Department of Health Update

Wekiva River Basin Commission

October 16, 2007

Wekiva Parkway and Protection Act

CHAPTER 2004-384

(2) The Department of Health, in coordination with the Department of Environmental Protection, shall study the efficacy and applicability of onsite disposal system standards needed to achieve nitrogen reductions protective of groundwater quality within the Wekiva Study Area including publicly owned lands and report to the Governor and the Department of Community Affairs no later than December 1, 2004. Based on the December 2004 report, the Department of Health shall, if appropriate, by March 1, 2005, initiate rulemaking to achieve nitrogen reductions protective of water quality or recommend legislation for any additional statutory authority needed to implement the report recommendations. The study shall consider:

(a) For new developments within the Wekiva Study Area and any existing development within the Wekiva River Protection Area using onsite disposal systems, a more stringent level of wastewater treatment, including, but not limited to, the use of multiple tanks to combine aerobic and anaerobic treatment to reduce the level of nitrates.

(b) The implementation of a septic tank maintenance and inspection program which includes upgrading certain onsite disposal systems permitted prior to 1982 to meet minimum Department of Health standards; replacement of failing systems and systems not meeting current standards; and providing funding mechanisms for supporting a septic tank inspection and maintenance program.

Recommendations
DOH Wekiva Study Report
December 2004

- A discharge limit of 10 milligrams per Liter for all systems in primary and secondary protection zones.
- Engineer-designed performance based treatment systems utilizing drip irrigation drainfields.
- Prohibition of land-spreading of septage in study area.
- Existing systems be upgraded to the new standard when they fail or require modification.
- Establishment of a maintenance program using regional management entities.

2004 DOH Report

Even with the added costs of nutrient removal technologies, onsite sewage treatment systems remain a viable option for wastewater disposal. In areas where development densities are low, the overall costs of onsite sewage treatment and disposal systems are less than sewering. Onsite sewage treatment and disposal systems can provide protection of the environment and the public health comparable to central sewer.

2006 Appropriation DOH Proviso:

From the funds in Specific Appropriation 566, $250,000 in non-recurring tobacco settlement funds are provided to the Department of Health to conduct or contract for a study to further identify and quantify the nitrogen loading from onsite wastewater treatment systems (OWTS) within the Wekiva Study Area. The objectives of the study shall be determined by the department's Research Review and Advisory Committee, which shall also have oversight of the study. The department shall provide a report to the Executive Office of the Governor, President of the Senate, and the Speaker of the House of Representatives no later than June 30, 2007. The report shall assess whether OWTS are a significant source of nitrogen to the underlying groundwater relative to other sources and shall recommend a range of possible cost-effective OWTS nitrogen reduction strategies if contributions are significant.

Nitrogen Impact of Onsite Sewage Treatment and Disposal Systems in the Wekiva Study Area
June 2007

The first task collected field data from groundwater around drainfields from three sites in the area. This task found high concentrations of nitrogen stemming from all three systems and a higher nitrogen input into the environment than expected (29 vs. 20 pounds per system per year) based on previous DOH research. Groundwater monitoring showed that nitrogen movement from onsite systems in the environment is complex. Relying only on the soil for treatment is not a reliable method to achieve load reductions.

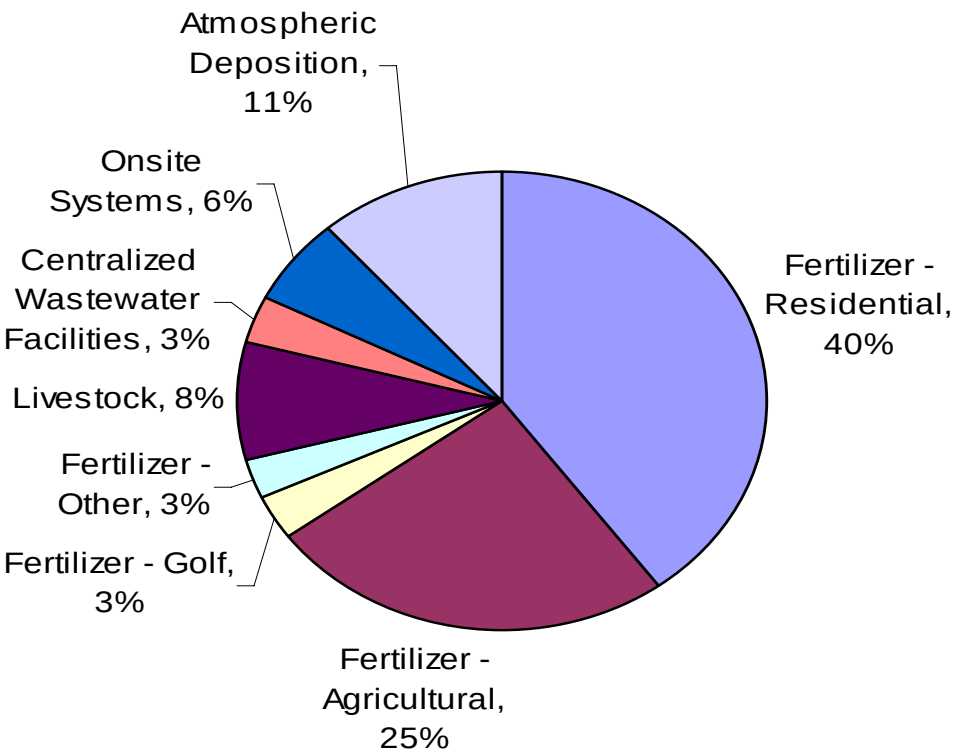
Nitrogen Impact of Onsite Sewage Treatment and Disposal Systems in the Wekiva Study Area
June 2007

A second task reviewed applicable literature to refine the loading estimate to the groundwater from onsite systems. This task developed a classification system to incorporate the influence of soil conditions and wastewater characteristics on nitrogen loading to the groundwater. The study resulted in a range of estimated percentages of nitrogen removal as a function of soil characteristics and system type. The results were generally consistent with the assumptions of the Florida Department of Environmental Protection (FDEP) March, 2007, Phase 1 Report Wekiva River Basin Nitrate Sourcing Study prepared by MACTEC.

Nitrogen Impact of Onsite Sewage Treatment and Disposal Systems in the Wekiva Study Area
June 2007

The third task was to determine whether onsite systems are a significant source of nitrogen to groundwater relative to other sources. This determination utilized data from the second task and the MACTEC study to estimate inputs to the environment and loading to groundwater from all sources of nitrogen in the area. Fertilizer use accounted for 71 percent of all inputs. Inputs to the environment from onsite systems were estimated to be 6 percent of the total input. This was based on an assumption of 20 pounds of nitrogen per year for 55,000 systems or a total of 1.1 million pounds per year. Based on this input the total estimated amount of nitrogen from onsite sewage treatment and disposal systems that is loaded to the groundwater is about 900,000 pounds per year. MACTEC's approach to estimating loading to groundwater resulted in an increased fraction of wastewater and a decreased fraction of fertilizer. Due to uncertainty and disagreements about this approach, RRAC recommended to the department that an assessment of loading contributions by all sources not be included in this report

Nitrogen Inputs by Source
DOH WSA Report
June 2007



Nitrogen Impact of Onsite Sewage Treatment and Disposal Systems in the Wekiva Study Area
June 2007

RRAC did not make a final decision on whether the OSTDS are a significant source of nitrogen load to the groundwater because the committee is uncomfortable with the methodologies and assumptions used in the calculations of the MACTEC loading numbers. RRAC decided that verification of the loading contribution from other sources by FDEP was necessary before any decision can be made relative to the significance of the nitrogen contribution from onsite systems in the WSA, and what, if any, cost-effective strategies the committee would endorse.

Nitrogen Impact of Onsite Sewage Treatment and Disposal Systems in the Wekiva Study Area
June 2007

The U.S. Environmental Protection Agency has established the goal of a 95% reduction in nitrogen concentrations for Wekiwa Springs and for Rock Springs Run. Additionally, the Saint Johns River Water Management District has proposed an 82% reduction for Wekiwa Springs, an 85% reduction for Rock Springs, a 69% reduction in the upper Wekiva River, and a 36% reduction for the Lower Wekiva River. Realizing that these established reduction goals present a challenge to all contributors the department finds that all contributors must work toward addressing their share of the problem. The contribution of onsite systems to nitrogen inputs to the Wekiva Study Area provides a starting point to determine this share.

DOH WSA Report Recommendations
June 2007

The Legislature should consider implementing a nitrogen discharge fee for all sources to fund the most cost-effective nitrogen reduction projects in the Wekiva Study Area to be administered by the Wekiva River Basin Coordinating Committee or other suitable agency.

DOH WSA Report Recommendations
June 2007

The Legislature should consider implementing an onsite wastewater management utility (EPA Model 4) in which operation, maintenance, and inspection of systems are the responsibility of a responsible maintenance entity instead of the individual homeowner. A portion of the funds collected should be used to assist with upgrades of onsite systems or connection to a wastewater treatment facility.

Otherwise, require an operating permit for all onsite systems and require all onsite systems be inspected every five years and during real estate transactions. Use a portion of the operating permit fee to fund a grant program to assist low income homeowners with upgrades or sewer connection fees. The department will provide a legislative proposal for the 2008 session.

DOH WSA Report Recommendations
June 2007

The Legislature should consider eliminating grandfather provisions in 381.0065, Florida Statutes, with regard to minimum lot sizes and surface water setbacks. The department will provide a legislative proposal for the 2008 session.

The department should amend Chapter 64E-6, Florida Administrative Code, to require all systems in need of repair or modification be upgraded to new system water table separation and surface water setback standards.

DOH WSA Report Recommendations
June 2007

The department should require that all new onsite systems in the Wekiva Study Area be performance based treatment systems providing nitrogen reduction pretreatment.

The department and local governments should create an inventory of all onsite systems in the Wekiva Study Area that can be maintained in cooperation between county health departments and county property appraisers.

DOH WSA Report Recommendations
June 2007

The department should prohibit the land spreading of septage and grease trap waste in the study area. Septage waste would be required to be disposed of at wastewater treatment plants permitted by the Florida Department of Environmental Protection.

The department recommends that state and local planning agencies evaluate the economic feasibility of sewering areas with existing onsite sewage treatment and disposal systems. Areas with high densities of development will be better suited to central sewering.

Proposed Rule Language
64E-6.0162 Specific Standards for the WSA

The following standards shall apply to all systems in the Wekiva Study Area as defined in 369.316, F.S.

(a) Except in areas scheduled, by an adopted local wastewater facility plan, to be served by a central sewage facility by January 1, 2011, all new systems shall be an engineer-designed performance-based treatment system providing nitrogen reduction. The systems shall provide at discharge from the treatment units a nitrogen reduction of 70 percent or a limit of 10 milligrams per liter. No increase in authorized flow allowances in 381.0065(4)(a), (b), or (g) or reductions in surface water setbacks in 381.0065(4)(e) or (l) shall be allowed. All systems shall use drip irrigation or low-pressure dosing.

Proposed Rule Language
64E-6.0162 Specific Standards for the WSA

(b) All existing systems requiring repair, modification or re-approval must meet a 24 inch separation from the wet season water table and surface water setbacks in 381.0065(4)(e) or (l), unless a variance has previously been granted by the State Health Office. All treatment receptacles must be within one size of current requirements in Table II and must be tested for water tightness by a state licensed septic tank contractor or plumber.

Proposed Rule Language
64E-6.0162 Specific Standards for the WSA

(c) All systems shall be inspected and pumped out by a state licensed septic tank contractor or plumber every five years. Upon completion of the inspection the contractor shall complete Form DH 4015 page 1 – 4, and submit the application for approval to the department with a $35 fee. A copy shall also be provided to the owner. The department shall review the application and approve the system for continued use or notify the owner of the requirement for a repair permit. The department shall be responsible for notification and enforcement of the inspection requirement. Initial notifications shall be phased in over a five year period beginning July 1, 2008.

Proposed Rule Language

64E-6.010 SEPTAGE AND FOOD ESTABLISHMENT SLUDGE

The land application area shall not be within the Wekiva Study Area as defined in 369.316, F.S.