

SALES TAX PROJECTS

Project Number: 43 A&B

Project Name: Alternatives to Central Sewer in Harbinwood Estates: Decentralized Cluster System

Total Project Cost: \$29,300,000

Total Project Cost Notes

Two alternatives to Central Sewer in Harbinwood have been proposed. Only one will be funded, therefore the more expensive cost is shown as the project total.

A: \$14,100,000 - Estimated costs include property acquisition and piping, pumps etc. for a cluster septic system with appropriately designed drainfields

B: \$29,300,000 - The project cost includes land acquisition design permitting construction of a centralized sewer collection system, Advanced Wastewater Treatment Plant (AWT) plant with a irrigation effluent disposal. This project is an alternative to connecting the neighborhood to the City's central sewer system.

Executive Project Summary:

A.) Use of cluster septic tank disposal sites within Harbinwood Estates Subdivision instead of connection to City central sewer. (\$14.1 million). This project is for the construction of a decentralized cluster system of new drainfields within the Harbinwood Community to enhance the treatment of the domestic waste. This project is an alternative to connecting the residents to the City's central sewer system.

Or

B.) Sanitary Sewer Construction to new wastewater treatment plant in Harbinwood Estates Subdivision instead of connection to City central sewer (\$29.3 million). This project would replace approximately 400 substandard septic tanks with a neighborhood centralized gravity collection system routed to a neighborhood AWT plant capable of meeting all current AWT standards including treating the domestic effluent for nitrogen to 3mg/l. The new treatment plant and disposal site would be located within the neighborhood.

Actions Taken by the Committee:

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

April 26, 2013: 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

Project 43A is for the construction of a decentralized cluster system of new drainfields within the Harbinwood Community to enhance the treatment of the domestic waste. This project is an alternative to connecting the residents to the City's central sewer system.

Harbinwood is a 400 lot subdivision consisting of less than 1/2 acres lots. Construction of a decentralized cluster system meeting the appropriate treatment standards is estimated to require the acquisition of approximately 35 lots (homes) to provide sufficient land area for the enhanced drainfields with a reasonable loading rate for the clay soils. Mounded systems are likely given the high water table.

Retrofitting to route clusters of homes to a common drainfield would require effluent pumps, piping etc.

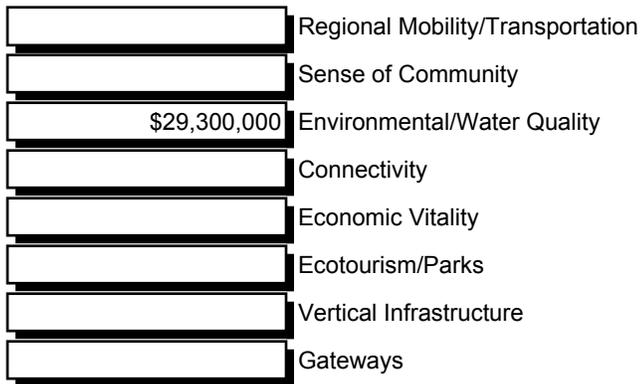
Provision of functioning drainfields would improve water quality of Lake Jackson with the reduction of fecal coliform and nitrogen loading to the surface water of the lake. This alternative does not provide AWT treatment as there are currently no State approved septic systems that are certified to meet AWT standards.

The estimated cost of this cluster system project for property acquisition, design, permitting and construction is \$14.1 million.

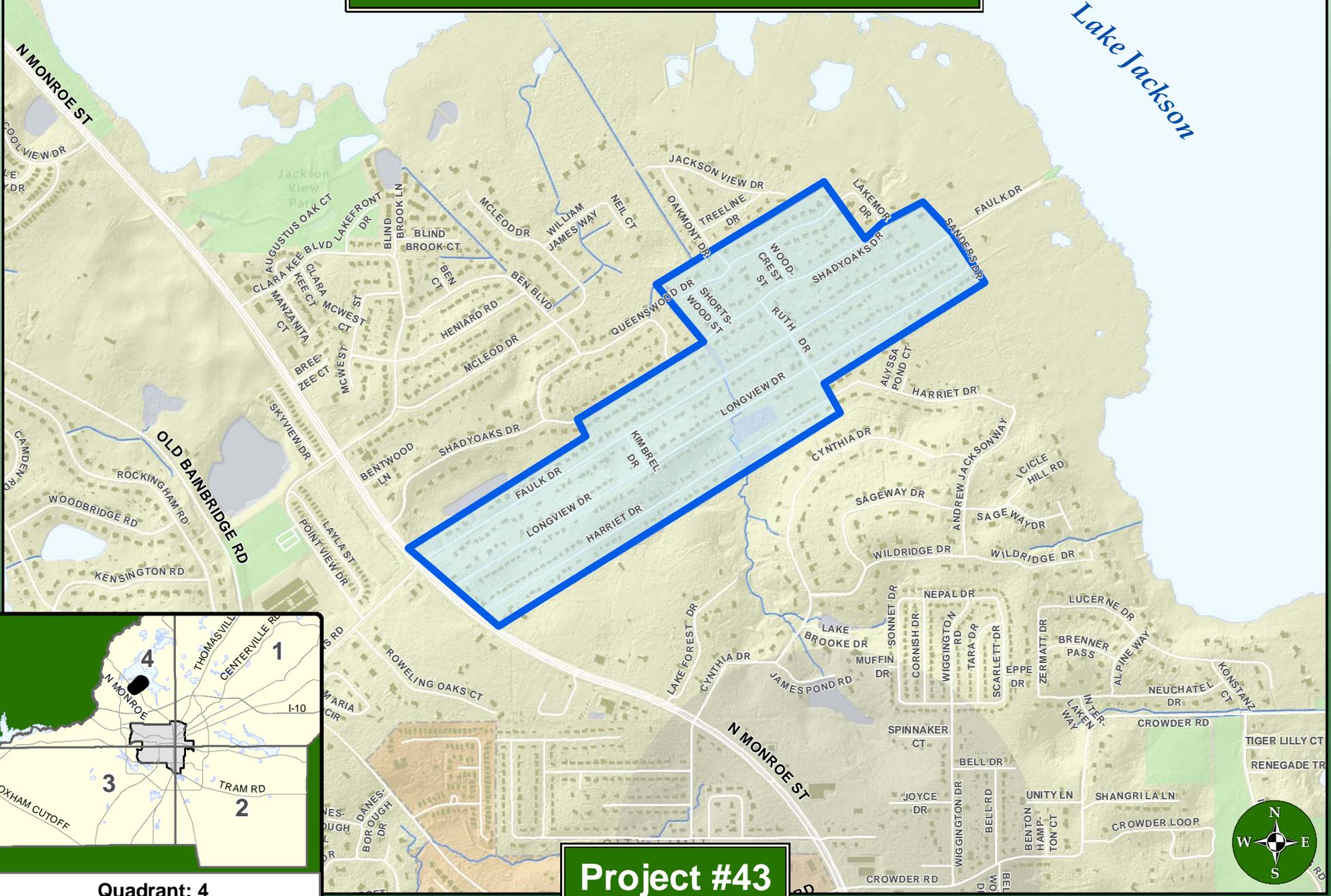
Project 43B consists of land acquisition for both the drainfield and treatment plant which is estimated at 37 lots. The plant and drainfield must be located outside of the Special Development Zones. Construction of a centralized collection system, a advanced wastewater treatment plant with odor control and capable of producing effluent with a nitrogen concentration of 3mg/l or less, a drip irrigation system disposal system.

Project would remove either by treatment or physical removal 400 non functioning septic systems and improve the water quality of Lake Jackson with the decrease in nitrogen loading.

Cost By Themes



Alternatives to Central Sewer in Harbinwood Estates



Project #43



Previous Project Information for:

Project #43
Alternatives to Central Sewer in Harbinwood
Estates:
A - Decentralized Cluster System
B - Advanced Wastewater Treatment Plan

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: Harbinwood Estates: Alternatives to Central Sewer (*Previously Project #44*)

Proposed Sales Tax Projects by the Community

Project Name: Harbinwood Estates: Alternatives to Central Sewer (Project #44)

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 |
| <input type="checkbox"/> Connectivity | <input type="checkbox"/> Gateways |

Project Description:

This project involves developing alternative methods of domestic wastewater treatment and disposal for the built-out neighborhood of Harbinwood Estates. 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.

Harbinwood is located in close proximity to the City of Tallahassee's sewer collection system. This neighborhood has sufficient density for consideration to be connected to the city's system and is included in the City Master Sewer Plan. While, developing this project, three other alternatives were considered: sewer cluster systems, package plants, and connection to Talquin Tower Road sewer plant. However, these alternatives are not recommended by staff for several reasons which are discussed below.

Cluster system: Retrofitting an existing neighborhood for a cluster system would create significant adverse neighborhood impacts. Due to low soils with low percolation rates in this neighborhood, it is estimated that approximately 35 lots would need to be acquired to provide sufficient drainfield area for improved treatment. This would displace a large number of residents and the projected cost is higher than connection to the city's system.

Package Plant: Constructing a sewer package plant in Harbinwood proposes similar issues to the cluster system. However, this alternative would require more land to construct the plant. In addition, the sewer package plant could not be located near Lake Jackson.

Connection to the Talquin Tower Road Plan: Constructing a large force main several miles long would be necessary to connect to the existing Talquin plant on Tower Road. The capacity at this plant would need to be greatly increased in order to service Harbinwood. In addition, Talquin's sprayfield at this plant would need to be expanded in an adjacent vacant subdivision which would need to be acquired.

Project Map:

