 2030 Sewer Masterplan, which deletes the requirement to include the additional area west of the Woodville Rural Community. The Board's priority/focus has been the development of the Woodville Rural Community node as a vibrant economic center. Central sewer is a key factor to allow the crucial density to occur. This area has been designated in the City's Sewer Masterplan for decades for connection to its system. The Woodville Urban Fringe area, due to its more rural character, has not historically been included in the Masterplan, and staff recommends that the City not be required to amend its Masterplan to include this more rural area. The removal of the request to amend the Sewer Masterplan to include the Woodville Urban Fringe area is consistent with all of the Board's actions to date. The Sales Tax Project #10 had three components, flood study, Woodville Rural Node Sewer, Woodville Urban Fringe Sewer. The project description is consistent with the approach being recommended in this agenda item to remove the urban fringe area from the City's 2030 Sewer Masterplan: provide central sewer to the Rural Community node and allow other AWT alternatives to be considered for the urban fringe area. This project can be found on page 36 of the Leon County Proposed Sales Tax Projects booklet.

Project Map:

N/A

January 31, 2013

Dear Members of the Leon County Sales Tax Committee:

The Leon County Water Resources Committee would like to thank you for allowing us to present a wastewater management and facility project for your consideration to be part of the next sales tax project list.

Due to time constraints, this specific document has not been reviewed and approved by the entire Water Resources Committee. It does however, represent a restatement of our previous presentation to you and the County Commission, the contents of which were reviewed and approved by the committee. We apologize for not being able to present you with a fully vetted document at this time. We hope that this will suffice for your discussions.

Sincerely,

Robert Scanlon
Chair, Leon County Water Resources Committee

Attachments:

1. Evaluation of County sewer proposals
2. Summary slide presented at the Sales Tax Committee
3. Summary slides presented at the County Commission workshop

Proposal: **Creating Comprehensive Wastewater Management for Leon County Unincorporated Area: Nitrogen Reduction and Infill Development**

Summary:

Cost	Component
\$2.8 M	Part I: Wastewater Management Plan and Execution
	Part II: Wastewater Treatment Facilities Plan Execution
\$2.2 M	Demonstration Cluster Facility
\$50-60 M	Other facilities for retrofit and urban infill
\$2.0 M	Part III: Connection Assistance Funding for existing Sewer

Part I: Wastewater Management Plan and Execution

Cost: \$2,800,000

This component starts with a study to determine the scope, responsibilities and funding for a Responsible Management Entity (RME) that would be tailored to the specific needs of the unincorporated portion of Leon County that is not served by a sewer utility. We have stated priorities as we believe are reflected in the Comprehensive Plan and other County policies.

1. Study options for establishment of a management entity that has characteristics of an EPA Level 4 or 5 of entity including:
 - Scope and Responsibilities
 - Oversight and Administrative Structure
 - Planning and Financing of RME

EPA Level 4 RME holds the permits for facilities, takes responsibility for aspects of operations and maintenance but does not own the facilities.

EPA Level 5 RME is both responsible for the facilities and owner thereof.

2. Adopt preferred options and establish the Responsible Management Entity
3. Establish Regulations following BCC directives for:
 - Wastewater Treatment Standard
 - Requirement for connection to facilities when available
4. Wastewater Treatment Facilities Plan
 - Develop an engineering study for the Primary Springshed Protection Zone (PSPZ) to determine appropriate scale, capacity and location of facilities: sewer, cluster and septic tanks

- Engineering standards for privately built facilities
5. Facilities Financing Plan
 - Facilities and large cost items: grants, sales tax
 - Establish user fees for operations and maintenance policy with specific values to be determined as facilities are built
 6. Woodville Basin Stormwater Treatment and Flood Study
 - Determine the engineering standards for stormwater treatment standards that support the concerns of nitrogen reduction in the PZPS
 - Determine the flooding pattern within the basin to provide information for development permitting and stormwater facilities.

Part II: Wastewater Treatment Facilities Plan Execution

Cost: Demonstration Cluster Facility: \$2,200,000

**Cost: Significant headway on total PSPZ nitrogen reduction and urban infill need:
\$50,000,000 to \$60,000,000**

This component calculates costs based on the estimates provided by the Lombardo Associates report (2011). According to this report, the estimates do not differ significantly among sewer, cluster or septic systems that meet AWT nitrogen treatment standards. The total cost about \$22,000 / unit, retrofit or new regardless of technology used: sewer, cluster or septic systems

At the County Commission workshop presentation we suggested that this large sum of money be divided as follows:

1. **Demonstration cluster facility:**
 - ~100 parcels, in PSPZ, Land Use with greatest potential for economic development and private need for capacity increase. The total cost would be \$2.2M assuming \$22,000 for each parcel served. The actual cost or number of parcels served would depend upon the distribution of capital costs between the builder of the facility and the users.
2. **Other facilities:**
 - residential retrofit or new residential development, approximately \$22,000 per unit (residential or commercial)
 - \$50,000,000 to \$60,000,000 for

The Lombardo report estimates the entire cost of meeting the TMDL for Wakulla Springs will, most likely, require AWT nitrogen standards for all wastewater systems in the PSPZ. This requires substantial retrofit of the approximate 7800 septic tanks, the vast majority of which are in Leon County. The total cost was estimated to be \$221 million.

Therefore, the Water Resources Committee proposes that a large amount of money be provided to make significant headway in the reduction of the nitrogen contribution

through the use of sewer, cluster and retrofit of septic tanks (as allowed by State law). In review of the County Sales Tax Projects that included four sewer projects, we indicated the importance of balancing nitrogen reduction, existing land use, future development potential and the capacity of wastewater facilities. The table we used to summarize our review is attached.

Part III: Connection Assistance Funding

Cost: \$2,000,000

This fund is for assistance to connecting owners to existing sewer in both the City of Tallahassee of in the unincorporated area. The form of the assistance, e.g. loan, grant, etc. is to be determined.

The connection costs for new facilities or extension of COT sewer is included in the project costs of the Wastewater Treatment Facilities Plan. The actual total cost of these projects or the capacity of the facilities will depend upon how the capital costs are shared. Connection costs for new development are the responsibility of the owners.