



Jeb Bush
Governor

M. Rony François, M.D., M.S.P.H., Ph.D.
Secretary

February 21, 2006

Mr. Richard Deadman
Division of Community Planning
Department of Community Affairs
2555 Shumard Oak Blvd
Tallahassee, FL 32399-2100

Dear Mr. Deadman:

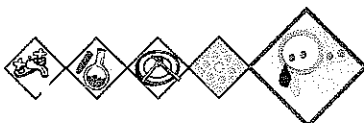
Your office requested that we obtain price quotes to assess the costs of installing nitrogen reduction technology relative to conventional systems for the Department of Community Affairs' Wakulla Interagency Workgroup. In December of 2005, Dr. Roeder contacted installers, distributors, and manufacturers and requested quotes. Three companies responded in written form. The two lower quotes, both from local installers, are included in this letter. This document does not represent or imply an endorsement or approval of any particular company, person, product or technology, nor a guarantee or affirmation that any particular treatment results will be achieved. The field of advanced wastewater treatment for onsite systems is undergoing rapid change.

The estimates were based on a new three-bedroom house in the Crawfordville (Wakulla County) Area, with a design daily flow of 300 gallons, and assumed that access, horizontal setback distances, authorized flow etc. could be met. Prices for the installation of two types of systems are provided:

- Conventional systems as a point of comparison;
- Performance-based treatment systems that meet advanced secondary wastewater treatment standards (CBOD₅=10/TSS=10/TN=20/TP=10), and a stricter nitrogen standard of TN=10 mg/L. Up to 30% reduction in drainfield size was allowed (F.A.C. 64E-6.028 (3)(j)), provided that surge storage requirements were met.

Given the variable soil conditions in Wakulla County, the prices considered three soil scenarios:

- Leon series (sand) with SHWT 5" below ground surface and a spodic layer at 18-38" below ground surface. Without a soil replacement, the drainfield bottom will be at 24" above ground. The drainfield area, assuming slightly limited material, will be 300 sqft.
- Shadeville series (sandy clay loam) with SHWT 42" below ground surface and limestone 45" below ground surface. The bottom of drainfield will be at 3" below ground surface. The drainfield area, assuming moderately limiting material, will be 462 sqft.



Division of Environmental Health, Bureau of Onsite Sewage Programs
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- Ortega series (fine sand) with SHWT at 42". The bottom of the drainfield can be at 18" below ground surface and the drainfield area will be 334 sqft.


The price information is summarized in the following table. Dr. Roeder's request specified that the responses should include materials, labor and equipment, permitting and the maintenance agreement for the first two years. The companies that provided this information were, in alphabetical order (equipment manufacturer in parentheses): Apalachee Backhoe and Septic Tank (Hoot) and Talquin Septic (Biomicrobics)

	drainfield bottom elevation relative to ground surface	conventional drainfield area (sqft)	PBTS-cost (advanced secondary TN=10 mg/L)	conventional system cost
dosed system (low-pressure or drip irrigation)	24" above	300	\$11,275(drip) \$11,350 (low pressure)	\$8,150 (drip) \$7,850 (low pressure)
dosed system (low-pressure or drip irrigation)	3" below	462	\$10,875 (drip) \$8,800 (low pressure)	\$6,000 (drip) \$5,300 (low pressure)
dosed system (low-pressure or drip irrigation)	18" below	334	\$10,575 (drip) \$7,060 (low pressure)	\$3,800 (drip) \$3,560 (low pressure)
gravity system	18" below	334	\$7,253 \$5,375	\$2,100 \$1,875

The contractors responding indicated that prices could be decreased by 5-25 percent if multiple lots were permitted and installed at the same time. Additional savings could be obtained by clustering houses onto a central system. Some older systems meeting current setbacks from surface water and separation from the seasonal high water table could possibly be retrofitted with a treatment unit to provide nitrogen reduction.

If you have questions please contact Dr. Roeder at 850-245-4070.

Sincerely,


Gerald R. Briggs
Chief, Bureau of Onsite Sewage Programs

GRB/er