Board of County Commissioners
Workshop Item

Date of Meeting:	May 12, 2009
Date Submitted:	May 4, 2009
To:	Honorable Chairman and Members of the Board
From:	Parwez Alam, County Administrator Vince Long, Deputy County Administrator Alan Rosenzweig, Assistant County Administrator Kim Dressel, Senior Assistant to the County Administrator David McDevitt, Growth and Environmental Management Director Tony Park, Public Works Director Homer Rice, Health Department Administrator Wayne Tedder, Planning Director
Subject:	Additional Information Regarding On-Site Sewage Disposal Systems and Establishment of Standards within the Primary Springs Protection Zone Consistent with the Comprehensive Plan

Statement of Issue:
This workshop item addresses questions the Board raised during the March 19, 2009 Public Hearing, on proposed amendments to Section 18, Article III, of the Leon County Code of Laws, establishing standards within the Primary Springs Protection Zone requiring the use of performance-based treatment systems (PBTS) designed to reduce the level of nitrogen in the effluent.

Background:

The Board held a workshop on January 23, 2007 to review information regarding the elevated nutrient levels in Wakulla Springs and a report of the recommendations of the Septic System Advisory Committee (SSAC) with respect to the use of nutrient reduction onsite sewage treatment and disposal systems (OSTDS) proposed for use in the environmentally sensitive aquifer recharge area below the Cody Scarp (the "Primary Springs Protection Zone" (PSPZ)). During the workshop, the Board accepted the report and the following recommendations of the SSAC:

1. For all new OSTDS proposed for use within the PSPZ, require the use of OSTDS that are National Sanitation Foundation (NSF) certified to produce 10 milligrams per liter (mg/L) nitrogen at the outlet of the system tank in conjunction with drip irrigation drainfield. Attachment # 1 depicts the PSPZ adopted on March 19, 2009.

2. Require U.S. Environmental Protection Agency (EPA) Model 3 or higher management

program for new OSTDS installed within the PSPZ.

Additionally, the Board directed staff to: (a) reconvene and work with the SSAC to draft language amending Chapter 18, Article III, Leon County Code of Laws, incorporating the Committee's recommendations and utilizing findings of the Leon Aquifer Vulnerability Assessment (LAVA) that was being performed; (b) look at the pros and cons of creating a utility for septic systems within the PSPZ; and (c) report on funding opportunities to address the replacement of existing systems in this area. The Board ratified the actions it had taken at the January 2007 workshop on February 27, 2007. The primary purpose of the LAVA project was to provide a science-based, water-resource management tool to help minimize adverse impacts on ground-water quality, including focused protection of sensitive areas like springsheds and groundwater recharge zones.

During the February 27, 2007 meeting, the Board additionally considered recommendations from the Woodville Recharge Basin Aquifer Protection Study, and took the following actions: (a) accepted the Woodville Recharge Basin Aquifer Protection Study; (b) directed the SSAC to consider the recommendations in the Woodville Recharge Basin Aquifer Protection Study when drafting language to amend the code regarding nutrient reduction onsite sewage treatment and disposal systems; (c) directed staff to explore all potential grant funding possibilities for analysis, design, and construction of a central sewer system for the Woodville area; (d) directed staff to monitor the modifications being made in the State stormwater rules for protection of the aquifer (karst) and, if the state does not pass this rule, directed staff to draft a separate ordinance to implement new stormwater standards to protect the aquifer in the Woodville Recharge Basin; and (e) directed staff to explore all potential grant funding for acquiring the St. Marks Rise, Natural Wells, and Verdura Plantation properties.

On October 9, 2007, the Board held a workshop on the LAVA Model, during which it accepted the LAVA Model and Final Report; confirmed the Evaluation and Appraisal Report (EAR) based amendments related to the model; and directed staff to identify federal funding sources for nitrogen reducing septic tanks. The finished output for the LAVA project consists of a probability map displaying zones of relative aquifer vulnerability across the Leon County study area (Attachment #2). Additionally, the Board directed staff to investigate federal funding sources to convert septic tanks to central sewer in already developed areas, but not to assist in the development of areas that are relatively undeveloped. The Board ratified the actions it had taken during the October 2007 workshop on November 27, 2007.

On April 10, 2008, Wakulla County was the host for a joint workshop with the Wakulla County Board of County Commissioners, Leon County Board of County Commissioners and the City of Tallahassee City Commission to discuss the coordination of measures to protect Wakulla Springs. The workshop was held at the Wakulla Springs Lodge. A joint presentation was provided by the Wakulla County Planning Department and the Tallahassee-Leon County Planning Department on past studies and current and proposed springs protection policies and practices. After the presentation, the floor was open for the Commissioners and the public to ask questions or make comments.

Comprehensive Plan Amendment Policies 1.2.6 [SS] and 4.2.5 [C] (PCT080117) (reprinted below) were adopted on January 7, 2009 and became effective on April 10, 2009. The Policies' provisions are consistent with February 2008 guidance provided by the Department of Community Affairs' (DCA) "Protecting Florida's Springs: An Implementation Guidebook."

Policy 1.2.6: [SS] *(Effective 4/10/09)*

Within the Primary Springs Protection Zone, as identified in Policy 4.2.5 [C], Performance Based On-Site Treatment Disposal Systems shall be required when connection to sewer facilities designed to achieve Advanced Wastewater Treatment standards is not available. Performance Based on-Site Treatment Disposal Systems must be a design that is certified and/or tested by the National Sanitation Foundation (NSF) Standard 245 to demonstrate no more than 10 milligrams per liter (mg/L) Nitrogen at the outlet of the final treatment chamber or reduces the effluent Nitrogen concentration by a minimum of seventy (70%). Performance based systems shall comply with the applicable standards in Part IV, ch. 64E-6, F.A.C.

Policy 4.2.5: [C] *(Effective 4/10/09)*

By 2010, local government shall adopt in the Land Development Regulations a mapped Primary Spring Protection Zone (PSPZ) for Wakulla Springs based on the Leon County Aquifer Vulnerability Assessment (LAVA). Land development regulations shall be adopted to establish additional requirements and regulations within the PSPZ to minimize the adverse impacts of development on groundwater recharge quality and quantity. At a minimum, local government shall address the items below:

(1) **The preferred method of wastewater treatment in the PSPZ within the Woodville Rural Community and the USA shall be connection to *sewer facilities designed to achieve Advanced Wastewater Treatment standards.** Land development regulations and the Water and Sewer Agreement shall be amended to include enhanced requirements for new development and redevelopment to connect to Advanced Wastewater Treatment facilities. **The costs of required sewer connections in the PSPZ shall be borne in part or in whole by the developer.**

(2) **When connection to sewer facilities designed to achieve Advanced Wastewater Treatment standards is not available, new development and redevelopment in the PSPZ shall use Performance Based On-Site Treatment Disposal Systems (OSTDS) as defined in Policy 1.2.6: [SS]. Existing traditional OSTDS shall be upgraded to Performance Based OSTDS when the traditional OSTDS **fails, as defined in the Florida Administrative Code. A process providing alternatives to upgrading to a Performance Based OSTDS at the time of traditional OSTDS failure may be developed for low-income households. To ensure that all existing traditional OSTDS and new Performance Based OSTDS function effectively, local government shall designate or institute a ***Responsible Management Entity and supporting fee structure.**

(3) New development and redevelopment in the PSPZ shall use a Low Impact Development approach, in addition to conventional water quality treatment infrastructure required outside the PSPZ, to minimize adverse impacts of development on water quality and Wakulla Springs. Land development regulations shall specify the mechanism for implementing the Low Impact Development planning and design approach.

(4) Establish a transfer of development units system within the PSPZ to foster growth in Woodville Rural Community, increase the feasibility of providing centralized sewer service, and protect Wakulla Springs. The transfer of development units system shall be based on the policies below:

(A) The Rural and Urban Fringe Future Land Use Map categories inside the PSPZ shall be designated as the sending areas to transfer dwelling units out of. Expansion of the Urban Fringe Future Land Use Map category shall not be allowed in the PSPZ.
(B) Areas inside the Woodville Rural Community Future Land Use Map category, where connection to sewer facilities designed to achieve Wastewater Treatment standards is available and required, shall be designated to receive dwelling units.
(C) No net increase in dwelling units, as allowed by the Future Land Use Map on the effective date of this policy, shall be allowed in the PSPZ. Areas inside the USA are exempt from this policy and may increase in allowed density when consistent with applicable Comprehensive Plan policies. Approval of a Future Land Use Map amendment outside the USA that would allow an increased number of dwelling units shall require appropriate documentation that rights to the number of increased dwelling units have been, or are committed by a legally binding agreement to be, acquired from the designated sending areas.

(5) The Urban Fringe clustering provision provided in Policy 2.2.2: [L] shall not be allowed within the PSPZ. Urban Fringe areas in the PSPZ may develop at one dwelling unit per three acres or as a Conservation Subdivision.

(6) **Restrict fertilizer content and application rates within the PSPZ.**

(7) Protection of environmentally sensitive areas and features within the PSPZ shall be a priority.

*Note: Under the May 10, 2005 Water and Sewer Agreement (Attachment #3), entered into by the Leon County and the City of Tallahassee, the City was granted the water and sewer franchise for all of Leon County, except where there were existing water or sewer franchises previously granted or where there were active applications for water or sewer franchises prior to the date that the Water and Sewer Agreement was executed. The Water and Sewer Agreement provides criteria for the service of new development within Leon County based on the distance of the new development from existing City utility systems. If the development is beyond these distances, the City is not required to serve the property. When a proposed development is outside of the areas which the City is obligated to serve, Section 8 of the Water and Sewer Agreement, the County may revoke the franchise for the geographic area in question and grant water and/or sewer franchises to other providers.

**Note: The Florida Administrative Code (Chapter 64-E) defines “failure” as a condition existing within an onsite sewage treatment and disposal system which prohibits the system from functioning in a sanitary manner and which results in the discharge of untreated or partially treated wastewater onto ground surface, into surface water, into ground water, or which results in the failure of building plumbing to discharge properly.

***Note: The Comprehensive Plan defines a Responsible Management Entity (RME) as, “A legal entity that has the technical, managerial, and financial capacity to ensure viable long-term, cost-effective, centralized management, operation, and maintenance of decentralized wastewater systems in accordance with appropriate regulations and generally accepted accounting principles. Viability is defined as the capacity of a responsible management entity to provide adequate technical, managerial, and financial resources to protect the public health and the environment consistently, in perpetuity, and at a minimal cost to taxpayers.”

On January 29, 2009, the Board approved the Wakulla Springshed Regional Partnership Memorandum of Understanding (MOU); authorized the Board designee to sign the MOU on the behalf of the Board of County Commissioners; and approved a request from the 1000 Friends of Florida to co-sponsor the 2009 Wakulla Springs Restoration Workshop held on February 25 – 26, 2009. The Wakulla Springshed Regional Partnership MOU was signed on the last day of the workshop, February 26, 2009.

The first of two public hearings on a proposed ordinance amending Section 18, Article III, of the Leon County Code of Laws, consistent with the Comprehensive Plan, was conducted on February 12, 2009. The Board continued a second public hearing on the proposed ordinance, scheduled for March 19, 2009, and requested a workshop that addressed: (1) organization of an advisory committee, including citizens and people in the profession, to serve an advisory role to the County's efforts; (2) funding that may be available to assist citizens with the costs associated with the proposed ordinance; (3) an update on Senate Bill 274; (4) what the County would need to do to pass a fertilizer ordinance; (5) whether the County should own and operate a utility rather than each homeowner being responsible for OSTDS; (6) setting up a test of the performance-based treatment systems and how such systems may perform under different conditions; (7) what is the contribution of cows and what actions may be taken to reduce that impact; (8) how the County might institute a septic system inspection program; and (9) consideration of what it would take to build a sewer system for Woodville, or a larger area, and how to finance it.

The proposed ordinance, set for its second public hearing on March 19, 2009 (Attachment #4) provided in part that, within the PSPZ:

1. PBTS are required for new development, system modifications, or to replace failing systems. The PBTS is required to be certified by the National Sanitation Foundation (NSF) or an equivalent American National Standards Institute (ANSI) accredited independent third party testing and certification organization in accordance with NSF/ANSI Standard 245. The average effluent quality of the PBTS shall be no more than 10 milligrams per liter (mg/L) Total Nitrogen at the outlet of the final treatment chamber or reduces the effluent Total Nitrogen concentration by a minimum of seventy percent (70%). PBTS shall comply with the applicable standards of ch. 64E-6, F.A.C. PBTS shall be used in conjunction with a drip irrigation drainfield, and shall be used by:

    a. Existing residential, multi-family, commercial establishments and industrial manufacturing zoned properties or its equivalent served by an OSTDS, "…where the OSTDS fails to function in a sanitary manner or which results in the discharge of untreated or partially treated wastewater onto the ground surface, into the surface water, into ground water, or which results in the failure of the building plumbing to discharge properly…";
    b. Newly created and existing undeveloped lots or parcels, where a central sewer system is not available; and
    c. Existing properties "…served by an OSTDS which requires modification as specified

in ch. 64-E-6001(f), F.A.C…"

These standards do not apply to a separate laundry waste system serving a single family home washing machine.

2. Property owners of a single family residence where an OSTDS requiring repair may request an exemption from the above standard when the single family residence is the property owner's primary residence and the owner resides on the premises; the property owner can demonstrate the household income is at or below 80% of the current Florida Housing Finance Corporation Income Limits Schedule; and the market value of the home, as determined by the Leon County Property Appraiser, is at or below the current value threshold as specified in the current Local Housing Assistance Plan. *The repair, however, shall be brought into full compliance with new OSTDS construction standards with respect to drainfield sizing and water table separation.

   *Note: Property owners who meet the exemption guidelines are only exempt from the requirement to install a PBTS when their traditional OSTDS fails; they are not exempt from the requirement to bring their OSTDS into full compliance with the new OSTDS construction standards regarding drainfield sizing and water table separation when their system is repaired. The cost difference would be negligible unless the property owner has to elevate the system to a 24" separation from the water table. The number of OSTDS within the PSPZ that do not currently meet drainfied sizing and water table separation is not known.

Analysis:

The following analysis focuses on questions which were raised during the March 19, 2009 Board meeting and two requirements of the Comprehensive Plan: (1) the requirements related to PBTS within the PSPZ when central sewer is not available, and (2) the restriction of fertilizer content and application rates in the PSPZ. Topics addressed include:

1. Why the proposed PBTS ordinance focused geographically on the PSPZ;
2. Nitrogen Loads to the landscape within the unconfined areas of Leon County and the Wakulla Springs contributory area, and actions taken thus far to mitigate those loads;
3. A proposed fertilizer ordinance to further reduce nitrogen loads to the Floridan Aquifer and Wakulla Springs;
4. The impact cattle grazing had on Nitrogen Loads within the unconfined areas of Leon County and the Wakulla Springs contributory area; actions taken thus far to mitigate those loads; and Best Management Practices instituted by the Florida Department of Agriculture and Consumer Services;
5. Highlights and status of Senate Bill 274 (Florida Springs Protection Act);
6. Wastewater Treatment Technologies, the estimated cost to bring central sewer to the Woodville area, Munson area and the remainder of the PSPZ, and cost models prepared by

the U. S. Environmental Protection Agency;

7. PBTS, including how well PBTS perform relative to the reduction of nitrogen, consideration of instituting a County PBTS performance test, recommendations for seeking an addendum to the Comprehensive Plan to modify PBTS performance requirements, cost comparisons with traditional OSTDS, and the estimated cost to institute a County loan program for homeowners who replace a failing traditional OSTDS with a PBTS in the PSPZ;
8. Management and inspections of OSTDS, including consideration of instituting a County inspection program for OSTDS within the PSPZ;
9. The estimated number of households that would be exempt from the draft ordinance scheduled for Public Hearing on March 19, 2009;
10. An analysis of funding assistance;
11. Advisory Committees; and
12. A brief summary.

<u>1. Woodville Karst Plain – Primary Recharge Area for Wakulla Springs and Vulnerable to Pollution</u> - Speakers asked, during the March 19, 2009 Board meeting, why the proposed ordinance focused geographically on portions of southern Leon County. Cody Scarp, an ancient shoreline formed during a period of higher sea level, runs east to west and separates the Hawthorn Group of fine to medium grained sandy clays and silty, clayey sands of the Red Hills Region of north Florida and southwest Georgia to the north from the fine to medium fine grained, partially recrystallized, silty to sandy limestones of the Gulf Coastal Lowlands to the south. The Floridan Aquifer underlies Leon County and within different parts of the County the aquifer is considered confined, semi-confined, or unconfined.

(a) Confined - Portions of western Leon County are considered confined; within these areas the Floridan Aquifer is held under pressure by the overlying clay-rich, low-permeability deposits.
(b) Semi-Confined – In northern Leon County, above the Cody Scarp, the clay beds may be less effective in inhibiting vertical water movement over large areas, and the Floridan Aquifer is considered to be under semi-confined conditions. Within these areas, the Floridan Aquifer is overlain but not confined by low-permeability sediments.
(c) Unconfined - The landscape south Cody Scarp is known as the Woodville Karst Plain, where the limestone aquifer is shallow, exposed in many places, and where the Floridan Aquifer is considered to be under "unconfined" conditions. Within this area there is little to no resistance to the vertical movement of water into and from the aquifer. *This is the PSPZ - the primary recharge area for Wakulla Spring, a zone of high sinkhole activity, and where the aquifer is most vulnerable to pollution on the land surface.*

According to the 2002 Northwest Florida Water Management District's report, "Nitrate Loading As An Indicator of Nonpoint Source Pollution in the Lower St. Marks-Wakulla Rivers Watershed", prepared by Angela Chelette and Thomas R. Pratt of the NWFWMD and Brian Katz, of the U.S. Geological Survey (the "April 2002 NFWMD Report"), the nitrate concentrations in Floridan

Aquifer groundwaters beneath the seminconfined portion of Leon County have been constant or slightly increasing over the past 20 years. That implies that the flux of nitrate from the semiconfined Floridan Aquifer into the unconfined Floridan Aquifer (along the Cody Scarp) has been relatively constant over this period. *The April 2002 NFWMD Report concluded the increase in nitrate output from Wakulla Springs over the past 25 years is largely attributable to inputs that have occurred south of the Cody Scarp(i.e., within the PSPZ).*

2. Nitrogen Source Inventory – The April 2002 NFWMD Report quantified inputs of nitrogen to the landscape of Leon and Wakulla counties, and estimated nitrogen loads to the Wakulla Springs contributory area. Table 1 summarizes the following from the April 2002 NFWMD Report (additional details are provided in Attachment #5):

(a) The nitrogen loads contributed to the landscape (but not necessarily to the Floridan Aquifer) within unconfined portions of Leon County (i.e., within the PSPZ). It is important to recognize that application of nitrogen to the landscape is not the same as its introduction to the Floridan Aquifer; only part of the nitrogen introduced to the landscape eventually reaches the aquifer.

(b) The nitrogen loads to the Wakulla Springs Contributory area, which is an area bounded on the north by Cody Scarp and on the east, south and west by a line that defines the downgradient limit of the Wakulla Springs "contributory zone." This is the aquifer volume thought to contribute and/or convey ground water to the spring.

Of note, the Comprehensive Plan relates to some of these sources, specifically OSTDS and fertilizer. With actions being taken by the City relative to its Wastewater Treatment Facilities, major sources of nitrogen loads to the Wakulla Springs from Leon County are being addressed with the following exceptions: on-site disposal systems (septic tanks), and sinking streams (stormwater runoff). During the January 29, 2009 Board workshop to address flooding, the Board directed staff to develop volume control regulations. These volume control regulations will further reduce nitrogen levels to Wakulla Springs. An additional contributor is fertilizer spread in areas not identified by the April 2002 NFWMD Report, due to the limitations of available data.

[1] Table 1 – Estimated Annual Nitrogen Loading

Source	Notes/Status	Nitrogen Loading to the Landscape – From Leon County Unconfined Areas		[2] 10-Year Avg. Nitrogen Loads to Wakulla Springs Contributory Area (Leon & Wakulla, 1990-1999)	
		Kg-N	%	Kg-N	%
[3] Wastewater Treatment Facilities (WWTF) Effluent	The City's 12/06 settlement agreement requires the City's investment of $160+ million to overhaul two WWTFs, reducing the flow of nutrients into Wakulla Springs by 75% and significantly improving the quality of reuse water. A City presentation, at the 2/09 Wakulla Springs Restoration Workshop, stated the City has committed $220 million to such efforts and its sewer rates will increase by 50%. The Advanced WWTF is being designed to reduce nitrogen to no more than 3 mg/L and the City has stopped the spreading of residuals.	326,000	63%	360,000	55%
WWTF Residuals		78,000	15%	130,000	20%
OSTDS	The April 2002 NFWMD Report estimated 4,290 OSTDS in unconfined areas of Leon County, with an average size household of 2.34 persons generating 4.2 Kg-N/person/year.	42,000	8%	56,000	9%
Commercial Fertilizer	The City's Southeast Sprayfield (SESF) is the only area designated "pasture and cropland" in the unconfined portion of Leon County. As part of its settlement agreement, the City discontinued its application of fertilizer at the SESF in June, 2006.	44,000	9%	60,000	9%
Sinking Streams	Munson Slough was identified in the April 2002 NFWMD Report as the only significant sinking stream in the Leon County unconfined area. Much of the water conveyed south through Munson Slough is stormwater runoff originating from the southern portion of the City.	13,600	3%	33,000	5%
Livestock	The SESF is the only area designated "pasture and cropland" in the unconfined portion of Leon County. The City discontinued its cattle grazing at the SESF in June, 2006.	10,000	2%	14,000	2%
Total		513,600	100%	653,000	100%

[1] Source: April 2002 NFWMD Report. Nitrogen loads from atmospheric deposits have not been included in the table as it is not specifically a local source and will require a fundamental change in our national technical infrastructure to resolve (the burning of fossil fuels is the primary human activity that effects atmospheric nitrogen). Additionally, a large percentage of nitrogen from this source is taken up by plants or otherwise lost, so that little, if any, enters the aquifer ("Degradation of Water Quality at Wakulla Springs, Florida: Assessment and Recommendations").
[2] The aquifer volume thought to contribute and/or convey ground water to Wakulla Springs.
[3] The City of Tallahassee's average sewer rate is $6.81/1,000 gallons, plus a fixed Readiness-To-Serve (RTS) charge, which costs the average dwelling $21.34/month. For a customer outside the City discharging 5,100 gallons/month, the monthly bill would be approximately $56.00 including the RTS charge, or $672/year. The City's PowerPoint presentation on the City's Advanced Wastewater Treatment Program, given during the February 2009 Wakulla Springs Restoration Workshop, stated there would be a "50% Sewer Rate Increase."

3. Fertilizer Ordinance - During the March 19, 2009 Board meeting, the Board asked what it would need to do to pass a fertilizer ordinance. Such an ordinance would implement one of the standards required by the Comprehensive Plan, which requires the County to "Restrict fertilizer content and application rates within the PSPZ." A draft fertilizer ordinance is provided for the Board's consideration (Attachment #6).

The draft fertilizer ordinance is substantively the same as an ordinance the City of Tallahassee adopted on January 28, 2009 (Attachment #7). Several other Florida counties have adopted similar fertilizer ordinances. Prior to its adoption of the ordinance, the City had extensive review meetings. The ordinance was reviewed by several City Departments including Growth Management, Planning, Water Quality and Wastewater, and Water Resources Engineering. On October 27, 2008 their draft ordinance was presented to the Energy and Environment (E & E) Target Issue Committee. In late November 2008, City staff organized a workshop to receive review comments from stakeholders (landscape services professionals) working in the community. Based on comments they received, the landscaping business/industry generally supported the ordinance. Comments by all these entities were addressed culminating in the City's approved ordinance. Adopting an ordinance that is substantively identical to the City's would reduce confusion by the applicators, ease compliance by homeowners and landscape professionals, and be consistent with the Board's direction to consider passage of ordinances consistent with the City's when prudent and in the County's best interest.

The proposed fertilizer ordinance regulates the proper use of fertilizers by any fertilizer applicator within the unincorporated area of the County; provides maximum fertilizer application rates; provides fertilizer free zones and low maintenance zones; requires proper training for the commercial and institutional fertilizer applicators; and will provide for certification of commercial and institutional fertilizer applicators. Training and certification will be provided by the University of Florida/Leon County Cooperative Extension Office. The training material will include, at a minimum, the most current version of the "Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, June 2002" and all of the provisions of the proposed fertilizer ordinance.

Staff recommends application of a fertilizer ordinance throughout the unincorporated area of the County, rather than limiting it to the PSPZ. Excessive nutrients can impair not only Wakulla Springs, but also any surface waters found within the County. Our larger lakes such as Lake Jackson, Lake Iamonia, Lake Lafayette and Lake Munson can benefit as well as our smaller lakes and rivers. The improper use of fertilizers contributes to adverse effects on surface and/or groundwater.

The County is preempted from regulating fertilizer applications on agricultural lands; those properties are regulated by best management practices instituted by the Florida Department of Agriculture and Consumer Services. Preemption is discussed further in this workshop item under the Contribution of Cattle.

Staff's recommendations are consistent with recommendations contained in the December, 2005 report "Degradation of Water Quality at Wakulla Springs Florida: Assessment and Recommendations", which states, "The amounts and types of fertilizer (e.g., slow release only) used in the catchment basin of Wakulla Springs should be limited and regulated through a combination of public education and targeted ordinances." The recommendation applied to the entire catchment

basin, because, "…fertilizer, mobilized by rainwater, can reach the aquifer by percolation in the unconfined portion of the basin or as stormwater from the confined portions."

The proposed fertilizer ordinance has specific limitations on the amount of nitrogen that can be applied at any one time and the amount that can be applied yearly. These limitations are summarized in row "A" in Table 2 below. The shaded areas are the brands and rates that violate the requirements of the draft ordinance; however, by adjusting the application rates, these could remain viable products for use consistent with the draft fertilizer ordinance.

Staff has discussed the potential for regulating the types of fertilizer used through the point of sale; however the County Attorney's office has expressed legal concerns with such a concept. For example, the majority of fertilizer sales occur within City limits; and fertilizer could be bought in the City and applied in the unincorporated area of the County. Implementation would be difficult as well. Instead of point of sale regulation, staff recommends an aggressive public education program to raise awareness of the proper use of fertilizers. If approved, the fertilizer ordinance would be enforced through the Code Enforcement Board.

Table 2 – Fertilizers

Brand Name of Fertilizer	Percentages of Nitrogen, Phosphorous, Potash	Total Pounds (lbs) of Nitrogen per 1,000 square feet	Lbs. of Readily Available Nitrogen per 1,000 square feet	Lbs. of Slow Release Nitrogen per 1,000 square feet
A. Limitations Proposed by the Draft Fertilizer Ordinance		▪ **2 lbs per year for Centipede grass;** ▪ **4 lbs per year for St. Augustine grass; and** ▪ **No more than 1 lb of Nitrogen at any one time**	**0.7 lbs at any one time**	
B. *Contents of Common Fertilizers:				
1. Scotts Bonus S (Weed and Feed)	29-1-10	**3.45**	**1.74**	**1.71**
2. Vigoro All Purpose Fertilizer	10-10-10	**1.50**	**1.50**	0.00
3. Milorganite	5-2-0	0.62	0.06	0.56
4. Lesco Turf Fertilizer	26-2-11	1.00	**0.75**	0.25
5. Scotts Organic Choice	11-2-2	0.80	0.07	0.73
6. Scotts Southern Turf Builder	32-0-10	**2.81**	**1.89**	**0.92**
7. Vigoro Super Green	35-0-5	**1.12**	**0.73**	0.39
8. Vigoro Ultra Turf	29-0-4	0.81	0.63	0.18
9. Lesco Weed & Feed (St. Augustine)	17-0-7	0.78	0.66	0.12
10. Vigoro Weed & Feed (St. Augustine)	29-0-4	0.93	**0.71**	0.22

Note: Shaded areas are fertilizers and application rates that would violate the proposed ordinance limits; however, by adjusting the application rates, these products could be used in compliance with the draft fertilizer ordinance.

Due to the City's extensive reviews and public involvement, staff recommends proceeding forward with the ordinance. The draft ordinance would initially need to be presented joint City/County Planning Commission and then the Board would need to hold a public hearing.

4. Contribution of Cattle - During the March 19, 2009 meeting, the Board asked about the impact cattle have on the nitrogen levels in Wakulla Springs. According to the April 2002 NFWMD Report, the SESF is the only area designated "pasture and cropland" in the unconfined portion of Leon County; livestock contributed approximately 2% of the nitrogen loading to the landscape from Leon County unconfined areas; and livestock in Leon and Wakulla Counties contributed approximately 2% of the nitrogen load to the Wakulla Springs Contributory Area (excluding Atmospheric Depositions). At one time, up to approximately 1,500 cattle grazed at the SESF several months during the year. However, as part of its settlement agreement, the City discontinued cattle grazing at the SESF in June, 2006.

If there are additional ranches not identified by the April 2002 NFWMD Report, the Florida Right to Farm Act (s. 823.14 F.S.), precludes the County from adopting ordinances, regulations, rules or policies to prohibit, restrict, regulate or otherwise limit an activity of a bona fide farm operation on land classified as agricultural land pursuant to s. 193.461 F.S., that is utilizing best-management practices (BMPs) or interim measures issued by the Florida Department of Agriculture and Consumer Services (FDACS), Department of Environmental Protection, or water management districts. FDACS' Office of Agricultural Walter Policy issued a "Water Quality Best Management Practices for Florida Cow/Calf Operations" for state-wide application. If followed, BMPs give ranchers a presumption of compliance with state water quality standards and a release from the provisions of section 376.307(5), Florida Statutes, for those pollutants addressed by the BMPs.

5. Senate Bill (SB) 274 (Florida Springs Protection Act) – SB 274 would have created the Florida Springs Protection Act and designated counties and cities with first or second magnitude springs as spring protection zones – as such, Leon County would have been subject to the requirements of the bill had it become law as the St. Marks River Rise Spring is designated as a first magnitude spring and is located within Leon County (Attachment #8). The springs protection zone area would have encompassed the entire jurisdiction of a county or city. Following is a summary of the bill, relative to OSTDS requirements, and Attachment #9 provides a side-by-side comparison with the proposed County ordinance relative OSTDS and PBTS.

- Densities greater than 640 OSTDS per square mile (equivalent to one acre per system) are required to connect to central sewer. Exemption for connection to central sewer may be waived for PBTS that meet or exceed standards established for OSTDS within the primary springs protection zone.
- New OSTDS (installed after July 1, 2009) cannot release more than 3 mg/L total nitrogen at the owner's property line.
- All OSTDS requiring repair, modification or reapproval must meet a 24-inch water table separation; and the tank must be tested for watertightness.
- Grants are available to low-income property owners in the springs protection zones

(guidelines used appear to be lower than those for exemptions under the proposed County ordinance). The amount of the grant for OSTDS is limited to the cost differential between replacement with a standard and nitrogen-reduction system, not to exceed $5,000 per property or connection to sewer.

- A mandatory statewide OSTDS inspection program is phased in over a 10-year cycle, with every system inspected on a 5-year recurring cycle. Exemptions from inspections based on the density of the dwellings (fewer than one per three acres unless the property abuts an impaired water body) are provided.

SB274 did not have a companion in the House of Representatives. The bill died on the Senate floor. There were several unsuccessful attempts by the bill's sponsor to amend the language onto other bills. It is anticipated that a spring protection bill will be re-introduced in the 2010 session.

6. Wastewater Treatment – The Technology and Costs – Traditionally in Leon County, two alternatives for wastewater treatment have been considered: (1) central sewer or (2) septic tanks that serve a single homeowner. The Comprehensive Plan established connection to sewer facilities designed to achieve Advanced Wastewater Treatment standards as the preferred method of sewage treatment in the PSPZ, within the Woodville Rural Community and the Urban Service Area (USA). This Policy does not promote the use of centralized sewer throughout the PSPZ; it only promotes centralized type systems inside the designated Woodville Rural Community and inside the USA. Currently the Comprehensive Plan does not allow the provision of centralized sewer outside of the USA and designated Rural Communities, except for documented health and environmental issues resulting from existing septic systems and to service specific types of development in the Urban Fringe land use category. The Water and Sewer Agreement grants the City the water and sewer franchise for all of Leon County, except where there were existing water or sewer franchises previously granted, and stipulates if a development is outside of the areas which the City is obligated to serve, the County may revoke the franchise for the geographic area in question and grant water and/or sewer franchises to other providers.

Sewer – The Board directed staff to provide a cost estimate for building a central sewer system for Woodville or for a larger area. In response, staff estimated the cost to construct central sewer in the Woodville Target Area, Lake Munson Target Area, and the balance of the PSPZ (Table 3). The areas are depicted in Attachment #10.

In consideration of developing a sewer service system for the Woodville area, or an expanded PSPZ, a utility provider must be identified:

- The City of Tallahassee can become the utility service provider where sewerage can be connected to the City's sewer system and the City agrees to accept the new sewer system and own and operate it. One issue the City may raise is that it does not usually want to provide sewer service if it is not the water service provider as well. Most of the area in question is served for water by Talquin Electric.

- If isolated small package sewer plants were to be utilized, Talquin Electric may agree to own and operate those systems.
- It should be noted that regardless of the extent of the system that is developed, some properties will remain too isolated for conventional connection, and options such as grinder pumping units, PBTS, or cluster systems may be the most cost-effective option.

Table 3 – Estimated Costs and Debt Service – Central Sewer System

Gravity Sewer System Areas	Homeowners' Costs: On-Site Home-owner Costs (1)	Homeowners' Costs: Annual Sewer Service Charges Per Home (2)	Gravity Sewer System Cost (in millions)	# Lots	Sewer System Cost Per Year Connection (3) 30 Year Term	Est. Total Home-owner Cost 30 Year Term	Annual Debt Service and Voted Millage Rate for the Gravity Sewer System Cost (unincorporated area only) (4): Annual Debt Svs	Annual Debt Service and Voted Millage Rate for the Gravity Sewer System Cost (unincorporated area only) (4): Millage Rate
Woodville Area	$6,500	$672	$30 m	2,150	$908	27,231	$1,951,543	**0.42**
Munson Area	$6,500	$672	$38 m	3,100	$709	21,267	$2,471,955	**0.53**
Balance of PSPZ	$6,500	$672	$45 m	1,359	$2,154	64,620	$2,927,315	**0.63**
Total PSPZ	$6,500	$672	$113 m	6,609	$1,112	33,360	$7,350,812	**1.58**

(1) - Cost to home owner per lot to abandon tank and hook up to sewer system. Financing to be provided by utility.
(2) – Based on current rates: $6.81/1,000 gallons x 5,100 gallons/month + Readiness to Serve @ $21.34/month
(3) - Assumes interest at 5%
(4) – Millage Rate is based on unincorporated valuation only. Assumes the millage rate is applied throughout the unincorporated area. If it were applied only within the PSPZ, the millage rate would need to be adjusted.

For example, it is estimated to cost $30 million to provide central sewer to the Woodville target area (2,150 lots approximately). Financed over 30 years, the annual debt service would be approximately $2 million (0.42 mills). It is estimated than $113 million would be required to bring central sewer to the entire unincorporated portion of the PSPZ. These costs do not consider a $6,500 one-time connection cost to homeowners, or annual sewer rates of approximately $672/year. As a point of quick comparison for the homeowner's cost, excluding the millage increase to cover the debt service, the cost differential between a PBTS and traditional system is about $3,150 and the recurring costs for maintenance is approximately $300 more/year (Table 5). It is important to note that approval by referendum would be required to fund this project by property tax supported debt.

The EPA produced a report in response to Congressional inquiries evaluating the use of on-site wastewater treatment systems as an alternative to the traditional central sewer, "Big Pipe" treatment systems. The EPA's report concludes that "adequately managed decentralized wastewater treatment systems are a cost-effective and long-term option for meeting public health and water quality goals, particularly in less densely populated areas." In many areas of the County, development is dependent on OSTDS due to the cost and time frames to install central sewer. As the Florida

Department of Health noted, in rural areas and low-density developments central sewer is not cost effective. Additionally, the EPA has demonstrated that misapplying an infrastructure model, such as attempting to regionalize low-density areas, or install onsite systems in urban areas, is not cost effective (U.S.EPA, 1997).

The EPA estimated the cost for providing sewer and alternate wastewater treatment technologies to a model "rural" and "fringe" community (Attachment #11). EPA's model terms "rural" and "fringe" community were used for illustrative purposes and do not equate with the County's land use planning terms. The cost for providing central sewer to EPA's model rural community was far more expensive than the cost for bringing small cluster systems or on-site systems to the community (the cost of the small cluster systems and onsite systems to single homes were comparable).

The Comprehensive Plan allows the construction of cluster systems; it has been at the developer's discretion as to whether they choose on-site cluster systems or on-site systems that serve single homes. Cluster systems are more feasible with new developments, rather than incorporating them through the retrofit for existing homes, as a treatment center must be developed for each cluster. A modification to Chapter 18, Article III, Leon County Code of Laws with performance standards for on-site cluster systems, relative to health, safety, water quality, and nitrogen reduction comparable with those standards for PBTS may be considered.

7. Performance-Based Treatment Systems (PBTS) – The April 2002 NFWMD Report estimated there were 4,290 OSTDS within Leon County's PSPZ, producing approximately 42,000 Kg of nitrogen per year (this estimate used an average household size of 2.34 persons, generating 4.2 Kg of nitrogen/person/year).

Staff estimates there are 6,640 OSTDS within the PSPZ (Table 7) generating 65,000 Kg (143,000 pounds) of nitrogen per year, 55% more than the April 2002 NFWMD Report's estimate.

Requirements and NSF Standards – When a PBTS is required under the draft ordinance, the PBTS must be certified by the National Sanitation Foundation (NSF) Standard 245 and (a) demonstrate no more than 10 milligrams per liter (mg/L) of total at the outlet of the final treatment chamber, or (b) demonstrate a reduction of total nitrogen (from the influent to the effluent) of no less than 70%. The PBTS performance requirements in the draft ordinance are consistent with the PBTS performance requirements in the Comprehensive Plan. Passive technologies that achieve these performance standards are allowed under the Comprehensive Plan and draft ordinance when those systems become available.

American National Standards (ANSI) exist for a wide range of products, providing for a method of test and associated criteria of demonstrated product compliance. NSF is accredited by ANSI to develop and publish American National Standards. NSF 245 was developed for residential wastewater treatment systems designed to provide for nitrogen reduction. The evaluation involves six months of performance testing, incorporating stress tests to simulate wash day, working parent, power outage, and vacation conditions. The standard is set up to evaluate systems having rated

capacities between 400 gallons and 1500 gallons per day. Technologies testing against NSF 245 must either be NSF 40 certified or be evaluated against NSF 40 at the same time an evaluation is being carried out for Standard 245, as both tests can be run concurrently (NSF 40 is NSF's standard residential wastewater treatment systems). Systems that are NSF 245 certified are also NSF 40 certified (NSF 245 adds the additional requirement for nitrogen reduction). A copy of the PBTS systems that are currently NSF 245 certified is provided in Attachment #12.

Performance of Locally Available PBTS - A presenter at the February, 2009 Wakulla Springs Workshop identified the following locally available PBTS providers:

- Southern Precast, Inc. (Moutrie, GA) and Brooks Concrete, Inc. (Panacea, FL) make precast concrete, Norweco and Bio-Microbics' FAST systems; and
- Averett Septic Tank, Inc (Lakeland, FL) makes the HOOT system.

Table 4 summarizes nitrogen reduction test results staff obtained from NSF for the NSF 245 certified systems offered by Norweco, Bio-Microbics and HOOT (Attachment #12 provides the NSF 245 Executive Summary for each of these systems).

Table 4 – Locally Available PBTS NSF 245 Certified Systems

		NSF 245 Evaluation – Total Nitrogen		
Company	**System**	**Influent Average Total Nitrogen**	**Effluent Average Total Nitrogen**	**% Total Nitrogen Reduction**
Bio-Microbics	MicroFast .5	38 mg/L	17 mg/L	55%
HOOT	*ANR-450	38 mg/L	5.8 mg/L	85%
Norweco	Singulair TNT 500	38 mg/L	12 mg/L	68%
Comprehensive Plan/Draft Ordinance Requirements			**No more than 10 mg/L, or**	**No less than 70%**

The NSF 245 test results (Table 4 above) shows that the HOOT ANR-450 is the only locally-available PBTS system that meets the Comprehensive Plan/draft ordinance standards. The HOOT representative advised staff that its ANR system is carbon loaded and costs approximately $2,000 - $3,000 more than HOOT's BNR system and costs more a year to maintain (he estimated maintenance for the ANR system at $600/year). HOOT's BNR system is NSF 40 certified and achieves a 50% reduction in total nitrogen, which does not meet the Comprehensive Plan and draft ordinance requirements.

Attachment #13 provides PBTS nitrogen reduction test results reported to the Florida Department of Health. The average total nitrogen in the influent was 35.73 mg/L and the average total nitrogen in the effluent was 12.19 mg/L (an average reduction of 66%). While these are reportedly 3rd party test results, they are not NSF standard results. Standard OSTDS effluent contains 36 – 45 mg/L of nitrogen (possibly increasing to 60 mg/L), according a January 11, 2007 Florida Wastewater Summit

presentation by Dr. Roeder, Bureau of Onsite Sewage Programs, Florida Department of Health. For a point of comparison, using the midpoint of 40.5 mg/L of nitrogen in the effluent of traditional OSTDS, the average of 12.19 mg/L of nitrogen in PBTS effluent represents a 70% increase in nitrogen reduction over the standard OSTDS.

While test results indicate PBTS reduce nitrogen far better than traditional OSTDS, NSF tested PBTS are not performing as well as required by the Comprehensive Plan or the draft ordinance (with the exception of the HOOT ANR-450 which is a more expensive to install and operate than standard residential PBTS).

The draft ordinance scheduled for public hearing on March 19, 2009 requires drip irrigation in addition to PBTS. In drip irrigation systems, the wastewater is discharged through a network of tubes typically located about 6 inches below the surface. Effluent is applied at a controlled rate through uniformly spaced drip emitters in the vegetation root zone, which minimizes percolation through the subsoil. Evapotranspiration is enhanced as water evaporates from soil and plants, which transfers the nitrogen to the atmosphere rather than to the subsurface water table.

The HOOT representative told staff that he has been advised that drip irrigation provides nitrogen uptake of 50% to 100%, depending upon the type of grass/ground cover over the drip irrigation field. Additionally, he advised that drip irrigation is less expensive to install than a standard drainfield (noting that drip tubing costs approximately $0.25/square foot and material for a standard drainfield costs approximately $1.50/square foot), and that water distributed to the roots through drip irrigation does not get released into the aquifer as would occur with a standard drainfield. Both the HOOT and Norweco representatives recommended the County reduce its nitrogen standards and continue the requirement for use of drip irrigations systems for additional nitrogen reduction.

Local PBTS Testing – At the Board's request, staff obtained a cost estimate for a local PBTS performance test. An eight-site test, of approximately 36-weeks in duration, was estimated to cost approximately $60,000. This cost estimate does not include the installation of PBTS system and assumes existing residential sites would be used with no payment to candidate site owners.

Cost Comparisons - PBTS cost approximately $3,150 more to install, and approximately $222 - $372 more/year to maintain than a traditional OSTDS (Table 5).

Table 5 – PBTS and Standard OSTDS Comparison Summary				
System	***Installation (one-time cost)**	**Est. Annual Operating and Maintenance**		**Est. Nitrogen Reduction**
		Annual Cost	**Details**	
PBTS	$5,500 to $8,500	*$292 - $442	Electric = $92/yr. electric costs (2.1 kw per day @ $0.12 per kw). DOH 2-Yr. Operating Permit = $100 ($50/yr.). Contract with Maintenance Entity = $150-$300/yr.	12.19 mg/L (DOH test results)
Standard OSTDS	$2,200 to $5,500 in PSPZ (excluding fill)	$70	One pump out every 5 years ($350/5) = $70/yr.	**36 – 45 (possibly increasing to 60 mg/L). Midpoint = 40.5 mg/L
Comparison	PBTS cost $3,150 more. Assuming 20-yr. system life = $158/yr.	PBTS $222 - $372 more expensive/yr. ($297 midpoint)		28.31 mg/L increased nitrogen removal with PBTS (70% increase)
*Installation cost estimates are from a presentation at the February 2009 Wakulla Springs workshop **Source - Dr. Roeder's 01/11/2007 "Performance-Based Nutrient Reduction Systems: What they are, What they can do, and Procedures for Permitting."				

Cost to Finance Replacements of Traditional OSTDS with PBTS – As requested by the Board, Table 6 provides an analysis of the costs associated with County-financed replacements of traditional OSTDS with PBTS within the unincorporated area of the PSPZ. For example, if the County were to offer $5,000 in financing to those who upgrade to a PBTS when their traditional OSTDS fails, assuming a 2% annual failure rate, the County would need a loan pool of approximately $661,000 for all failures (or $357,000 if limited to those who are not exempt from the requirement to upgrade to a PBTS). The annual assessment to owners who finance $5,000 would be $648/year for 10 years, or $482/year for 15 years. The $5,000 financing level was modeled after SB 274's grant amount and approximates the cost difference between traditional OSTDS and PBTS installations. Loans could be offered to those who replace failing traditional OSTDS; or include voluntarily upgrades to PBTS; or be limited to those who are not exempt from the requirement to replace a failed traditional OSTDS with a PBTS (estimated at 54% of total failures/year).

Table 6 – County Financed PBTS Replacement Loan Program (Sample)						
Financing PBTS	**Amount Financed**	**Annual Assessment 10 Years**	**Total 10 Years**	**Annual Assessment 15 Years**	**Total 15 Years**	
Costs Example	$5,000	$648	$6,480	$482	$7,230	
Est. Failure Rate (based on 6,609 OSTDS in PSPZ):		**2%**	**5%**		**10%**	
% of "Failed" Tanks Financed		**100%**	***54%**	**100%**	***54%**	**100%**	***54%**
Failures/Yr.		132	72	330	179	661	357
Loan Pool/Yr. (Rounded)		$661,000	$357,000	$1,652,000	$893,000	$3,305,000	$1,785,000
*Estimated percentage of parcels that would not be exempt from installing a PBTS when the OSTDS fails.						

Recommended Comprehensive Plan Amendment - Based on NSF test results for PBTS available in Leon County, staff recommends revising the County's requirements to a PBTS that is either NSF 40 certified and NSF tested to obtain no less than a 50% reduction in nitrogen, or NSF 245 certified (which requires no less than a 50% reduction in nitrogen for certification) with a drip irrigation system.

8. Management and Inspections of Onsite Systems - Accepting that decentralized, or on-site treatment systems are an important and viable tool for treating wastewater in low-density areas, how can such decentralized systems be managed to ensure they are being properly maintained and are functioning properly? The Comprehensive Plan requires the County to designate or institute a Responsible Management Entity (RME) and supporting fee structure to ensure existing traditional OSTDS and PBTS function properly. The Comprehensive Plan defines a RME as, "A legal entity that has the technical, managerial, and financial capacity to ensure viable long-term, cost-effective, centralized management, operation, and maintenance of decentralized wastewater systems in accordance with appropriate regulations and generally accepted accounting principles. Viability is defined as the capacity of a responsible management entity to provide adequate technical, managerial, and financial resources to protect the public health and the environment consistently, in perpetuity, and at a minimal cost to taxpayers."

Options for the intensity of management are considered in the EPA guidelines, ranging from an inventory of systems to actual ownership and operation. A summary table from the EPA guidance document is provided as Attachment #14. Selecting the appropriate level of management depends on the severity of expected impacts; technical complexity of onsite systems; the amount and type of funding available; and enforcement capabilities. Florida has implemented some aspects of the first three management models but does not have a mandatory maintenance and management program for the vast majority of its onsite systems. Florida's rule requirements include:

1. Standard Septic Systems – EPA Model 1 Management. Homeowner awareness; and design, construction, training certification and standards.
2. Aerobic Treatment Units – EPA Model 2/3 Management. Operating permit to the homeowner requires a contract with a qualified maintenance entity, and regular inspections are required.
3. Performance Based Systems – EPA Model 3 Management. Current standards require a biennial operating permit issued by the health department. The homeowner is required to contract with a maintenance entity to service the system. During the life of the permit the system must be visually inspected once annually by health department staff and twice by the maintenance entity.

In a January 23, 2007, Leon County's Septic System Advisory Committee recommended that the County require EPA Model 3 or higher be utilized for new OSTDS installed within the PSPZ and the Board accepted that recommendation.

Within environmentally sensitive areas, Florida counties have begun implementing local

management and maintenance programs to better manage OSTDS, and to ensure OSTDS infrastructure is adequately maintained and continues to operate effectively. According to an October 1, 2008 report from the Florida Department of Health, three Florida Counties (Charlotte, Escambia, and Santa Rosa) have implemented local management and maintenance programs.

- The Charlotte County locally mandated inspection program was implemented in 2007. It requires 5-year inspections in geographically designated and environmentally sensitive areas. The tracking and property owner inspection notification process is handled by the county health department (CHD) and inspections are performed by both the CHD inspectors and the private sector (Registered Septic Tank Contractors, State Licensed Plumbers and Private Certified Environmental Health Professionals). For the year starting July 1, 2007 and ending June 30, 2008, the Charlotte County program conducted 3,000 mandated septic tank inspections. Charlotte County's mandatory inspection program is costing approximately $115.00 per inspection and the program cost is covered by local fees. In general, the program was received favorably, but has received some complaints from economically challenged property owners.

- The Escambia County program was implemented in 1999 and the mandated septic inspection is required at the point of sale (POS) on a real estate transaction. The inspection procedure is similar to the Department of Health's existing procedure for voluntary inspections. The objective of the POS inspection is to provide information and protection to property owners and to identify and repair existing malfunctioning systems. The program inspections are limited to a geographically designated environmentally sensitive areas and the property owner notification process is handled by realtors and title companies. Inspections are performed and tracked by the Escambia CHD. For the year starting July 1, 2007, ending June 30, 2008, the Escambia County program conducted 711 mandated septic tank inspections. In general, Escambia County's program was favorably received, as property buyers benefit from the information they receive on the condition of the onsite system. Escambia County's mandatory inspection program is costing approximately $83.93 per inspection and program costs are covered with by an inspection fee.

- The Santa Rosa County program was implemented in 2000 and requires a mandatory inspection every 5 years. Similar to Escambia County's program, in Santa Rosa the program inspections are limited to geographically designated environmentally sensitive areas and the property owner notification process is handled by the real estate industry. CHD inspector, Registered Septic Tank Contractors and Private Environmental Health Professionals are permitted to perform the mandatory inspections. For the year starting July 1, 2007, ending June 30, 2008, the Santa Rosa County program conducted 944 mandated septic tank inspections. In general, Santa Rosa County's program was favorably received. The CHD reported that while new taxes or program fees were not popular, property buyers do appreciate the information they receive on the condition of the onsite system. Santa Rosa County's mandatory inspection program is costing approximately $215.00 per inspection and program costs are partially recovered with a $150.00 per inspection fee. Santa Rosa County

suggested that a statewide mandatory septic tank inspection program should at least require pumping of the tanks and appropriate fees to cover the complete cost of the program.

The Florida Department of Health reported that a number of counties, including Franklin and Monroe, already have a significant number of systems under operating permits and maintenance agreements. Wakulla County has recently adopted a local ordinance requiring performance based treatment systems which are under active management. A number of other counties are actively considering such programs.

The EPA strongly encourages adoption of programs which include a comprehensive management and maintenance component to ensure onsite systems are performing as designed and to minimize the potential adverse human or environmental health impacts from the continued use of under designed or failing systems. According to the Florida Department of Health, less than one percent of Florida's 2.3 million onsite sewage treatment and disposal systems are actively managed under operating permits and maintenance agreements; the balance are generally only serviced when the system fails, often leading to costly repairs that could have been avoided with routine tank pump outs and service. Over half of these systems are 30 years old and were installed under standards less stringent than current standards.

Staff recommends the County's Health Department serve as the permitting agency/RME for OSTDS and PBTS within the PSPZ. Additionally, the Board may want to consider instituting an inspection program for onsite systems within the PSPZ. A five-year inspection cycle would be consistent with the processes instituted by other Florida counties. Through these inspections, failing systems and systems in need of maintenance or pump out service would be identified for corrective action and owner training. The owner would continue to be responsible for maintenance of their systems. It is anticipated that department costs would be offset by application and permit fees (counties with mandatory inspections average $149.64 per inspection – or approximately $30/year for a five-year inspection cycle).

There are no RME's or septic tank management authorities in operation in Florida. However, the County's Health Department is well-positioned to effectively serve as the RME for OSTDS and PBTS systems.

<u>9. Estimated Households Exempt from Proposed OSTDS Ordinance</u> - The ordinance scheduled for a second public hearing on March 19, 2009 addressed most of the requirements of the Comprehensive Plan relative to OSTDS within the PSPZ, and provided income-based and property-value based criteria for exemptions to the requirement for PBTS. To be exempt under the proposed ordinance, the OSTDS must support a single family residence with an existing OSTDS; such residence must be the property owner's primary residence and the owner must reside on the premises; the property owner must demonstrate the household income is at or below 80% of the current Florida Housing Finance Corporation Income Limits Schedule; and the market value of the home, as determined by the Leon County Property Appraiser, must be at or below the current value threshold as specified in the current Local Housing Assistance Plan (currently, no greater than

$204,000). During the March 19, 2009 meeting, the Board asked questions concerning the estimated number of households that would be exempt from the requirement to install a PBTS when their existing OSTDS fails. Staff estimates 46% of the 6,640 OSTDS within the PSPZ may be exempt from the draft ordinance (Table 7). Attachment #10 depicts the location of the OSTDS within the PSPZ.

Table 7 – OSTDS within PSPZ Potentially Exempt from Proposed Ordinance

	Total OSTDS	Potentially Exempt	Potentially Not Exempt
# OSTDS – Unincorporated Area	6,609	3,054	3,555
# OSTDS – Incorporated Area	31	4	27
# OSTDS –PSPZ Total	6,640	3,058 (46%)	3,582 (54%)

The potentially exempt OSTDS were located on parcels identified as single-family residential, homestead exempt, with a property value below $204,000 according to the Leon County Property Appraiser. These estimates do not consider household income, as there is no statistically valid way to estimate the number of Leon County homeowners within the PSPZ that fall within the income level for exemption. To meet the income standards for exemption, the household income must be no greater than 80% of the current Florida Housing Finance Corporation Income Limits Schedule (the schedule prepared for the State Housing Incentives Program (SHIP)). A copy of the 2009 income schedule is provided as Attachment #15.

The PSPZ includes all or part of seven census tracts; six of which had median family income levels between 45% and 80% of the median family income for Leon County in 2000. According to the U.S. Census Bureau's website, Leon County's median household income was $47,739 in 2007. If the PSPZ median income is 80% of the County's income, the PSPZ's 2007 median family income would be estimated to be $38, 191, which is below the 80% Florida Housing Finance Corporation 2009 limits for a household of two ($40,700), even adjusting for a 3% pay increase for 2008. While it appears on this basis that many of the households would meet the finance test for exemption, the quantity of households cannot be determined with any degree of certainty.

Of note, when staff turned to the Property Appraiser's database for this analysis, the following issues arose, which staff recommends addressing through refined ordinance language:

- As the Property Appraiser identifies properties as "homestead exempt", staff recommends revising the ordinance language from the requirement that the owner must reside on the premises to the parcel is homestead exempt.
- As the Property Appraiser's database provides a market value for the parcel (the land plus the building(s)), not the "home", staff recommends revising the ordinance language from the market value of the home to the market value of the parcel (including improvements).
- As there are some parcels with more than one mobile home on the parcel, the ordinance language should be refined to address its application in such cases.

<u>10. Funding Assistance</u> – There are limited funding assistance opportunities for sewage disposal

systems for individual residents, neighborhoods and the County. The Community Development Block Grant/State Housing Initiative Partnership (CDBG/SHIP) program provides individual assistance to low to moderate income residents for sewage disposal systems. However, under the currently proposed ordinance, low to moderate income Leon County residents would be exempted from the requirement to upgrade to a PBTS when their traditional OSTDS fails.

Additionally, CDBG provides funds on a competitive basis to connect a primarily low to moderate income neighborhood to a central sewer system. At a maximum, $750,000 would be available if the County successfully competed. Again, that population is proposed to be exempted from the required upgrade to PBTS.

The Clean Water State Revolving Fund is an existing program under the Department of Environmental Protection (DEP) that provides low-interest loans to local governments for wastewater and stormwater projects. Loans are made based on a federally-approved, competitive priority system, based primarily on environmental and public health considerations and the readiness of a project. DEP awards $100-$150 million in low-interest loans each year. The maximum amount funding that a local government can receive is $10 million per year. Loans are generally made for a 20-year term at rates that are at least 40% below market value. DEP recently received approximately $132 million through the federal stimulus package for sewer and clean water projects. The department has indicated that the federal stimulus funds will utilize to provide loans to projects on its FY 09 priority list which includes the City of Tallahassee's Lake Bradford Road Wastewater Treatment Facility in the amount of $2.6 million.

11. Advisory Committee - The Board appointed a Septic System Advisory Committee (SSAC) by resolution on March 23, 2004, charging the committee to review and make recommendations to revise Article III "On-site Sewage Disposal Systems" of Chapter 18 "Utilities" of the Code of Laws of Leon County, Florida. Each Commissioner had one appointment to the SSAC.

At the January 23, 2007 Workshop on the SSAC's recommendations, the Board accepted the recommendations made with respect to the exclusive use of PBTS in the PSPZ. The SSAC then reconvened when the Board tasked it to draft ordinance language, using data from LAVA, for the exclusive use of PBTS in the PSPZ for new development, and to consider standards that would address repairs to existing systems in failure.

The SSAC drafted language to amend Chapter 18, Article III, Leon County Code of Laws. The first Public Hearing on that proposed amendment was held on February 12, 2009 and scheduled for the second Public Hearing on March 19, 2009. The second Public Hearing was continued. The purpose or role for a future advisory committee will be dependent upon Board direction.

12. Summary - Data provided by the April 2002 NFWMD Report attributed approximately 89% of the annual nitrogen loading to the landscape from Leon County's unconfined areas to Wastewater Treatment Facilities (WWTF) and operations: 63% effluent, 15% residuals, 9% commercial fertilizer, and 2% livestock (Table 1). The City entered into a December 2006 settlement agreement

under which it is undertaking a $220 million upgrade of its WWTF to an Advanced Wastewater Treatment system designed to a standard of no greater than 3 mg/L of nitrogen. Additionally, residual spreading, fertilizer application, and livestock operations at the WWTF have been discontinued.

The remaining nitrogen loads from the unconfined areas of Leon County are OSTDS (8% of the load), sinking streams (stormwater - 3% of the load) and fertilizer application beyond the WWTF that were not captured in the April 2002 NWFMD Report as the data was unavailable. The Board has directed staff to develop stormwater volume control regulations, which will further reduce nitrogen levels to Wakulla Springs. A draft fertilizer ordinance, substantively the same as the City's, is presented in this workshop item for the Board's consideration.

Regarding OSTDS, a draft ordinance was scheduled for a second public hearing On March 19, 2009. The draft ordinance was the result of years of work by the Board-appointed Septic Tank Advisory Committee, Board studies and workshops, and a Comprehensive Plan amendment consistent with the draft ordinance regarding PBTS within the PSPZ. The Board continued the second public hearing and requested a Board workshop.

Under the draft ordinance, PBTS meeting certain nitrogen reduction performance standards, with a drip irrigation system, were required within the PSPZ for new development, where central sewer is not available, and to replace failing OSTDS. Based on property value criteria contained in the draft ordinance, approximately 46% of the estimated 6,640 OSTDS in the PSPZ may be exempt from such upgrades to PBTS. Assuming a 2% annual failure rate, approximately 133 OSTDS within the PSPZ would fail/year – 61 (46%) of which may be exempt from the requirement to install a PBTS and 72 (54%) of which may be required to replace the traditional OSTDS with a PBTS. The draft ordinance also required repairs to OSTDS, when exempt from the requirement for replacement with a PBTS, to meet certain construction standards, including drainfield sizing and a 24" separation from the bottom of the drainfied to the water table.

Table 8 summarizes components of PBTS requirements; whether those requirements are contained within the Comprehensive Plan and/or within the draft ordinance that was scheduled for its second public hearing on March 19, 2009, and options the Board may consider. For this purpose, changes to an OSTDS fall under one of four categories: (1) New Development; (2) Failure (repair an existing, failing on-site system); (3) Redevelopment (the abandonment of an existing on-site system and the installation of a new on-site system); and (4) Modifications (changes not otherwise classified).

Table 8 – Comprehensive Plan and Ordinance Considerations Summary

	*PBTS Required in PSPZ		Required to Meet Current FAC 64-E Standards for Drainfield Sizing and 24" Water Table Separation		
A. OSTDS Status	**B. Req. by Comp. Plan**	**C. Req. by 3/19/09 Draft Ord.**	**D. Req. by Comp. Plan**	**E. Req. by 3/19/09 Draft Ord.**	**F. Board Consideration (Options)**
1. New Development	Yes		Yes		No options – FAC req.
2. "Failure" – Correcting a "failing" system without abandoning the existing system (definition at end of table).	Yes		Required to comply with applicable FAC 64E-6 standards, which may or may not require current drainfield sizing and 24" water table separation.	Yes. If the low-income standards were met for an opt-out to the required replacement with a PBTS, the repair is required to meet current drainfield sizing and 24" water table separation.	Seek a modification to the Comprehensive Plan, such that an upgrade to a PBTS is not required if an existing traditional OSTDS is repaired and not abandoned.
3. Redevelopment – Staff recommends defining (see column F).	Yes; however "redevelopment" was not defined.		Yes		Define as the abandonment of an existing on-site treatment system (septic tank and drainfield) and installation of a new on-site system.
4. Modification – All other OSTDS changes (i.e., not new development, failure or redevelopment). For example, increasing sewage flow without abandoning an existing OSTDS.	No	Yes. SSAC recommended this provision so failing systems would not be otherwise classified to avoid PBTS requirement.	No	Yes	Revise the ordinance and do not require PBTS for modifications.
*PBTS Nitrogen Reduction Requirements	NSF 245 certified; demonstrating effluent nitrogen concentration no more than 10 mg/L or reduced effluent nitrogen concentration of at least 70%.		N/A	N/A	Seek a modification to the Comprehensive Plan to the following PBTS nitrogen reduction requirements: NSF 40 certified to reduce nitrogen by no less than 50% or NSF 245 certified (both with drip irrigation).

FAC 64E-6.002(47) Definition of "Repair": "Repair – replacement of or modifications or additions to a failing system which are necessary to allow the system to function in accordance with its design or must be made to eliminate a public health or pollution hazard. Servicing or replacing with like kind mechanical or electrical parts of an approved onsite sewage treatment and disposal system; or making minor structural corrections to a tank, or distribution box, does not constitute a repair. The use of any treatment method that is intended to improve the functioning of any part of the system, or to prolong or sustain the length of time the system functions, shall be

considered a repair. The use of any non-prohibited additive by the system owner, through the building plumbing, shall not be considered a repair. Removal of the contents of any tank or the installation of an approved outlet filter device, where the drainfield is not disturbed, shall not be considered a repair. Replacement of a broken lid to any tank shall not be considered a repair. Splicing a drip emitter line where no emitter is eliminated shall not be considered a repair."

FAC 64E(23) Definition of "Failure": "Failure - a condition existing within an onsite sewage treatment and disposal system which prohibits the system from functioning in a sanitary manner and which results in the discharge of untreated or partially treated wastewater onto ground surface, into surface water, into ground water, or which results in the failure of building plumbing to discharge properly."

SB 274, the Florida Springs Protection Act, proposed similar protections. SB 274 did not have a companion in the House of Representative this year, and did not pass the Senate. It is anticipated to be re-introduced in the 2010 session.

The Comprehensive Plan and draft ordinance require PBTS in the PSPZ when central sewer is not available. PBTS are required to be NSF 245 certified and: (a) produce no more than 10 mg/L total nitrogen at the outlet of the final treatment chamber, or (b) reduce total nitrogen by no less than 70%.

The cost for bringing City sewer to the PSPZ and the annual debt service over a 30 year period follows: Woodville area - $30 million ($2 million/year/30 years); Munson area - $38 million ($2.5 million/year/30 years); balance of the PSPZ - $45 million ($3 million/year/30 years). The cost to bring central sewer to the entire PSPZ is estimated at $113 million ($7.4 million/year/30 years). If the project is supported by property tax, it would require approval by voter referendum. In addition, homeowners' hook-up costs are estimated at $6,500 and monthly sewer rates for the average homeowner are estimated at approximately $60/month or $720/year (Table 3).

While PBTS reduce nitrogen at far greater levels than traditional OSTDS, they are not meeting the standards set by the draft ordinance or Comprehensive Plan (Table 4); therefore, staff recommends revising the PBTS standard to NSF 245 certified or NSF 40 certified to reduce total nitrogen by no less than 50%, in combination with a drip irrigation system. Table 5 provides a comparison of costs associated with PBTS and traditional OSTDS.

The Board requested information about a loan program for those who replace an existing OSTDS with a PBTS. Associated costs are provided in Table 6.

Where central sewer is not available, the Comprehensive Plan and draft ordinance allow developers to use OSTDS, which may include cluster systems rather than the traditional OSTDS that serves a single household. The Board may want to consider modifying its ordinance to institute standards for nitrogen reduction, comparable to those for PBTS, if cluster systems within the PSPZ are constructed.

The Comprehensive Plan requires the County designate a Responsible Management Entity (RME)

and supporting fee structure to ensure existing traditional OSTDS and PBTS function properly. There are no RMEs or septic tank management authorities in operation in Florida. The County's Health Department serve as permitting authorities for OSTDS and RMEs, and are well-suited to serve as the RME in Leon County for such systems. Some Florida counties have expanded the role of their health department to include mandatory inspections of on-site systems in environmentally sensitive areas. The Board may want to consider instituting a comparable OSTDS inspection program within the PSPZ to identify system failures and deferred maintenance. This is particularly important in the PSPZ, where the land is porous and will readily absorb untreated or partially treated wastewater. Such failures may not be readily apparent to a homeowner.

Options:

A. Furthers requirements of the Comprehensive Plan:

1. Staff Recommendation - Direct staff to present the proposed fertilizer ordinance to the joint City/County Planning Commission and, upon its approval, schedule a Public Hearing.
2. Staff Recommendation - Designate the Leon County Health Department as the Responsible Management Entity for performance-based and traditional on-site treatment systems in the PSPZ.
3. Staff Recommendation - Direct staff to define "redevelopment" in a revised draft ordinance as the abandonment of an existing on-site treatment system and installation of a new on-site treatment system.
4. Staff Recommendation - Direct staff to revise the draft ordinance so that terms for exemption from such PBTS requirements within the PSPZ are consistent with the source data (for example, refer to "homestead exempt" rather than "owner must reside on the premises" and "market value of the parcel with improvements" rather than "market value of the home") and address multiple dwellings and multiple OSTDS on a single parcel.

B. Would require an amendment to the Comprehensive Plan:

5. Staff Recommendation - Direct staff to seek an amendment to the Comprehensive Plan to revise the nitrogen reduction performance standard for PBTS in the PSPZ to: NSF 40 certified to reduce nitrogen by no less than 50% and used in conjunction with drip irrigation, or NSF 245 certified and used in conjunction with drip irrigation.
6. Seek Board Direction - Direct staff to seek an amendment to the Comprehensive Plan to eliminate the requirement that failing traditional OSTDS within the PSPZ are to be replaced with PBTS.

C. Would be a substantive change to the draft ordinance scheduled for its Second Public Hearing on March 19, 2009, but would not require an amendment to the Comprehensive Plan:

7. Seek Board Direction - Do not require OSTDS within the PSPZ that are being modified, and do not meet F.A.C. 64E-6.002 definition of "repair", to be replaced by PBTS.

D. Other Board considerations:

8. Staff Recommendation - Direct staff to amend Chapter 18, Article III, Leon County Code of

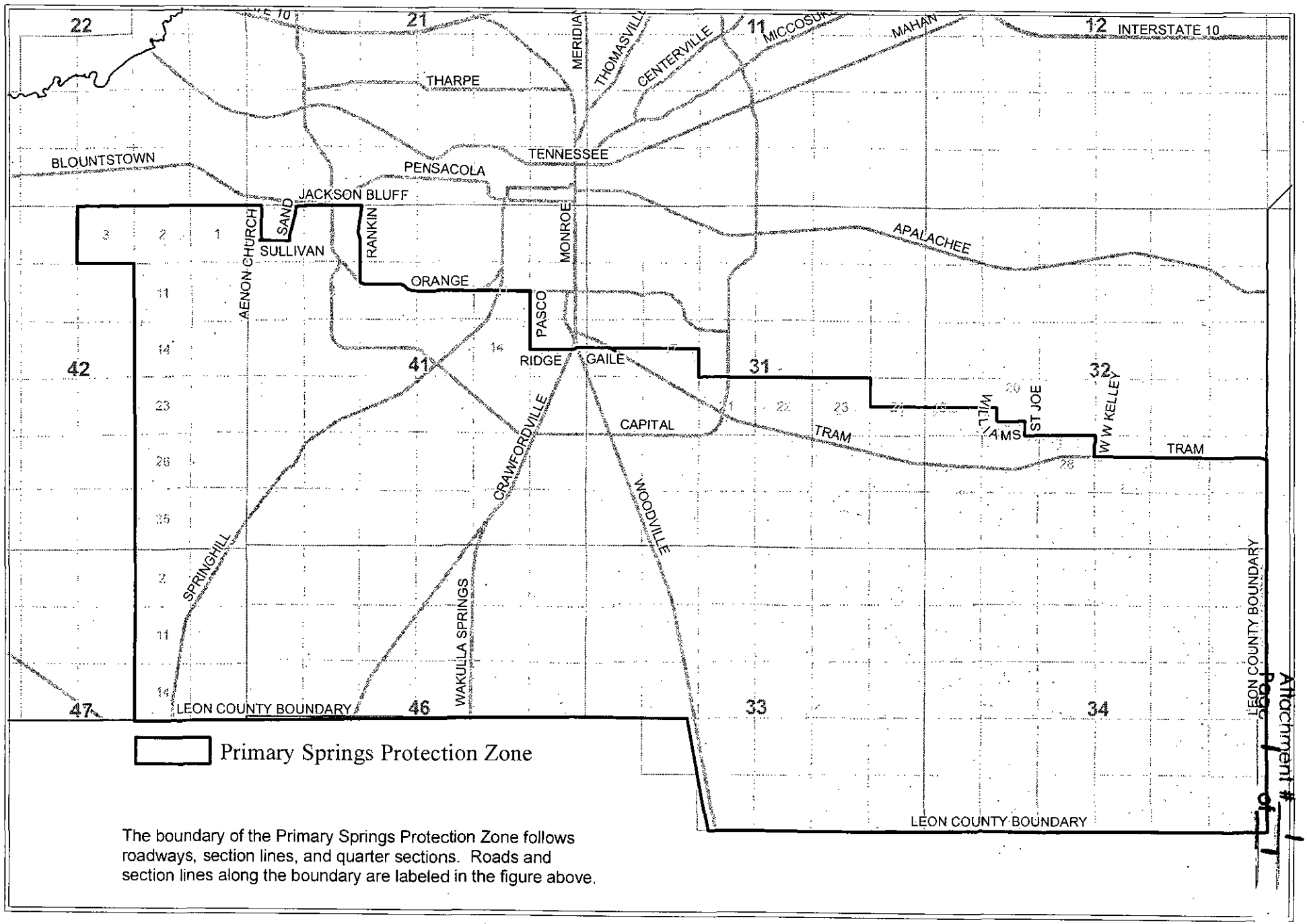
laws to include nitrogen reduction performance requirements for on-site cluster systems within the PSPZ.

9. Staff Recommendation - Continue to require OSTDS with the PSPZ that are being modified and do not meet F.A.C. 6.002 definition of "repair" to meet current F.A.C. construction requirements for drainfield sizing and a 24" separation from the bottom of the drainfield to the water table, as currently written in the draft ordinance that was scheduled for its Second Public Hearing on March 19, 2009.
10. Seek Board Direction - Direct staff to identify approximately $60,000 in funding and to procure an on-site test of performance-based treatment systems.
11. Seek Board Direction - Direct staff to return to the Board with a loan program for the replacement of traditional on-site treatment systems with performance-based systems within the PSPZ.
12. Seek Board Direction - Direct staff to return to the Board with an inspection program for on-site treatment systems within the PSPZ.
13. Board direction.

Recommendation:
Options #1, #2, #3, #4, #5, #8, and #9. Board direction on #6, #7, #10 and #11 and #12.

Attachments:
1. Depiction of Primary Springs Protection Zone
2. Vulnerability Based on the LAVA Model
3. Water and Sewer Agreement
4. Ordinance Scheduled for Second Public Hearing March 19, 2009 (Proposed Ordinance)
5. Details Regarding the 2002 NFWMD Report
6. Draft Fertilizer Ordinance
7. City of Tallahassee's Fertilizer Ordinance
8. SB274
9. Side-by-side Comparison of SB274C2 with Proposed Ordinance
10. OSTDS within the PSPZ, with Sewer Target Areas
11. EPA Model Costs for Central and Other Wastewater Technologies
12. NSF 245 Certified Systems
13. PBTS Test Data, Dr. E. Roeder, Ph.D., P.E, Bureau of Onsite Sewage Programs, Florida Department of Health
14. EMA Management Models
15. SHIP Income Limits Schedule

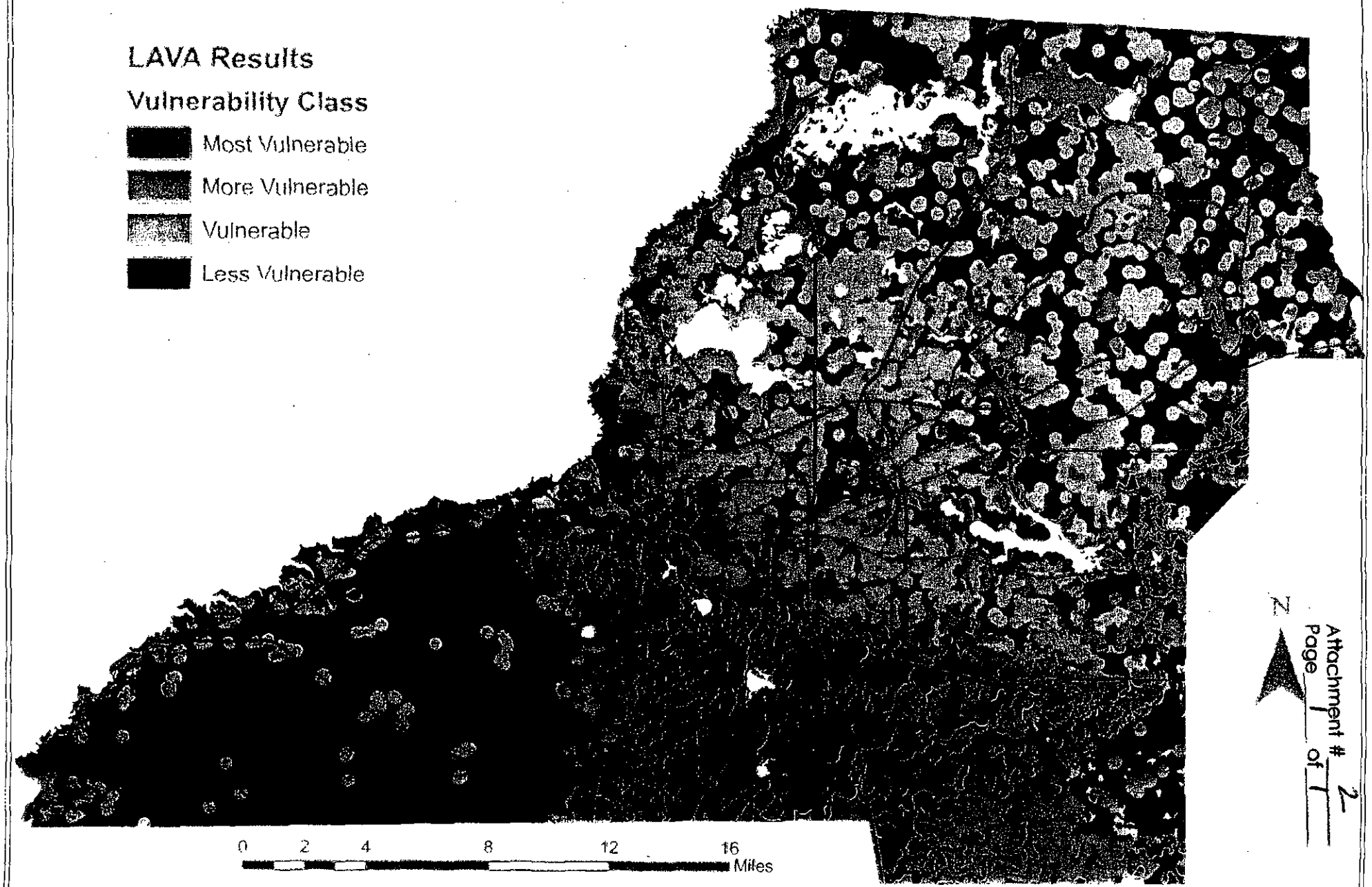
December 12, 2009 Updated Primary Springs Protection Zone



The boundary of the Primary Springs Protection Zone follows roadways, section lines, and quarter sections. Roads and section lines along the boundary are labeled in the figure above.

Attachment # 1 Page 1 of 1

Leon County Aquifer Vulnerability Assessment Map



Attachment # 2
Page 1 of 1

WATER AND SEWER AGREEMENT

THIS AGREEMENT, made and entered into this 10th day of May, 2005, by and between the CITY OF TALLAHASSEE, a Florida municipal corporation (hereinafter referred to as "City"), and LEON COUNTY, a political subdivision of the State of Florida (hereinafter referred to as "County").

WITNESSETH

WHEREAS, the County has determined that it will be the sole local governmental entity to authorize the planning, construction and operation of water systems and sewage disposal systems within the unincorporated area of the County and will provide such services when it deems it appropriate; and

WHEREAS, the County has specifically determined that it is in the best interest of the citizens of the County if City is granted an exclusive water and sewer franchise to serve all of that part of the County that is not currently served by other water and sewer providers, with conditions thereon; and

WHEREAS, the City, by accepting an exclusive water and sewer franchise pursuant to this Agreement, does not waive or relinquish any rights to which it is entitled under Florida Statutes, Chapter 180; and

WHEREAS, the County recognizes that, until such time as the City has its countywide system in place, there are areas of the County that cannot reasonably, efficiently and economically be served by the City and that other water and sewer providers may be able to provide the necessary service and, accordingly, upon notice from the City that the City cannot serve the area, the County will revoke the City's exclusive franchise for any specific geographic area and grant a franchise to another water and/or sewer provider so that the needs of the citizens of the County will be met.

NOW, THEREFORE, in consideration of the following mutual promises and covenants, and other good and valuable consideration the sufficiency of which is being acknowledged, the City and County hereby agree as follows:

Section 1. Term. The Term of this Agreement shall commence upon full execution hereof and shall continue until September 30, 2030, unless earlier terminated pursuant to the terms of this Agreement. This Agreement shall be extended automatically for an unlimited number of additional five (5) year periods unless written notice is provided by either party at least twenty-four (24) months prior to the end of the original or any extended agreement period.

Section 2. Franchise.

a. The County does hereby grant unto the City, and the City hereby accepts, an exclusive franchise to provide water service to all properties located within the County that are not located within an existing or applied for water franchise area at the time this Agreement becomes effective. Exhibit A identifies all existing water and sewer utility franchise areas at the

time of execution of this Agreement and is attached hereto and incorporated as if fully set forth herein. Further, the County does hereby grant unto the City, and the City does hereby accept, an exclusive franchise to provide sewer service to all properties located within the County that are not located within an existing or applied for sewer franchise at the time this Agreement becomes effective. Both the sewer and water service franchises granted herein shall be subject to and contingent upon the terms and conditions contained in this Agreement.

b. Portions of the sewer franchise granted herein are subject to the Tallahassee-Leon County Comprehensive Plan restrictions prohibiting the installation of municipal sewers. The City shall not be obligated to provide service in these areas until such time as amendments are made to the Tallahassee-Leon County Comprehensive Plan, which shall have the effect of partially or completely removing those restrictions.

Section 3. Target Water and Sewer Service Areas.

a. The City and County agree that, within the franchise area granted herein there are specific geographic areas, the Woodville Community, Centerville Trace Subdivision and Harbinwood Subdivisions, hereinafter referred to as Target Areas. It is agreed that these Target Areas are in need of water and/or sewer service due to the lack of proper utilities or the failure of utilities on which they were developed and that these Target Areas will be prioritized for the provision of water and/or sewer services.

b. Target Areas have been identified by the City and County and are attached hereto and incorporated as if fully set forth herein as Exhibit A. Target Areas will be updated annually by the County no later than December 1 of the preceding fiscal year prior to anticipated action by the City.

c. The City and County agree that, at the time that a Target Area is to be provided with water and/or sewer service by others, the City and County will enter into a Target Area Implementation Agreement. Said Implementation Agreement will specify the rights and responsibilities of each party in the provision of the utility service to the Target Area and the terms and conditions of service. The County agrees that the City is not obligated to participate in the development and construction of the water distribution or sewer collection system within the Target Area. The City agrees to provide some or all of the conveyance to or from the Target Area subject to the Implementation Agreement.

d. The City agrees that it will maintain or plan for treatment and disposal capacity to serve the identified Target Areas.

Section 4. Rights and responsibilities of City.

a. The City is responsible for providing water and/or sewer service to all properties located within the franchise area except as provided in this Agreement. City water and/or sewer service to existing developed properties within the franchise area shall be determined on the basis of a site specific evaluation by the City that includes cost feasibility, availability of easements, and other pertinent factors in a manner similar to that used within the City limits.

b. All City policies, standards, procedures, regulations, rates, fees, and charges for water and sewer services shall be the same, inside and outside City 's corporate limits, with the exception of the rebate policy, and as provided herein. City shall have the exclusive right to manage and operate its water and sewer system in the unincorporated area except as limited by this Agreement.

c. The City may assess a surcharge of up to 50% on water and/or sewer services in accordance with Florida Statutes commencing no sooner than October 1, 2005. Upon termination of the Parks and Recreation Agreement entered into by and between the parties on May 10, 2005 the provisions of this Section 4. paragraph c. shall expire.

d. The City shall not require annexation into the City as a condition for providing water and/or sewer service to any property in the franchise area.

e. The City's rights to require connection of existing properties shall be as prescribed in applicable statutes and codes. This agreement does not add to or detract from those rights.

Section 5. Annual Review of Long Range Master Plan.

a. The City shall, within 18 months of the effective date of this agreement, develop and maintain a long range master plan for the provision of water and sewer service within the franchise area granted herein. Said master plans shall be approved by the County and shall be updated and submitted for County approval every five years.

b. The County shall have the right to provide input to the City's budget process concerning priorities for water and sewer projects in the County. Such input shall be provided no later than December 1 of the preceding fiscal year. The City shall submit no later than June 1 the proposed City five-year capital improvement plan (CIP) for water and sewer projects in the County for annual review and approval by the County. City shall submit no later than October 20 to the County the final approved City CIP for water and sewer projects in the County. The CIP shall be based upon the approved long range master plans described above.

Section 6. Determination of City Sewer Service Availability for New Development

a. City sewer service shall be considered available to new developments which require site and development plan approval or issuance of a development order if it is capable of being connected to by the plumbing of a development, establishment or residence which has adequate permitted capacity to accept the sewage to be generated by the development, establishment or residence; and

1. All references to lots in this section are to developments having an average lot size of 2 acres in area or less.

2. For a new development on an existing parcel which has an estimated sewage flow of 1,000 gallons per day or less, a gravity sewer line to maintain gravity

flow from the property's drain to the sewer line, or a low pressure or vacuum sewage collection line in those areas approved for low pressure or vacuum sewage collection exists in a public easement or right-of-way within100 feet of the property line of the lot, residence, or establishment.

3. For a new development on an existing parcel which has an estimated sewage flow exceeding 1,000 gallons per day, a point of connection to a sewer line exists in a public easement or right-of-way that abuts the property of the establishment or is within 400 feet of the property line of the establishment as accessed via existing rights-of-way or easements.

4. For residential subdivisions with 10 lots or less, and for commercial subdivisions with less than 5 lots, a point of connection to a sewer line exists within 400 feet of the development as measured and accessed via existing easements or rights-of-way.

5. For residential subdivisions with 11-20 lots, a point of connection to a sewer main exists within 800 feet of the development as measured and accessed via existing easements and rights-of-way.

6. For residential subdivisions with greater than 20 lots and for commercial subdivisions with 5 or more lots, a point of connection to a sewer main exists within 1200 feet of the development as measured and accessed via existing easements and rights-of-way.

b. The determination of availability of sewer for any new development shall be made based upon existing conditions at the time of the first Site Development Plan review meeting, as defined under Chapter 10, Leon County Code of Laws, except that the City reserves the right to extend its sewer system at its cost to make sewer available in accordance with the availability criteria set forth herein to existing and developing parcels within six months after the issuance of a site plan approval or development order as may be applicable to the new development.

c. When the City sewer system is available within the respective distances specified above, the property owner will be responsible for extending to the sewer main the remaining distance to their property and also for installing any on-site sewer collection system.

d. If the City Manager and the County Administrator or their designees agree that the connection of a development to City sewer is not economically feasible, regardless of the criteria defined herein, said service shall be determined to be not available.

e. The City reserves the right to develop agreements with property owners and developers to make service available within time frames and at locations that vary from these criteria subject to mutual agreement between City and developer.

Section 7. Determination of City Water Service Availability for New Development

a. City water service shall be considered available to new developments which require site and development plan approval or issuance of a development order if it is capable of being connected to the plumbing of a development, establishment or residence and has adequate permitted capacity and pressure to supply water to the development, establishment or residence; and

1. All references to lots in this section are to developments having an average lot size of 2 acres in area or less.

2. For a new development on an existing parcel a water main exists in a public easement or right-of-way within 200 feet of the property line of the lot, residence, or establishment.

3. For residential subdivisions with 10 lots or less, and for commercial subdivisions with less than 5 lots, a point of connection to a water line exists within 400 feet of the development as measured and accessed via existing easements or rights-of-way.

4. For residential subdivisions with 11-20 lots, a point of connection to a water main exists within 800 feet of the development as measured and accessed via existing easements and rights-of-way.

5. For residential subdivisions with 20 or more lots, for commercial subdivisions with 5 lots or more, a water system exists within 1200 feet of the development as measured and accessed via existing easements or rights-of-way.

b. The determination of availability of water for any new development shall be made based upon existing conditions at the time of the first Site Development Plan review meeting, as defined under Chapter 10, Leon County Code of Laws, except that the City reserves the right to extend its water system at its cost to make water available in accordance with the availability criteria set forth herein to existing and developing parcels within six months after the issuance of a site plan approval or development order as may be applicable to the new development.

c. When the City water system is available within the respective distances specified above, the property owner will be responsible for extending the water main the remaining distance to their property and also for installing any on-site water distribution system.

d. If the City Manager and the County Administrator or their designees agree that the connection of a development to City water is not economically feasible, regardless of the criteria defined herein, said service shall be determined to be not available.

e. The City reserves the right to develop agreements with property owners and developers to make service available within time frames and at locations that vary from these criteria subject to mutual agreement between City and developer.

Section 8. When City Service is not Available for New Development

a. City shall provide written notification to the County and the property owner within 14 days after the first formal review of the proposed site plan. Said notification shall advise whether service is or is not available, and shall describe the conditions which qualify it as being available. Upon notification that service is not available, property owner shall be allowed to install potable water wells and/or septic sewage systems in accordance with applicable County Codes of Law, or to seek services from another water and/or sewer service provider.

b. If City Service is not available as per notification received by the County described in Paragraph a above, County may, in accordance with Leon County Code and the provisions of this agreement, revoke the franchise for the geographic area in question and grant water and/or sewer franchises to other providers.

Section 9. Standards for Construction and Operation.

a. The City water and sewer construction standards, as they exist or may be modified, shall apply to all City water and sewer franchise area.

b. Standards for the design and construction of water and sewer systems by providers other than City shall be at least equal to those of City. Such standards for water systems shall include minimum requirements for water main sizes, fire hydrant distribution, and flow capacities to provide adequate fire protection.

c. State and Federal regulations relative to the construction and operation of water and sewer facilities shall be adhered to by all utility providers in Leon County.

d. County standards and permit procedures must be adhered to by City and all franchise holders for any water and/or sewer construction that impacts County maintained facilities such as roads or drainage facilities.

Section 10. Termination. If either Party fails to comply with any of the terms or conditions of this Agreement or defaults in any of its obligations under this Agreement and shall fail, within ninety (90) calendar days after written notice from the other Party, to correct such default or noncompliance, the non-defaulting Party may, at its option, forthwith terminate this Agreement after Section 11 provisions have been complied with. Upon termination, geographic areas physically served shall be converted into specific water and/or sewer franchises.

Section 11. Dispute Resolution.

a. The Parties shall attempt to resolve any disputes that arise under this Agreement in good faith and in accordance with this Section. The provisions of the "Florida Governmental

Conflict Resolution Act" shall not apply to disputes under this Agreement, as an alternative dispute resolution process, is hereby encompassed within Section 11. The aggrieved Party shall give written notice to the other Party, setting forth the nature of the dispute, date of occurrence (if known), and proposed resolution, hereinafter referred to as the "Dispute Notice".

b. The appropriate City and County department heads shall meet at the earliest opportunity, but in any event within 10 days from the date the Dispute Notice is received, to discuss and resolve the dispute. If the dispute is resolved to the mutual satisfaction of both, the department heads shall report their decision, in writing, to the City Manager and the County Administrator.

c. If the department heads are unable to reconcile the dispute, they shall report their impasse to the City Manager and the County Administrator who shall then communicate at their earliest opportunity regarding the dispute, but in any event within 20 days following receipt of the Dispute Notice, to attempt to reconcile the dispute.

d. If a dispute is not resolved by the foregoing steps within thirty (30) days after receipt of the Dispute Notice, unless such time is extended by mutual agreement of the Parties, then either Party may require the dispute to be submitted to mediation by delivering written notice thereof (the "Mediation Notice") to the other Party. The mediator shall meet the qualifications set forth in Rule 10.100(c), Florida Rules for Mediators, and shall be selected by the Parties within 10 days following receipt of the Mediation Notice. If agreement on a mediator cannot be reached in that 10-day period, then either Party can request that a mediator be selected by an independent conflict resolution organization, and such selection shall be binding on the Parties. The costs of the mediator shall be borne equally by the Parties.

e. If an amicable resolution of a dispute has not been reached within 60 calendar days following selection of the mediator, or by such later date as may be mutually agreed upon by the Parties, then such dispute may be referred to binding arbitration by either Party. Such arbitration shall be conducted in accordance with the Florida Arbitration Code (Chapter 682, Florida Statutes).

f. Such arbitration shall be initiated by delivery, from one Party (the "Claimant") to the other (the "Respondent"), of a written demand therefor containing a statement of the nature of the dispute and the amount, if any, involved. The Respondent, within ten (10) days following its receipt of such demand, shall deliver an answering statement to the Claimant. After the delivery of such statements, either Party may make new or different claims by providing the other with written notice thereof specifying the nature of such claims and the amount, if any, involved.

g. Within ten (10) days following the delivery of such demand, each Party shall select an arbitrator and shall deliver written notice of that selection to the other. If either Party fails to select an arbitrator within such time, the other Party may make application to the court for such appointment in accordance with the Florida Arbitration Code. Within ten (10) days following delivery of the last of such written notices, the two arbitrators so selected shall confer

and shall select a third arbitrator. Each of the arbitrators so appointed shall have experience in local government and/or utility issues.

The arbitration hearing shall be commenced in Leon County, Florida within sixty (60) days following selection of the third arbitrator. Except as may be specifically provided herein, the arbitration shall be conducted in accordance with Rules R-23 – R-48, of the Commercial Arbitration Rules of the American Arbitration Association.

Section 12. Indemnification

To the extent permitted by law and subject to the limitations, conditions, and requirements of Section 768.28, Florida Statutes, which the Parties do not waive, each Party agrees to indemnify, defend and hold harmless the other Party, their officials, officers, and employees, from and against all liabilities, damages, costs and expenses, resulting from or arising out of any acts or omissions by the indemnifying Party, or its officials, officers, or employees, relating in any way to this Agreement.

Section 13. General Provisions.

a. Governing Law and Venue . This Agreement shall be governed by and construed in accordance with the laws of the State of Florida. Any action to enforce any of the provisions of this Agreement must be maintained in Tallahassee, Leon County, Florida.

b. Waiver. Failure to insist upon strict compliance with any term, covenant or condition of this Agreement shall not be deemed a waiver of it. No waiver or relinquishment of a right or power under this Agreement shall be deemed a waiver of that right or power at any other time.

c. Modification. This Agreement shall not be extended, changed or modified, except in writing duly executed by the Parties hereto.

d. Binding Effect. This Agreement shall be binding upon the successors and, subject to below, assigns of the Parties hereto.

e. Assignment. Because of the unique nature of the relationship between the Parties and the terms of this Agreement, neither Party hereto shall have the right to assign this Agreement or any of its rights or responsibilities hereunder to any third Party without the express written consent of the other Party to this Agreement, which consent shall not unreasonably be withheld.

f. Entire Agreement. This Agreement constitutes the entire agreement between the Parties with respect to the matters contained herein, and all prior agreements or arrangements between them with respect to such matters are superceded by this Agreement.

g. Headings. Headings in this Agreement are for convenience only and shall not be used to interpret or construe its provisions.

h. Ambiguity. This Agreement has been negotiated by the Parties with the advice of counsel and, in the event of an ambiguity herein, such ambiguity shall not be construed against any Party as the author hereof.

i. Public Bodies. It is expressly understood between the Parties that the City is a duly incorporated municipal corporation of the State of Florida and that the County is a political subdivision of the State of Florida. Nothing contained herein shall be construed as a waiver or relinquishment by either of the Parties to claim such exemptions, privileges or immunities as may be provided to that Party by law.

j. Force Majeure. A Party shall be excused from performance of an obligation under this Agreement to the extent, and only to the extent, that such performance is affected by a "Force Majeure Event" which term shall mean any cause beyond the reasonable control of the Party affected, except where such Party could have reasonably foreseen and reasonably avoided the occurrence, which materially and adversely affects the performance by such Party of its obligation under this Agreement. Such events shall include, but not be limited to, an act of God, disturbance, hostility, war, or revolution; strike or lockout; epidemic; accident; fire; storm, flood, or other unusually severe weather or act of nature; or any requirements of law.

k. Cost(s) and Attorney Fees. In the event of litigation between the Parties to construe or enforce the terms of this Agreement or otherwise arising out of this Agreement, the prevailing Party in such litigation shall be entitled to recover from the other Party its reasonable costs and attorneys fees incurred in maintaining or defending subject litigation. The term litigation shall include appellate proceedings.

l. Severability. It is intended that each Section of this Agreement shall be viewed as separate and divisible, and in the event that any Section, or Party thereof, shall be held to be invalid, the remaining Sections and parts shall continue to be in full force and effect.

m. Subject to Appropriation. All payment obligations of the Parties as set forth herein shall be subject to appropriation of funding therefore by the applicable legislative bodies; however, failure to appropriate funding adequate to meet such payment obligations shall be dealt with as a dispute under this Agreement.

n. Exceptions to Agreement. All provisions of Chapter 18, of the Leon County Code of Laws, not in conflict with the provisions herein, shall remain in full force and effect. All provisions of the City of Tallahassee Code, particularly Chapter 21 not in conflict with the provisions herein, shall remain in full force and effect. The Water and Sewer Agreement entered into by and between Leon County and the City February 11, 1993 shall be cancelled as of the effective date of this agreement and shall have no effect upon the terms and conditions of this Agreement, nor the Franchise granted herein.

IN WITNESS WHEREOF, the Parties hereto, through their duly authorized representative, have executed this Water and Sewer Agreement as of the date first written above.

LEON COUNTY, FLORIDA

By: _____
CLIFF THAELL, Chairman
of the Board of County Commissioners

ATTESTED TO:

By: _____
ROBERT B. INZER, Clerk
Leon County, Florida

APPROVED AS TO FORM:

By: _____
HERBERT W.A. THIELE, Esq.
COUNTY ATTORNEY

CITY OF TALLAHASSEE, FLORIDA

By: _____
JOHN R. MARKS, III, Mayor
of the City of Tallahassee

ATTESTED TO:

By: _____
GARY HERNDON
City Treasurer-Clerk

APPROVED AS TO FORM:

By: _____
JAMES R. ENGLISH, Esq.
CITY ATTORNEY

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COMMISSIONERS:

WILLIAM C. PROCTOR, JR.
DISTRICT 1

JAMIE G. SAULS
DISTRICT 2

DAN WINCHESTER
DISTRICT 3

TONY GRIPPA
DISTRICT 4

BOB RACKLEFF
DISTRICT 5

CLIFF THAELL
AT-LARGE

ED DEPUY
AT-LARGE

PARWEZ ALAM
COUNTY ADMINISTRATOR

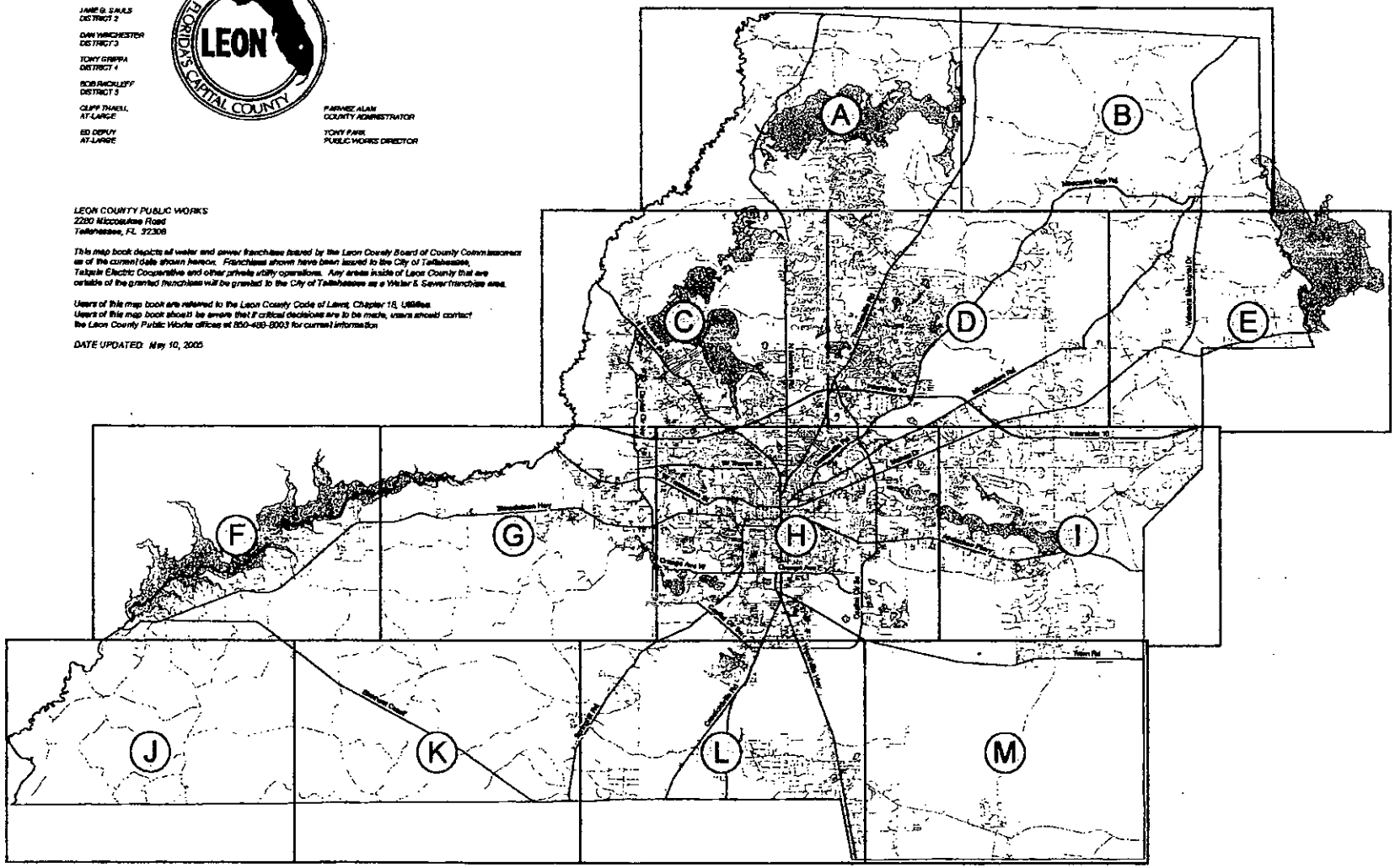
TONY PARK
PUBLIC WORKS DIRECTOR

LEON COUNTY PUBLIC WORKS
2280 Miccosukee Road
Tallahassee, FL 32308

This map book depicts all water and sewer franchises issued by the Leon County Board of County Commissioners as of the current date shown hereon. Franchises shown have been issued to the City of Tallahassee, Talquin Electric Cooperative and other private utility operations. Any areas inside of Leon County that are outside of the granted franchises will be granted to the City of Tallahassee as a Water & Sewer franchise area.

Users of this map book are referred to the Leon County Code of Laws, Chapter 18, Utilities.
Users of this map book should be aware that if critical decisions are to be made, users should contact the Leon County Public Works offices at 850-488-8003 for current information.

DATE UPDATED: May 10, 2005



Water & Sewer Utility Franchise Areas and Target Areas

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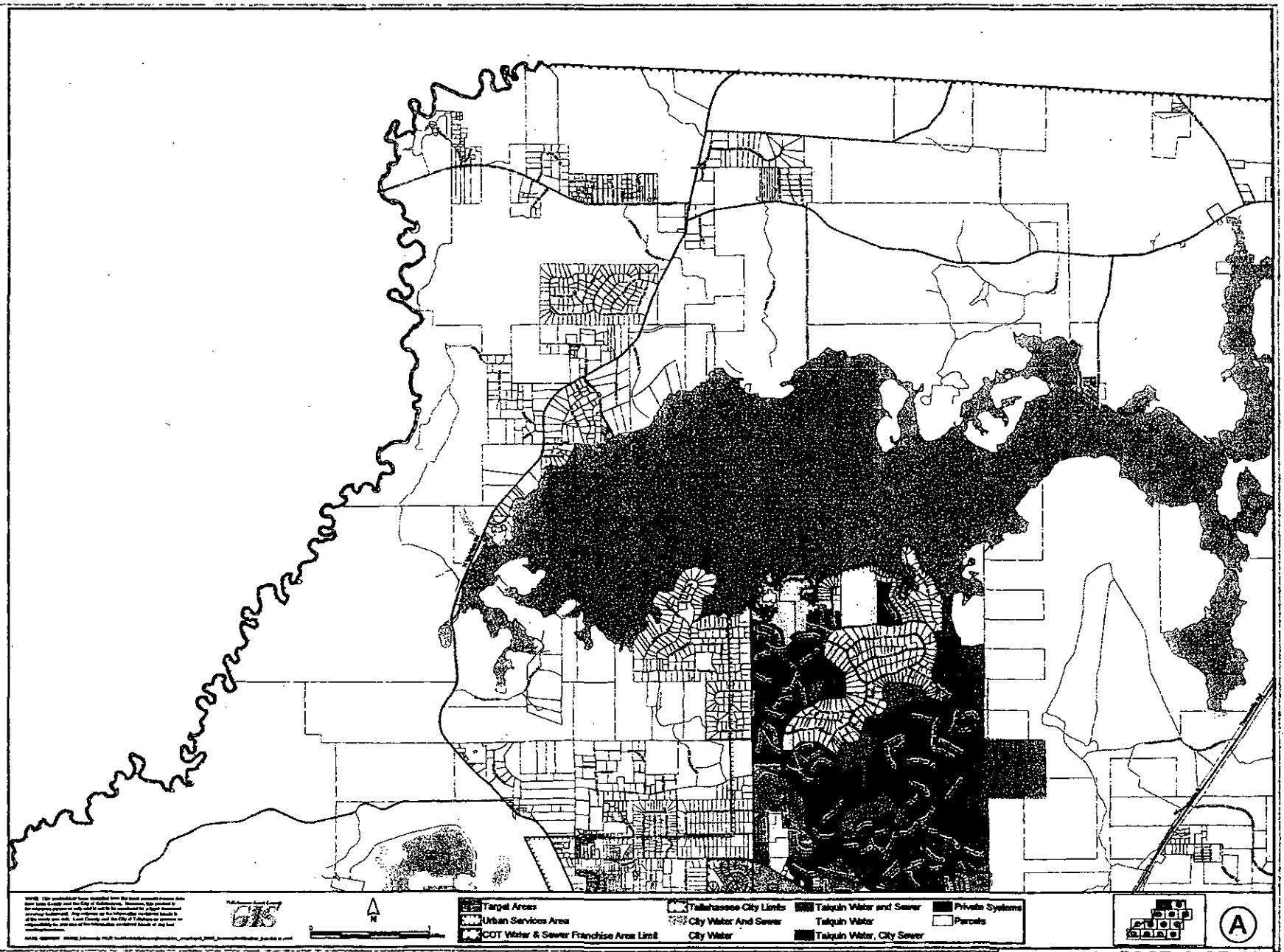

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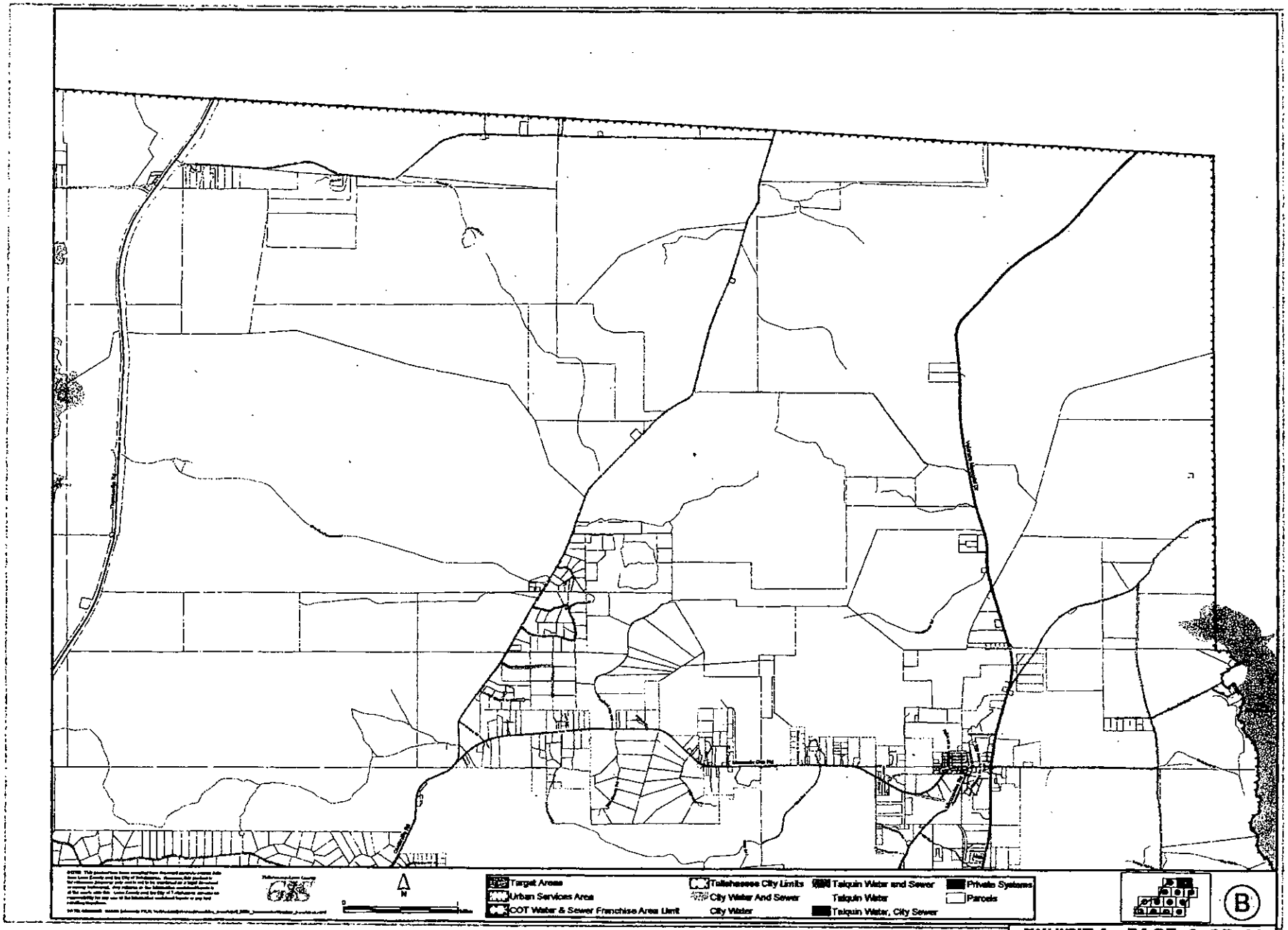

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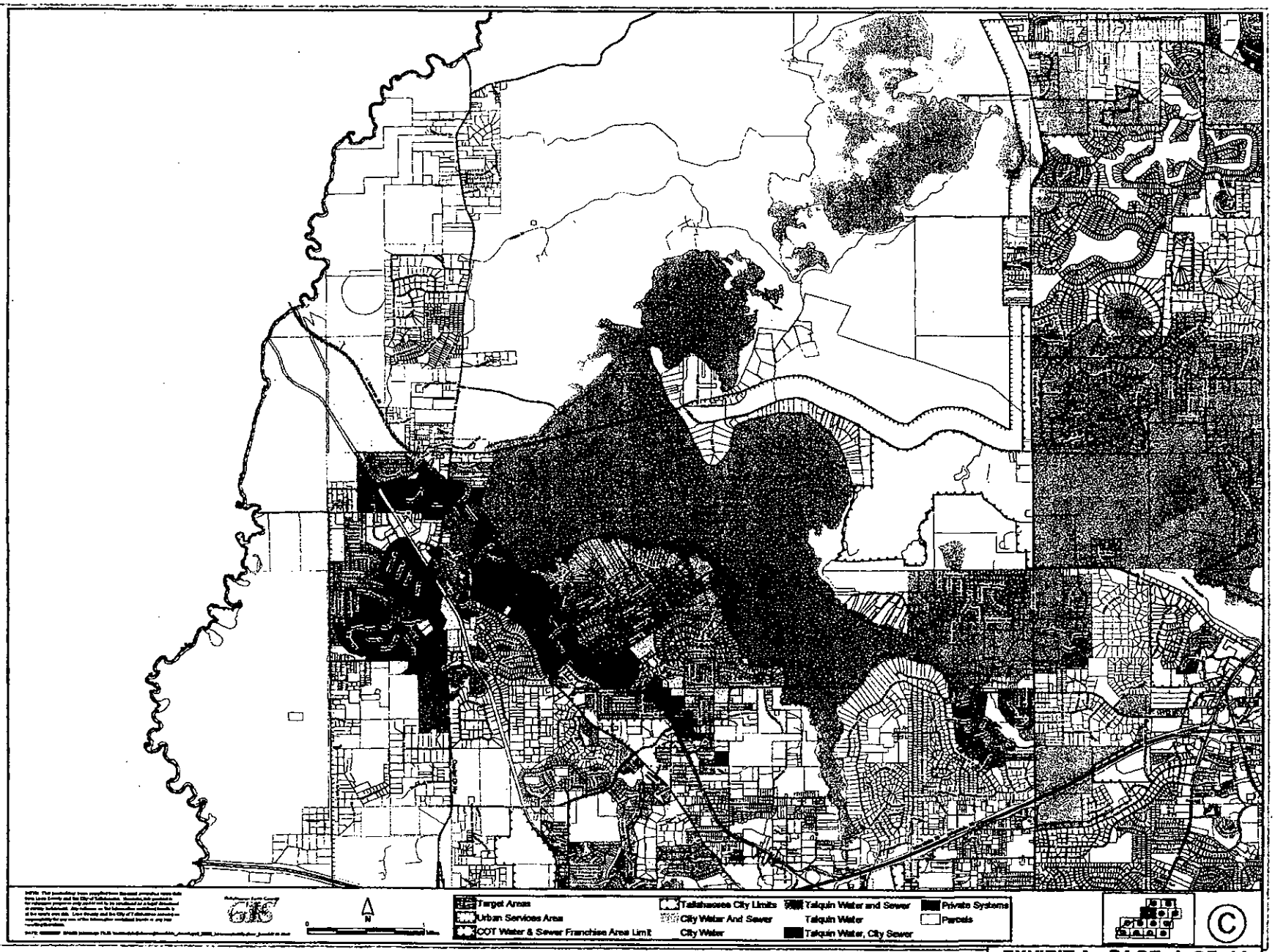

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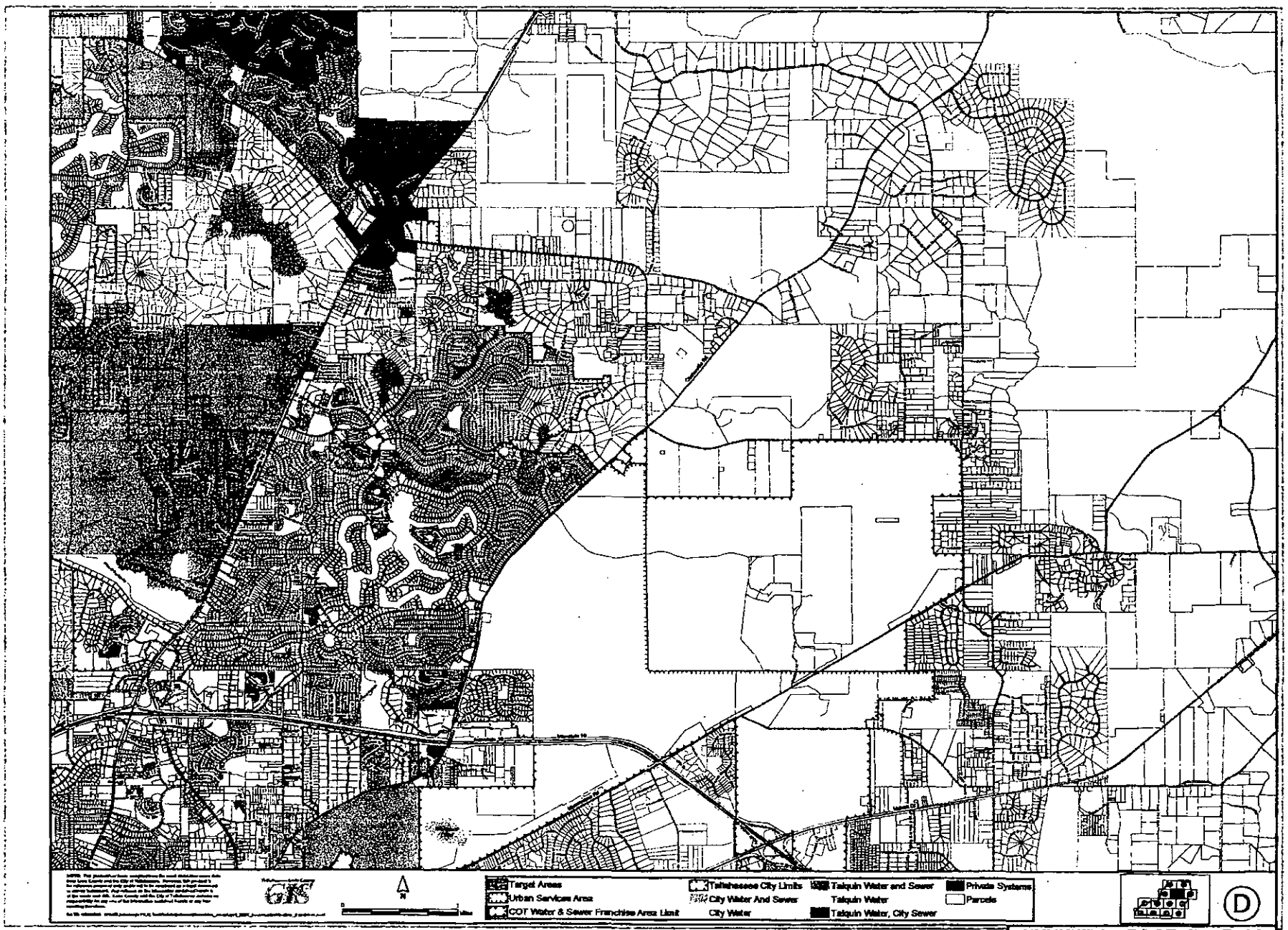

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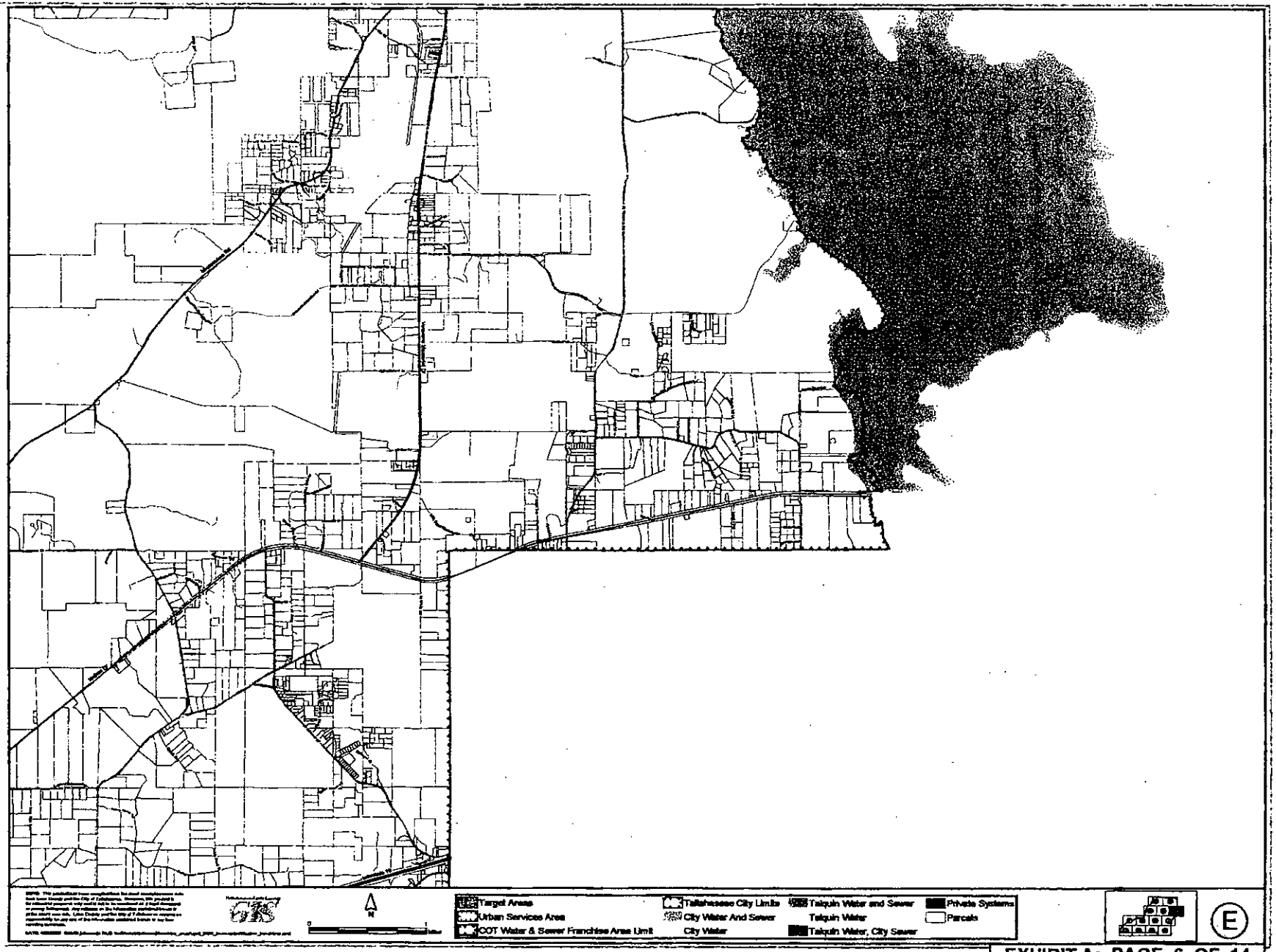

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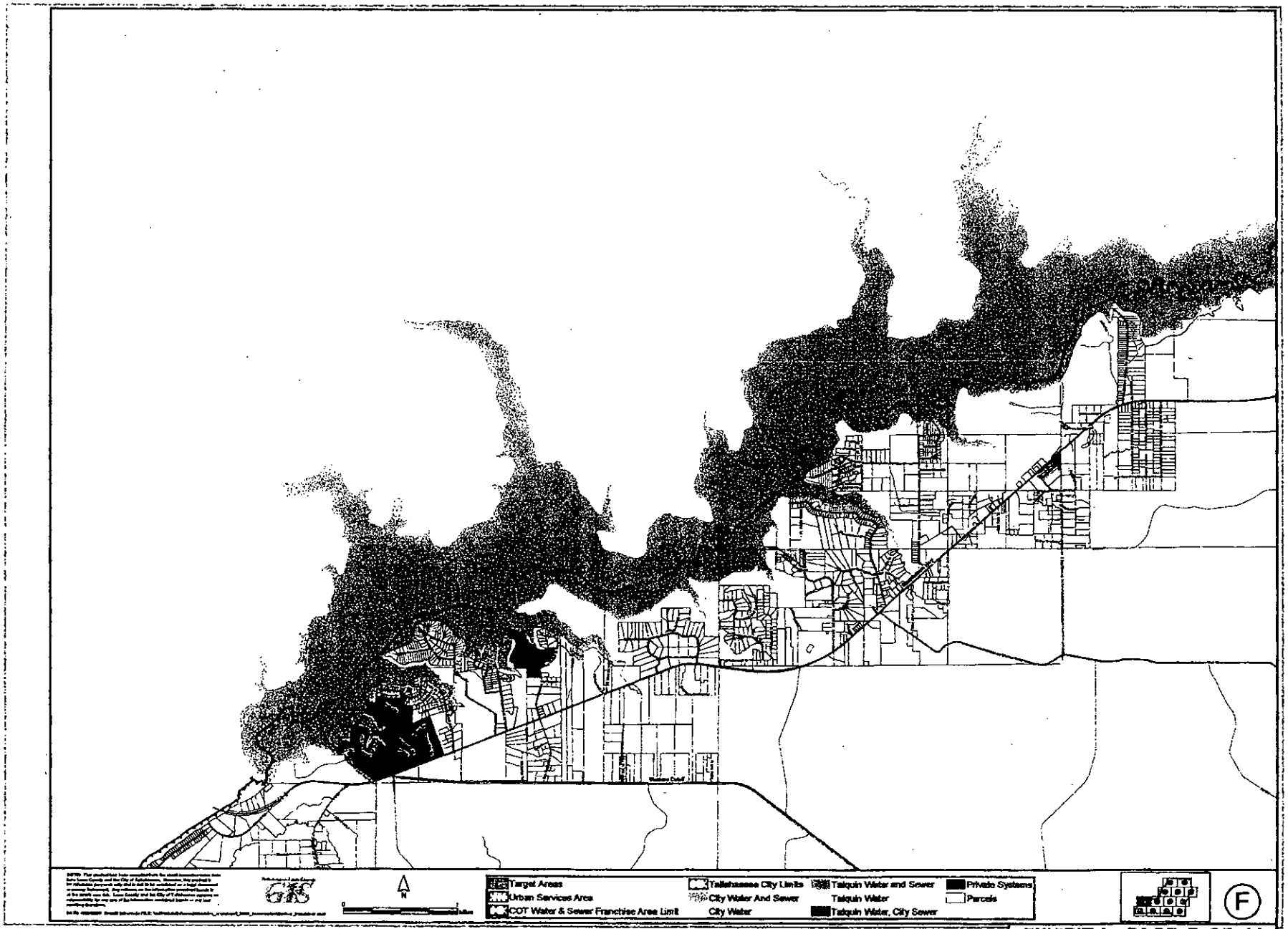

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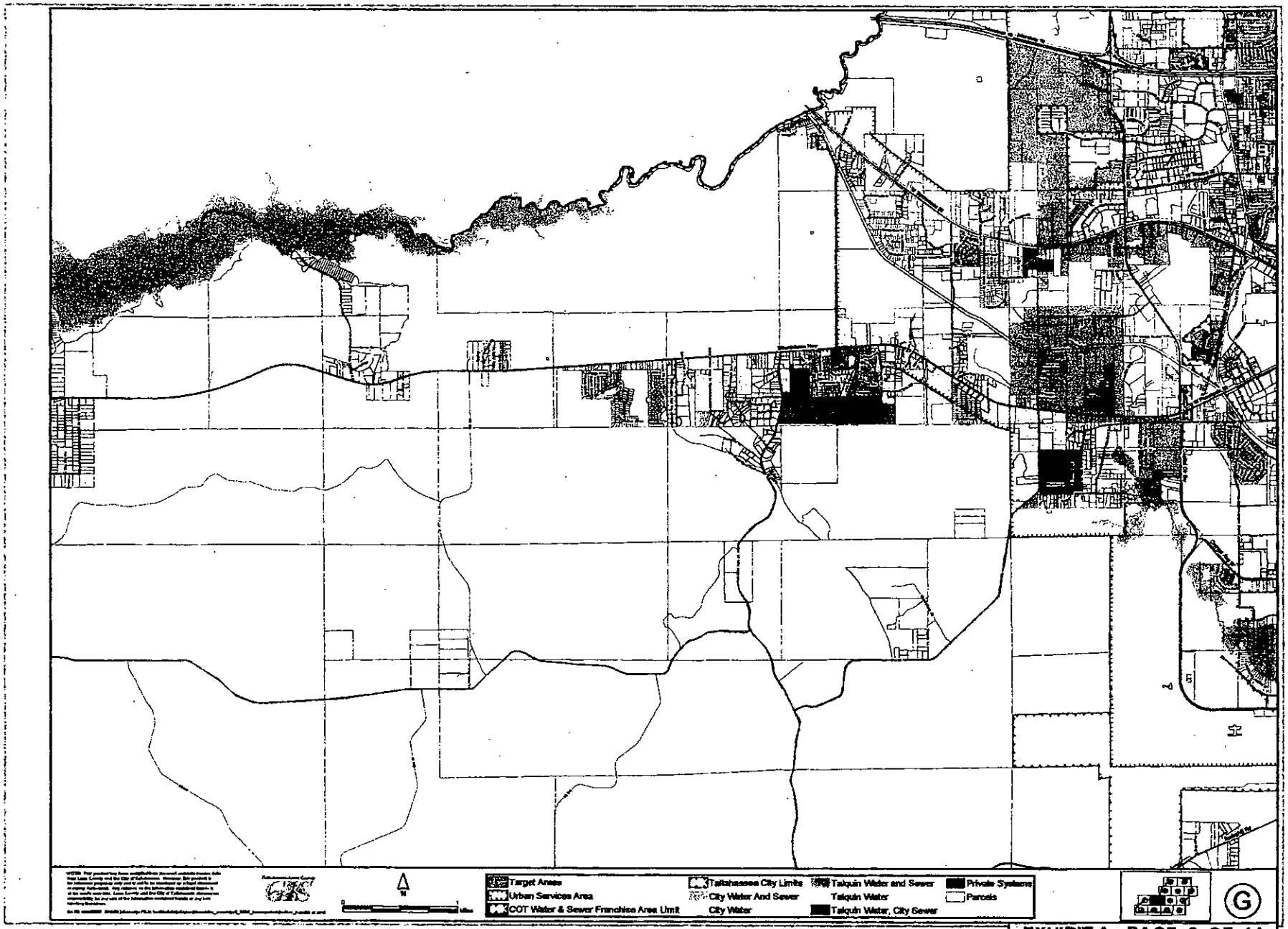

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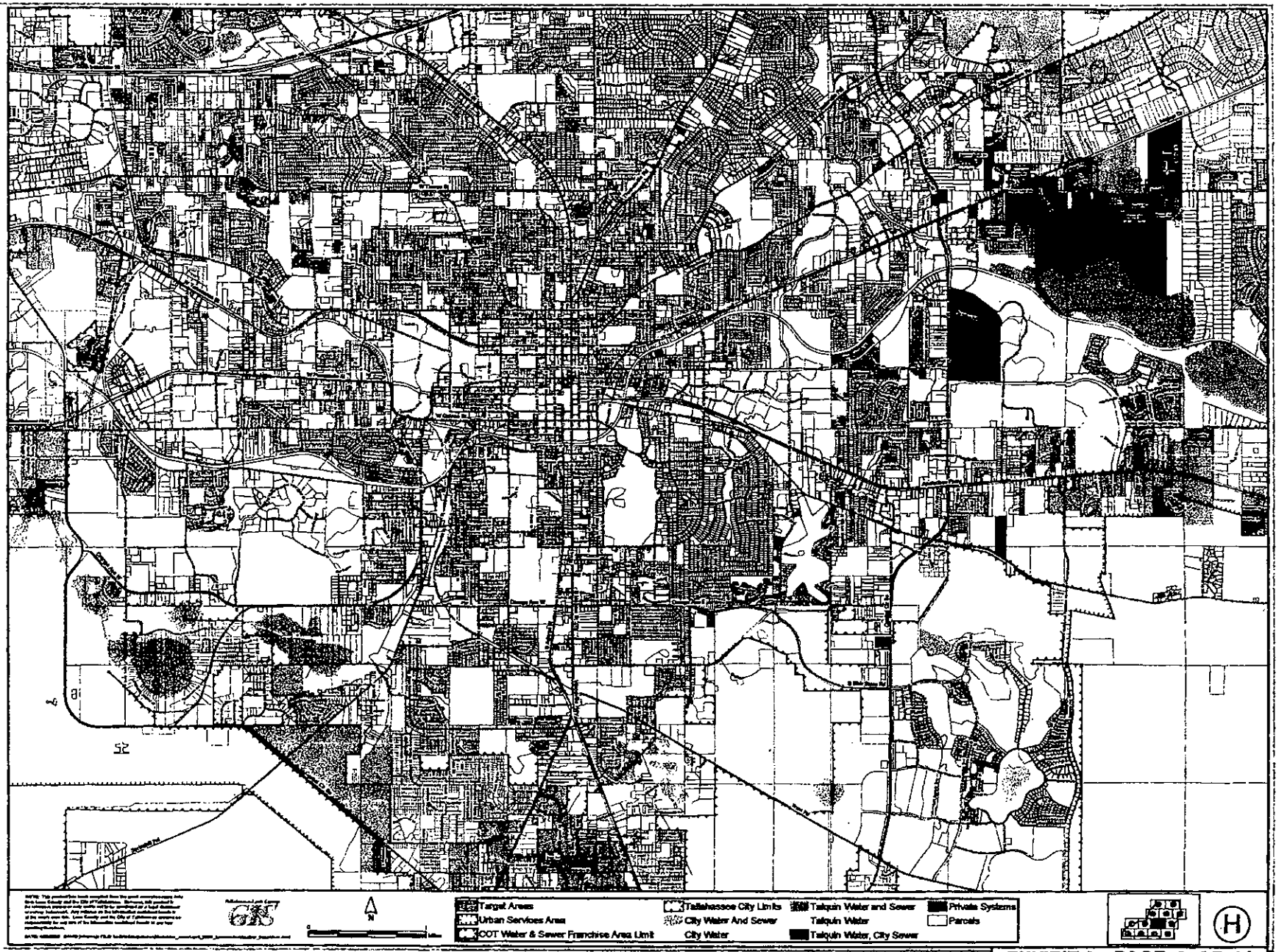
Target Areas
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COT Water & Sewer Franchise Area Limit
Tallahassee City Limits
City Water And Sewer
City Water
Talquin Water and Sewer
Talquin Water
Talquin Water, City Sewer
Private Systems
Parcels
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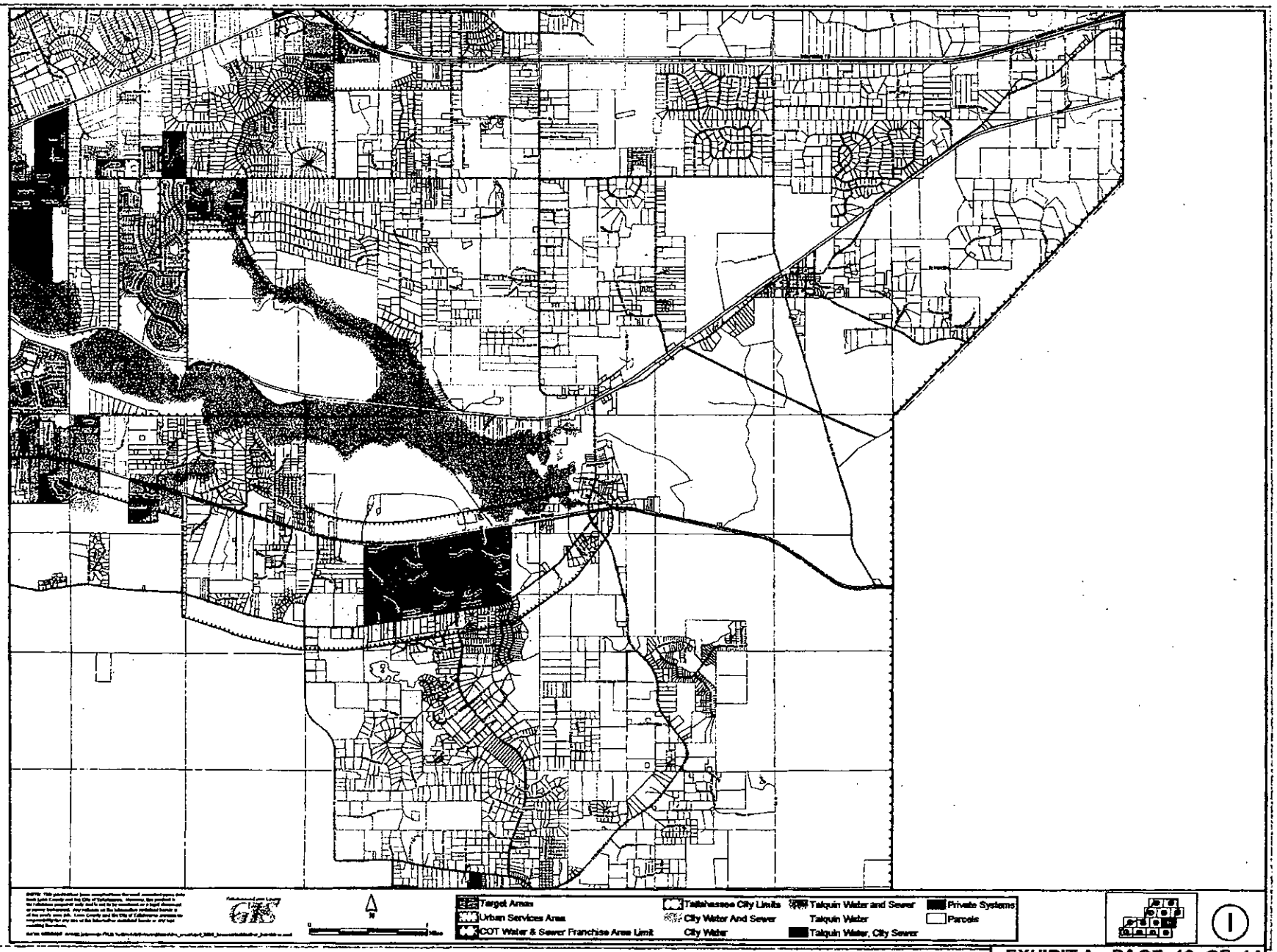

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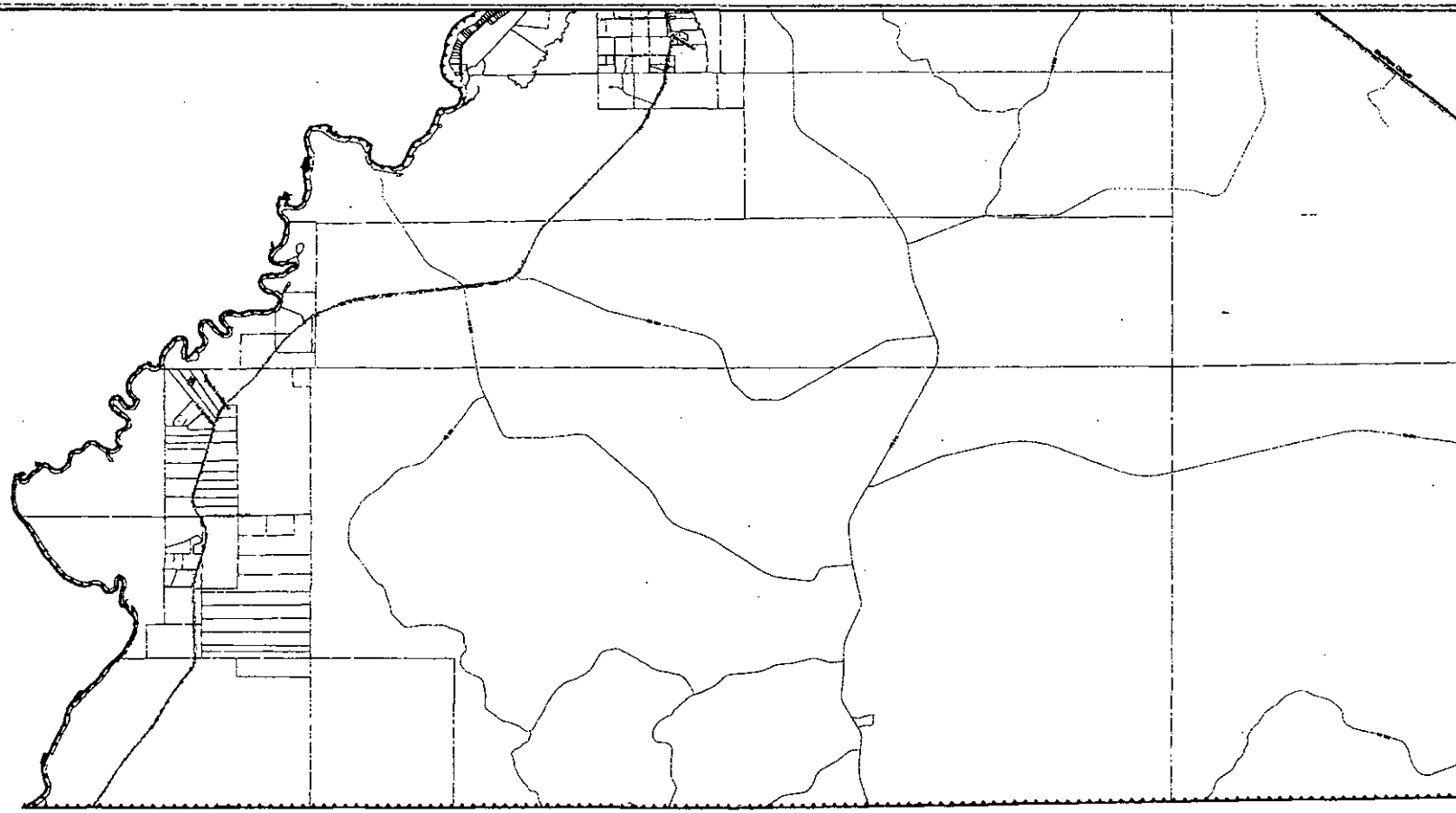

Target Areas
Urban Services Area
COT Water & Sewer Franchise Area Limit
Tallahassee City Limits
City Water And Sewer
City Water
Talquin Water and Sewer
Talquin Water
Talquin Water, City Sewer
Private Systems
Parcels

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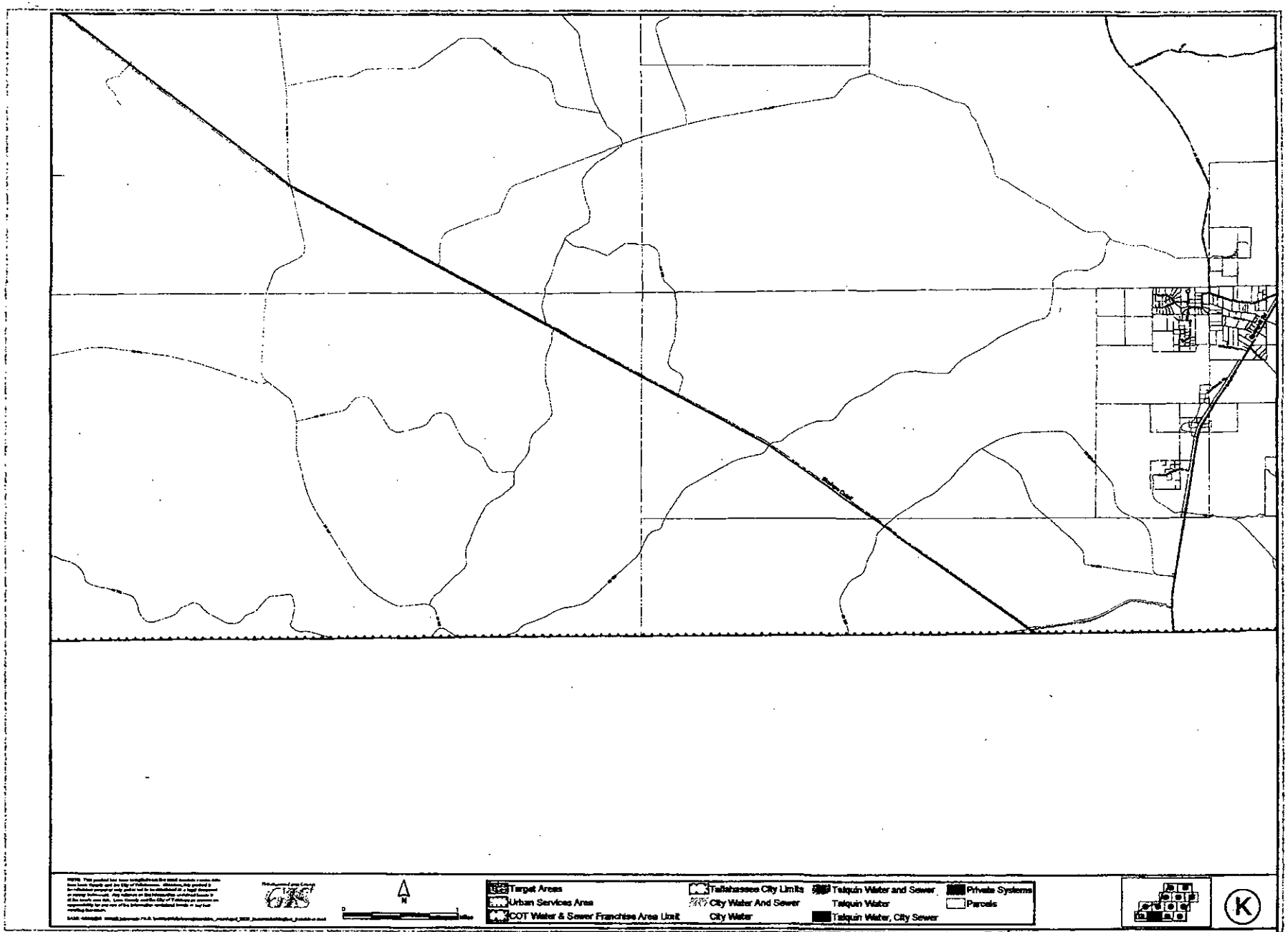

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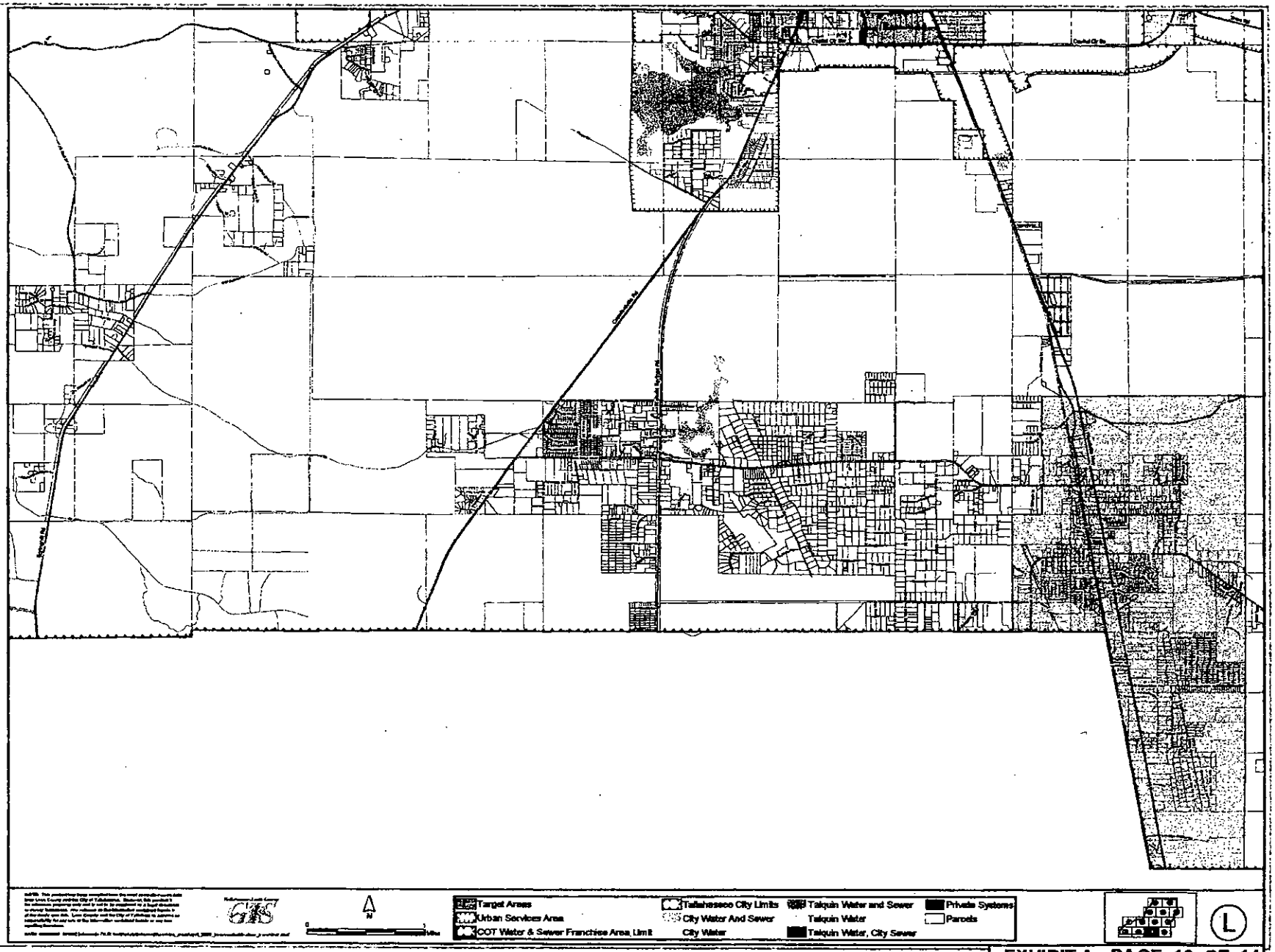

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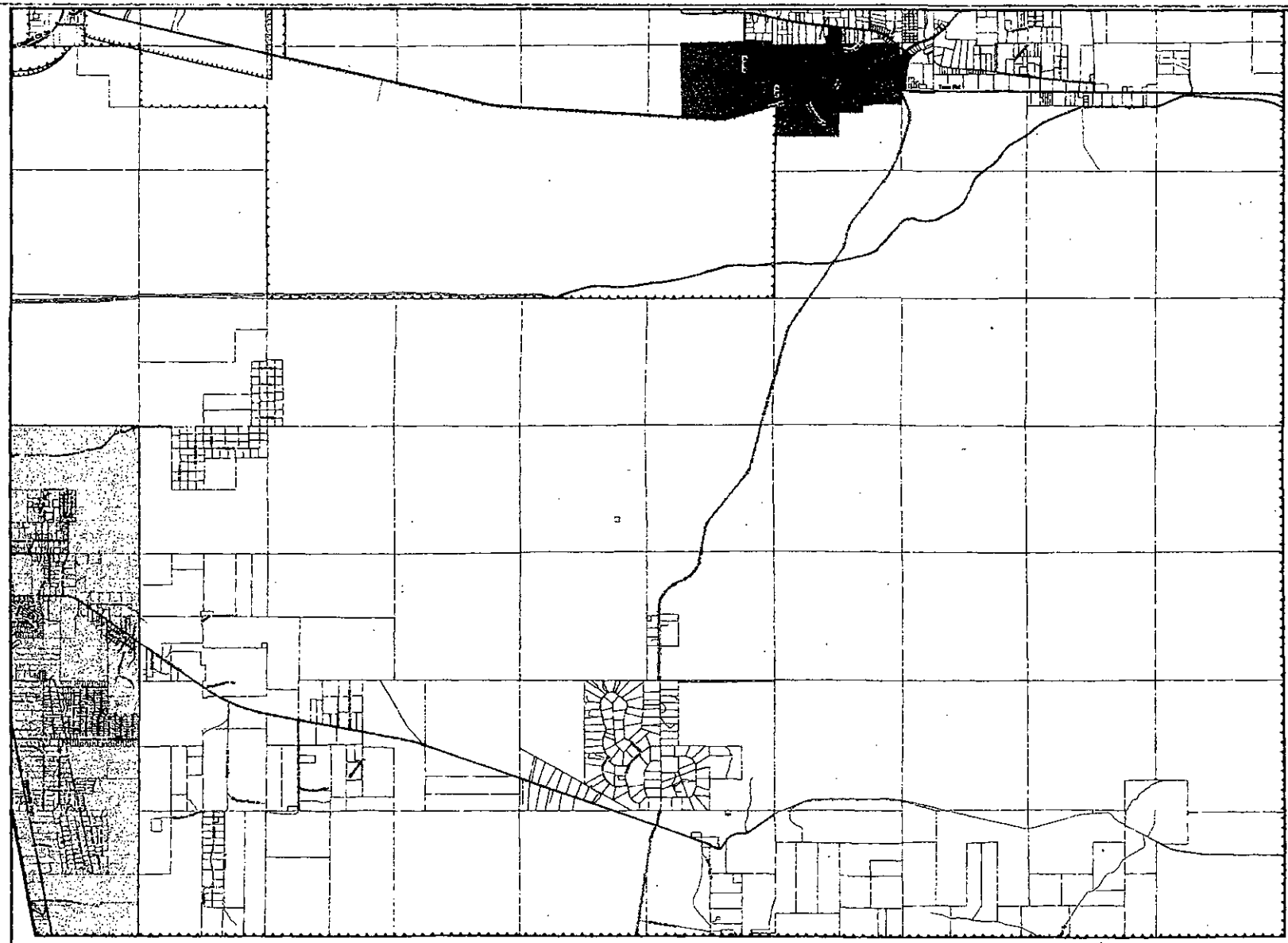

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ORDINANCE NO. 09-_____

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF LEON COUNTY, FLORIDA, AMENDING CHAPTER 18, ARTICLE III OF THE CODE OF LAWS OF LEON COUNTY, FLORIDA, RELATING TO ONSITE SEWAGE DISPOSAL SYSTEMS; TO REPEAL PRIOR PROVISIONS RELATED TO SUBDIVISIONS LOCATED IN KILLEARN LAKES UNITS I AND II; ENACTING NEW REGULATIONS PROVIDING FOR A PRIMARY SPRINGS PROTECTION ZONE DEVELOPMENT STANDARD WITHIN SUCH ZONE INCLUDING MANDATORY USE OF PERFORMANCE BASED ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS UNDER CERTAIN CIRCUMSTANCES; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF LEON COUNTY, FLORIDA, that:

WHEREAS the staff of Leon County and the Leon County Health Department, with the assistance and input of the Septic Advisory Group reviewed the regulation relative to septic systems as contained in Chapter 18, Article III, of the Leon County Code of Laws; and,

WHEREAS, based upon this report, the Leon County Board of County Commissioners hereby find that the additional regulations required for units in Killearn Lakes Unit I and II are no longer needed and should be repealed, as sewer service is now available by way of the newly constructed low pressure system; and,

WHEREAS, the Board of County Commissioners has also determined that there is a significant health, safety, and welfare need to reduce nitrogen in septic tank effluent so as to protect certain sensitive areas south of the "Cody Scarp" in Leon County, Florida; and,

WHEREAS, based upon the recommendations of staff and other experts, the Board of County Commissioners does hereby find and determine that mandating, under certain conditions

and circumstances the use of performance based treatment systems (PBTS) would serve to help reduce nitrogen in the affected areas.

Section 1. Chapter 18, Article III of the Code of Laws of Leon County, Florida, is hereby amended to read as follows:

ARTICLE III. ON-SITE SEWAGE DISPOSAL SYSTEMS

DIVISION 1. GENERALLY

Sec. 18-61. Short title.

This article shall be known as the Leon County On-Site Sewage Disposal System Ordinance.

Sec. 18-62. Definitions.

For the purpose of this article, the following terms shall be defined as set forth in this section unless the context clearly requires otherwise or a different definition is prescribed for a particular provision.

Acceptable system shall mean the collection, treatment and disposal of sewage wastes in a manner consistent with modern technical standards and generally regarded as a system which does not contribute to the contamination of groundwater or surface water or the spread of communicable disease.

Department shall mean the county health department or its synonyms; Leon County Public Health Unit or the health department.

Existing system shall mean an onsite sewage treatment and disposal system that is installed and operating in the county as of February 1, 1988.

Extension, when applied to onsite sewage treatment and disposal systems, shall mean addition of drainfield to an existing system, where the existing system is not adequate in size or efficiency to distribute the existing or proposed sewage flow.

Heavy loading appliances shall include all appliances used in mechanical process of clothes washing, dish washing, and the grinding and/or disposing of food wastes.

Laundry waste shall mean the liquid wastes from washing machines, laundry sinks or other clothes-washing devices.

100-year flood elevation shall mean that flood elevation which has a one in 100 probability of being equaled or exceeded in any calendar year. The 100-year flood elevation shall be determined by a registered professional engineer.

Person or other entity shall mean any individual, corporation, partnership, association, firm, trust or other organization, whether public or private. The word "person" includes individuals, children, firms, associations, joint ventures, partnerships, estates, trusts, business trusts, syndicates, fiduciaries, corporations, and all other groups or combinations.

Relocation shall mean the movement of all or a part of an existing system from one location to another on the same site.

Relocation shall mean the movement of all or a part of an existing system from one location to another on the same site.

Sewage wastes shall include human, domestic and commercial wastes, liquids or other matter from plumbing fixtures and other similar wastes from household or establishment appurtenances.

Subdivision shall mean a division of any parcel of land for the purpose, whether immediate or future, of any transfer of ownership, right to possession or building development; also, the establishment of a street and the replatting of existing plats.

Unacceptable system shall mean the collection, treatment and/or disposal of sewage wastes in a manner which is not consistent with modern technical standards or contributes to the contamination of groundwater and/or surface water or the spread of communicable disease due to design flaws. Unacceptable systems include cesspools, dry wells, metal drums, open or closed pits, lagoons, bottomless tanks or any structure that discharges directly to the ground surface, ditches, canals, sinkholes or bodies of water.

Unobstructed land shall mean land (contiguous to the system) which is free of pools, concrete slabs, buildings, driveways, parking or landscape features which would prohibit, hinder or otherwise adversely affect the installation, operation or maintenance of the on-site sewage disposal system.

Sec. 18-63. Alternative means for enforcement.

In addition to the remedies set forth in section 18-97, the department, the Board of County Commissioners, or any aggrieved person may have recourse to such remedies in law and equity as may be necessary to ensure compliance with the provisions of this article, including injunctive relief to enjoin and restrain any person or other entity violating its provisions and such damages as may be sustained by virtue of a violation of this article, together with all costs and expenses involved in the case.

Sec. 18-64. Purpose.

The purpose of this article is to promote and protect the health, safety and general welfare of the citizens of the county by establishing local regulations above and beyond those found in

F.S. ch. 381 and F.A.C. ch. 64E-6 regarding the design, construction, installation, maintenance and repair of onsite sewage treatment and disposal systems.

Sec. 18-65. Appeal from permit denial.

Any person aggrieved by a determination of the department as to the issuance or denial of a septic tank permit shall have the right to appeal the decision as follows:

(1) If the appeal relates to F.A.C. ch. 64E-6 standards, the aggrieved person may appeal to the state variance review board or as otherwise indicated in this article. Application forms may be obtained from the department.

(2) If the appeal relates to a standard included in this article, over and above F.A.C. ch. 64E-6 standards, the aggrieved person shall be entitled to a hearing conducted by a hearing officer designated by the Board of County Commissioners. A request for a hearing pursuant to this paragraph shall be made in writing to the department. A hearing shall be held within 30 days from the date of receipt of the request for hearing by the department.

Sec. 18-66. Evaluation for subdivisions and parcels.

~~(a)~~ (1) Any subdivision developed, designed, platted, recorded or unrecorded after February 1, 1988 which proposes the use of onsite sewage treatment and disposal systems shall be evaluated by the department for suitability prior to recommendations being made to the technical coordinating committee. The evaluation process shall consist of the investigation and determination of the suitability of the subdivision to accommodate onsite sewage treatment and disposal systems based on the following parameters in addition to those required under F.A.C. ch. 64E-6:

~~(1)~~ (a) Overall density of onsite sewage treatment and disposal systems.

~~(2)~~ (b) Estimated wet-season water table.

~~(3)~~ (c) Soil texture.

~~(4)~~ (d) Slope of the land and drainage features.

~~(5)~~ (e) Flood elevations.

~~(b)~~ (2) Proposed subdivisions shall receive an overall rating of satisfactory, marginal, conditional or unsatisfactory based on these criteria. Recommendations from the department shall be made in writing to the Staff Technical Review Committee assigned to review the project by the Leon County Growth and Environmental Management Department.

~~(c)~~ (3) A standardized rating and evaluation procedure shall be developed by the department and made available to all interested parties for guidance in the planning of proposed subdivisions.

~~(d)~~ (4) Any subdivision that receives an overall rating of conditional or unsatisfactory shall include, on the final plat, the type of systems required to overcome the noted limitations.

~~(e)~~ (5) In addition to the criteria set forth in subsections ~~(a)~~ (1) through ~~(d)~~ (4) above, lots in subdivisions and parcels will be considered on the basis of an evaluation of soil characteristics, water table elevations, history of flooding, records of service of existing installations in the same general area and adequate stormwater drainage.

Sec. 18-67. Standards.

~~(a)~~ (1) The base standard and definitions for this article shall be those standards and definitions found in F.A.C. ch. 64E-6 ("Standards for Onsite Sewage Treatment and Disposal Systems," Part I), and are hereby incorporated into this article as if fully set out herein, and shall be met by any and all persons, or other entities desiring to construct, install, operate or repair a system in the county.

~~(b)~~ (2) All systems, as defined in this article, constructed, installed or repaired in the county after February 1, 1988, shall conform to the requirements of this article.

~~(c)~~ (3) Any system installed before February 1, 1988 which was inspected and approved by the department may continue to be lawfully used as approved; provided, however, if a failure of the system necessitates reconstruction or repair, such reconstruction or repair shall conform to the requirements of F.A.C. ch. 64E-6.

~~(d)~~ (4) Any system which must be mounded, as a condition of the permit, shall receive prior approval from the Leon County Growth and Environmental Management Department for the placement of fill on the property. A copy of the approval must be provided to the county health department prior to the construction permit being issued. This requirement shall also apply to any application where a portion or all of the lot or site is proposed to be elevated.

~~(e)~~ (5) The plot plan, site plan or sketch plan used for the purpose of obtaining a system permit shall also be used for the purpose of obtaining all other county permits, including building, stormwater, landscape or any other necessary permits.

~~(f)~~ (6) The area adjacent to the proposed drainfield location shall be unobstructed and clearly shown on the plot plan.

~~(g)~~ (7) All information relative to the construction of the system shall be identified on the site plan submitted to the department for permit approval. Where the proposed installation site is within the 100-year floodplain, this information shall include, a benchmark, established on site by a professional land surveyor or registered engineer, from which the 100-year flood may be referenced.

~~(h)~~ (8) Drainfield sizing shall be in accordance with the standards established in this article and F.A.C. ch. 64E-6 except for sandy clay loam textured soils. For new systems in a

trench configuration only, when a soil loading rate of 0.65 gallons per square foot per day is determined using the provisions of F.A.C. ch 64E-6 and the USDA soil texture is sandy clay loam, the drainfield shall be sized using a loading rate of 0.50 gallons per square foot per day. Loading rates for bed configurations shall be in compliance with F.A.C. ch. 64E-6. There shall be an exception made for systems in a trench configuration installed in sandy clay loam textured soils where the estimated sewage flows are equal to 500 gallons per day. The drainfield size for estimated sewage flows equal to 500 gallons per day shall be no less than 990 square feet.

Sec. 18-68, 18-69. Reserved.

Sec. 18-70. Heavy loading appliances.

~~(a)~~ (1) Additional treatment of wastes from heavy loading appliances is required when soil limitations, at the proposed system installation site, are rated as moderate or severe for septic tank use. The "USDA Soil Survey of Leon County, Florida," along with a site evaluation by the department, shall be used for this determination.

~~(b)~~ (2) The septic tank and drainfield sizing requirements, as described in F.A.C. ch. 64E-6, shall be used with the following additions:

~~(1)~~ (a) Where more than one heavy loading appliance is proposed for use, a secondary tank or interceptor installed in series with the main septic tank, shall be required. The tank shall be a minimum of 250 gallons in size and shall meet all applicable (structural) requirements of F.A.C, ch. 64E-6.

~~(2)~~ (b) Laundry wastes may be separated from the main septic tank system when the following conditions are met:

~~a.~~ 1. There is no reduction in the size of the main septic tank.

~~b.~~ 2. Laundry waste tanks meet the sizing requirements of F.A.C.-ch 64E-6 and contain at least 125 square feet of drainfield or an amount prescribed by F.A.C. ch. 64E-6.

~~c.~~ 3. Where soils rated as moderate or severe, for onsite sewage treatment and disposal system use due to slow percolation rates, unusual conditions exist, or the number of bedrooms is more than four, the department may require additional drainfield in excess of the Florida Administrative Code requirement.

~~(3)~~ (c) The secondary tank or interceptor may be utilized as a pump chamber in the event that the onsite sewage treatment and disposal system needs repair which requires a pump to elevate the effluent to a newly installed drainfield, provided the tank has been certified as structurally sound by a registered septic contractor and meets the sizing requirements for pump tank capacities in F.A.C., ch. 64E-6.

~~(4)~~ (d) A secondary tank or interceptor shall not be required where two separate tanks, installed in series, are used to make up the total required tank volume, provided that the total volume of the tanks in series exceeds the required minimum tank volume by 250 gallons or more.

~~(4)~~ (e) Whenever a separate tank is required, all plumbing for the tank shall be stubbed out within ten feet of the main septic tank system. This requirement can be waived for laundry waste systems at the discretion of the department.

Sec. 18-71. Floodprone areas.

~~(a)~~ (1) Systems shall be installed so that the bottom surface of the drainfield is no more than 12 inches below the 100-year floodplain.

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~~(b)~~ (2) System installations proposed within the 100-year floodplain shall be accompanied with a signed and sealed flood letter from a registered professional engineer indicating the elevation of the 100-year flood at the proposed system installation site and so noted on the plot plan.

~~(c)~~ (3) Maintaining the bottom surface of the drainfield 12 inches below the 100-year flood elevation does not override the 24-inch separation from the bottom of the drainfield to the estimated wet-season water table described in F.A.C. ch. 64E-6. Both requirements must be met.

~~(d)~~ (4) Systems shall not be installed in areas that are subject to failure because of inadequate, artificial or natural stormwater facilities.

~~(e)~~ (5) Estimation of the wet-season water table in sandy clay loam, sandy clay or clay type soils shall be done during the wet-season and at a time when the groundwater table is at or near its seasonal high elevation, when the following situations exist:

~~(1)~~ (a) Documented and recurring perched water tables.

~~(2)~~ (b) Failure or lack of a stormwater system to adequately collect, transport and dispose of excess water from the subdivision.

~~(3)~~ (c) Reported and/or documented cases of septic tank failures in the vicinity.

~~(4)~~ (d) Insufficient evidence in the soil to accurately predict the estimated wet-season water table.

Sec. 18-72. Lake Jackson Special Development Zone.

~~(A)~~ (1) Zone A. Wetland and floodplain ecotone, from elevation 89 feet NGVD or the water's edge, whichever provides the greater protection, to 100 feet NGVD.

~~(1)~~ (a) Onsite sewage treatment and disposal system standards:

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~~a.~~ 1. Minimum lot size of one acre, net useable land, exclusive of all paved areas, public rights-of-way, and prepared road beds within easements, and exclusive of streams, lakes, drainage ditches, marshes, or other bodies of water, and wetlands as determined by the state department of environmental protection or the director of Growth and Environmental Management.

~~b.~~ 2. Onsite sewage treatment and disposal systems shall be sized according to the predominant naturally occurring soil type beneath the proposed system or a maximum sewage loading rate of one gallon per square foot per day, whichever yields a greater size drainfield.

~~c.~~ 3. No portion of any onsite sewage treatment and disposal system, with the exception of self-contained composting systems, shall be located within 75 feet up land of elevation 89 feet NGVD, within 75 feet of any water body or watercourse or jurisdictional limit of a wetland as determined by the state department of environmental protection or the director of Growth and Environmental Management, or within any 100-year floodplain area.

~~d.~~ 4. An existing, previously platted lot or lot or record existing on January 15, 1990, when used for single-family residential use, shall be exempt from the standards of this subsection but shall comply with all other applicable laws, ordinances and regulations relating to onsite sewage treatment and disposal systems. Existing onsite sewage treatment and disposal systems may be replaced by the same size or larger systems as

required by other applicable laws, ordinances and regulations relating to onsite sewage treatment and disposal system, except where sanitary sewer is available.

Sec. 18-73. ~~Killearn Lakes Units I and II Special Development Zone.~~

~~(A) Within the platted subdivisions known as Killearn Lakes Unit I, recorded in the Public Records of Leon County at Plat Book 6, Page 26 A-L, and Killearn Lakes Unit II, recorded at Plat Book 6, Page 39, the following onsite sewage treatment and disposal system standards shall apply:~~

~~(1) No mound systems, as defined in this article, shall be permitted;~~

~~(2) All systems shall be required to either:~~

~~(a) utilize aerobic treatment units (ATUs) as defined in Section 64E-6.002, Florida Administrative Code, meeting the standards for construction, maintenance and operation set forth in Section 64E-6.012, Florida Administrative Code; or~~

~~(b) utilize an alternative treatment system or performance based systems, as defined in Chapter 64E-6, Florida Administrative Code, demonstrated to produce an effluent quality consistent with the standards in required in Chapter 64E-6 for ATUs;~~

~~(3) All systems must be designed and sealed by a Florida registered professional engineer;~~

~~(4) The design engineer must demonstrate that the system will have no adverse impact on the function of existing onsite sewage treatment and disposal systems in the subdivision, nor an adverse impact on~~

~~the stormwater drainage system for the subdivision and the subsurface ground water quantity or quality;~~

~~(5) The design engineer must sign and seal a no adverse impact letter in substantially the following form:~~

~~"I hereby certify that development of Lot ____ Block ____ Killearn Lakes Unit ____ as designed, will have no adverse impact to existing development with respect to stormwater drainage, subsurface ground water and/or the satisfactory function of existing onsite sewage treatment and disposal systems for a period of five (5) years."~~

~~and;~~

~~(6) The design engineer must guarantee the system against failure for a period of five years from the date of installation and secure a bond to assure same, in a reasonable amount to be determined by the county.~~

Primary Springs Protection Zone Special Development Zone

(1) The Primary Springs Protection Zone (PSPZ) shall be that area of Leon County within the PSPZ boundary as approved and adopted by the Board of County Commissioners.

(2) Within the PSPZ the following additional special development standards shall apply to the use of onsite sewage treatment and disposal systems (OSTDS):

(a) Newly created and existing undeveloped lots or parcels, where a central sewer system is not available, as defined in ch. 64E-6, F.A.C., may utilize an OSTDS under the following conditions:

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1. A performance-based OSTDS shall be use that is tested and certified by the National Sanitation Foundation (NSF) or an equivalent American National Standards Institute (ANSI) accredited independent third party testing and certification organization in accordance with NSF/ANSI Standard 245. The average effluent quality of the OSTDS shall be no more than 10 milligrams per liter (mg/L) Total Nitrogen at the outlet of the final treatment chamber or reduces the effluent Total Nitrogen concentration by a minimum of seventy percent (70%). Performance-based systems shall comply with the applicable standards of ch. 64E-6, F.A.C.

2. A drip irrigation drainfield system shall be used in conjunction with the performance based OSTDS. Until such time as drip irrigation drainfields are approved for commercial waste, a low pressure dosing drainfield shall be used for commercial applications. Alternative drainfield configurations may be approved by the Health Department provided that the applicant can demonstrate the same level of treatment and Nitrogen reduction as a drip irrigation drainfield. Applicable provisions of ch. 64E-6, F.A.C., shall apply to the use of drip irrigation, low pressure dosing and alternative drainfields.

(b) Existing residential, multi-family, commercial establishments and industrial manufacturing zoned properties or its equivalent served by an

OSTDS which requires modification as specified in ch. 64E-6.001(4), F.A.C., shall comply with the provisions of section 18-73 (2)(a)(1) and (2) of this chapter.

(c) All residential, multi-family, commercial establishments and industrial manufacturing zoned properties or its equivalent served by an OSTDS, where the OSTDS fails to function in a sanitary manner or which results in the discharge of untreated or partially treated wastewater onto the ground surface, into surface water, into ground water, or which results in the failure of the building plumbing to discharge properly, shall comply with the provisions of section 18-73(2)(a)(1) and (2) of this chapter.

1. Property owners of a single family residence where an OSTDS requiring repair is located may request an exemption from the above repair standards provided:

a. The single family residence is the property owner's primary residence and the owner resides on the premises.

b. The property owner can demonstrate that the household income is at or below 80% of the most current Florida Housing Finance Corporation Income Limits Schedule. The Health Department shall establish criteria for determining income eligibility.

c. The market value of the home as determined by the Leon County Property Appraiser, is at or below the current value

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threshold as specified in the current Local Housing Assistance Plan.

d. The repair shall be brought into full compliance with ch. 64E-6, F.A.C., new OSTDS construction standards with respect to drainfield sizing and water table separation.

2. The above repair standards found in section (2)(c) above do not apply to a separate laundry waste system serving a single home washing machine.

(3) OSTDS Maintenance Requirements:

(a) All residences, multi-family, commercial establishment and industrial manufacturing zoned properties or its equivalent served by a performance-based OSTDS installed within the PSPZ shall obtain and maintain an operating permit in compliance with ch. 64E-6.27(6), F.A.C.

(b) Systems repaired under the exemption in sec. 18-73(2)(c)(1) shall have the following additional requirements:

1. Obtain an operating permit from the Health Department.

2. Operating permits shall be valid for a period of five (5) years.

3. Operating permit fees shall be established at $100.00.

4. Systems shall be visually inspected by Health Department staff to ensure proper function at least once during the life of the operating permit.

5. Property owners shall have the septic tank(s) pumped of its contents and the tank visually inspected for structural integrity by

an individual or entity licensed and/or registered in the State of Florida to perform such services once during the life of the operating permit. The property owner or their representative shall provide documentation of the pump-out and inspection to the Health Department at the time of permit renewal.

Secs. 18-74--18-90. Reserved.

DIVISION 2. RESERVED

Secs. 18-91--18-115. Reserved.

Section 2. Conflicts. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict, except to the extent of any conflicts with the Tallahassee-Leon County 2010 Comprehensive Plan as amended, which provisions shall prevail over any part of this ordinance which is inconsistent, either in whole or in part, with the said Comprehensive Plan.

Section 3. Severability. If any word, phrase, clause, section or portion of this ordinance shall be held invalid or unconstitutional by a court of competent jurisdiction, such portion or words shall be deemed a separate and independent provision and such holding shall not affect the validity of the remaining portions thereof.

Section 4. Effective Date. This ordinance shall have effect upon becoming law.

DULY PASSED AND ADOPTED by the Board of County Commissioners of Leon County, Florida, this _____ day of _____, 2009.

LEON COUNTY, FLORIDA

21

By: _____
Brian Desloge, Chairman
Board of County Commissioners

Attest:
Bob Inzer, Clerk of Circuit Court

By: _____
Clerk

Approved as to form:
County Attorney's Office
Leon County, Florida

By: _____
Herbert W. A. Thiele, Esq.
County Attorney

Additional Details Regarding the Sources of Nitrogen Loads to the Landscape in Unconfined Areas of Leon County (Other than Atmospheric Deposits)

1. City of Tallahassee WWTF (effluent and residuals) – The largest WWTF total nitrogen load originates from facilities operated by the City of Tallahassee. In addition to effluent disposal, the City of Tallahassee also disposes of solidified wastewater residuals, which remain following treatment. These two sources represent approximately 78% of the nitrogen load (excluding atmospheric deposits) to the landscape in unconfined areas of Leon County. Additionally, the City's Southeast Sprayfield (SSF) operation was a major contributor of nitrogen through fertilization and livestock grazing operations (both of those activities, discussed later, ended June, 2006).

   Improvements to the City's treatment plants and facilities are underway. The City entered into a settlement agreement in December 2006 which calls for an investment of more than $160 million to overhaul two wastewater facilities, reducing the flow of nutrients into Wakulla Springs by 75% and significantly improving the quality of reuse water. According to a presentation at the by Jim Oskowis, P. E., City of Tallahassee at the February 2009 Wakulla Springs Restoration Workshop, the City has committed $220 million to such efforts, and its sewer rates will increase by 50%.

2. OSDS – On-site disposal systems (OSDS) include septic tanks, cesspits and other non-sewered disposal of domestic wastewater. The April 2002 NFWMD Report estimated OSDS nitrogen loads to the landscape within the unconfined area of Leon County in 1999 as follows:

Estimated 1999 Nitrogen Loads from OSDS

Area	# OSDS	Household Occupancy	Kg-N/Person/Year	Kg-N/Year
Leon Unconfined	4,290	2.34	4.2	42,000

3. Commercial Fertilizer – The April 2002 NFWMD Report utilized the Florida Department of Agriculture and Consumer Services (DACS) reported distribution records from fertilizer distributors/manufacturers to estimate the amount of fertilizer used within Leon County. The report assumed that the predominant use for the fertilizer is agricultural in nature; however, to the extent that large, non-farm retailers purchase fertilizer through distributers reporting to DACS, these figures capture fertilizer sold for application in residential settings, golf courses, etc. The report states that it is believed most of the fertilizer destined for residential application is included in the DACS data. Based on the distribution of land use areas identified as "pasture and cropland", the report distributed commercial fertilizer use to areas that lie within the semi-confined, unconfined and confined portions of Leon County.

   The report stated Leon County had 14,272 hectares (35,267 acres) of "pasture and cropland", of which 1,091 hectares (2,646 acres) (7.5%) were located in the unconfined area of the County. The City's Southeast Spray Field (SESF) was the only "pasture and cropland" land use identified in the unconfined portion of Leon County. The City reported it applied 44,000 Kg-N to the SESF in 1999. As the SESF is the only area designated "pasture and cropland"

in the unconfined portion of Leon County, the nitrogen application to the SESF was assumed to represent the entirety of commercial fertilizer applied in this area. The report states the approach it utilized resulted in an underestimation of the actual application of nitrogen in the unconfined area. Therefore, the report assumes some of the 150,000 Kg-N reportedly distributed in the semi-confined areas of the County were distributed in unconfined areas.

As part of its settlement agreement, the City discontinued fertilizing at the SESF in June, 2006.

4. Livestock – The April 2002 NFWMD Report utilized the following daily nitrogen discharge estimates for each type of animal: (1) dairy cattle – 0.18 kg-N/day; (2) beef cattle and broiler chickens – 0.5 kg/N/day; (3) egg-laying chickens – 0.38 kg/N/day; (4) swine – 0.24 kg-N/day. Based on the distribution of "pasture and cropland" area, the report estimated 10,000 kg/N in the unconfined area of Leon County.

   As noted previously, the SESF is the only area designated "pasture and cropland" in the unconfined portion of Leon County.

   As part of its settlement agreement, the City discontinued its cattle grazing at the SESF in June, 2006.

   Agricultural Land - State Preemption – According to the DCA's "Protecting Florida's Springs: An Implementation Guidebook", the Agricultural Lands and Practices Act (ALPA) prohibits counties from adopting regulations for regulating "an activity of a bona fide farm operation on land classified as agricultural land" for ad valorem tax purposes if the activity is regulated through "implemented best management practices, interim measures or regulations" adopted b DEP, DACS or a WMD or USDA, USACOE or EPA. There are limited exceptions for emergencies, wellfield protection, land application of sewage sludge, farm operations adjacent to homesteads or businesses established as of 1982, and for certain counties. "Most agricultural activities that might potentially impact the quality or quantity of groundwater are thus probably exempt from new regulation by counties…" Regulation of agricultural activities by municipalities is similarly preempted by a duplicative section of the Florida Right to Farm Act.

   The Florida Department of Agriculture and Consumer Services (FDACS), Office of Agricultural Walter Policy, has issued a "Water Quality Best Management Practices for Florida Cow/Calf Operations." The practices outlined in the 2008 manual are "…intended for use statewide on beef cow/calf operations, and other cattle operations…" The following is a brief history and purpose for the Best Management Practices (BMPs), summarized from FDACS' manual. The 1972 Federal Clean Water Act (FCWA) required states to assess the impacts of nonpoint sources of pollution on surface and ground waters, and establish programs to minimize these impacts. The FCWA also requires states to identify impaired waters and establish total maximum daily loads (TMDLs) for pollutants entering these waters. TMDLs establish the maximum amount of pollutants that can be discharged to a waterbody and still meet designated uses such as swimming, fishing, or as a potable water source. The 1999 Florida Watershed Restoration Act (FWRA) provided the framework for

Florida's TMDL program. Under the FWRA, once the Florida Department of Environmental Protection (FDEP) establishes a TMDL, the agency may develop and adopt a Basin Management Action Plan (BMAP), which specifies the activities that watershed stakeholders will undertake to reduce point and nonpoint source pollutant loadings. In watersheds with adopted BMAPs and in some other areas, agricultural producers are statutorily required to implement FDACS-adopted BMPs or conduct water quality monitoring prescribed by FDEP or the water management district.

The FWRA gives FDACS the authority to develop BMPs, and also stipulates that the FDEP must verify that these BMPs are effective in reducing pollutant loading to waters. Pursuant to sections 403.067(7)(c) and 570.085, Florida Statutes, implementation, in accordance with FDACS rule, of DEP-verified and FDACS-adopted BMPs give ranchers the following advantages: a presumption of compliance with state water quality standards; a release from the provisions of section 376.307(5), Florida Statutes, for those pollutants addressed by the BMPs; and assistance with BMP implementation.

5. Sinking Streams – Four significant sinking streams flow into the Floridan Aquifier from the surrounding landscape. These include Munson Slough in Leon County as well as Fisher, Black and Lost creeks in Wakulla County.

   Munson Slough and Ames Sink - Munson Slough drains much of the southern portion of the City of Tallahassee, eventually sinking at Ames Sink. Much of the water conveyed south through Munson Slough is stormwater runoff originating from the southern portion of City of Tallahassee. Ultimately, Munson Slough discharges to the Floridan Aquifer via Ames Sink in southern Leon County. Prior to discharging to the Floridan Aquifer, surface waters flow through Lake Munson, and, further south, through Eightmile Pond.

   The Lake Munson Basin has an area of 68.75 square miles, of which about 75% is thought to contribute stormwater runoff to the lake. The remainder of the basis consists of sub-basins closed in all but the most extreme hydrologic conditions.

Estimated "Recent" Nitrogen Loads from Sinking Streams

Area	Surface Water Body	Flow (cfs)	Median Concentration (mg-N/L)	Load (Kg-N/Year)
Leon Unconfined	Munson Slough	30	0.51	13,600

Note: Unless otherwise referenced, the source is Nitrate Loading as an Indicator of Nonpoint Source Pollution in the Lower St. Marks-Wakulla Rivers Watershed, Prepard by Northwest Florida Water Management District, April 2002

ORDINANCE NO. 09- _____

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF LEON COUNTY, FLORIDA, AMENDING CHAPTER 10 OF THE CODE OF LAWS OF LEON COUNTY, FLORIDA, BY ADDING A NEW ARTICLE XIV, TO REGULATE THE USE OF FERTILIZER WITHIN THE UNINCORPORATED AREAS OF THE COUNTY; PROVIDING DEFINITIONS; PROVIDING FOR ENFORCEMENT AND PENALTIES; PROVIDING FOR SEVERABILITY, CONFLICTS, AND AN EFFECTIVE DATE.

WHEREAS, as a result of impairment to Leon County's surface waters caused by excessive nutrients under the Florida Impaired Waters Rule, or, as a result of increasing levels of nitrogen in the surface and/or ground water within the aquifers or springs within the boundaries of the unincorporated areas of the county, the Leon County Board of County Commissioners has determined that the improper use of fertilizers on lands within the unincorporated areas of the county contributes to adverse effects on surface and/or groundwater. Accordingly, the Leon County Board of County Commissioners find that additional measures than are otherwise required by the most recent edition of the "*Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, June 2002*" may be required by this ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF LEON COUNTY, FLORIDA:

SECTION 1: Adding a new Article XIV to the Code of Laws of Leon County, Florida, as follows:

ARTICLE XIV. FERTILIZER USE

Sec. 10-14.101. Purpose and Intent.

This Article regulates the proper use of fertilizers by any fertilizer applicator; requires proper training of commercial and institutional fertilizer applicators; establishes training and licensing requirements; establishes a prohibited and restricted application period; specifies allowable fertilizer application rates and methods, fertilizer-free zones, low maintenance zones, and exemptions. The Article requires the use of Best Management Practices that provide specific management guidelines to minimize negative secondary and cumulative environmental effects associated with the misuse of fertilizers. These secondary and cumulative effects have been observed in and on the County's natural and constructed stormwater and drainage conveyances, creeks, canals, springs, lakes, ponds, and other water bodies. Collectively, these water bodies are an asset critical to the environmental, recreational, cultural and economic well being of the County's residents and the health of the public. Overgrowth of algae and vegetation hinder the effectiveness of flood attenuation provided by natural and constructed stormwater and drainage conveyances. Regulation of nutrients contained in fertilizer will help improve and maintain water and habitat quality.

Sec. 10-14.102. Definitions. The following words, terms and phrases, when used in this Article, shall have the meanings ascribed to them in this Article, except where the context clearly indicates a different meaning.

Administrator means the County Administrator, or designee.

Application or *apply* means the actual physical deposit of fertilizer to turf or landscape plants.

Applicator means any person who applies fertilizer on turf and/or landscape plants in the unincorporated areas of the county.

1 *Best management practices* under this Article means turf and landscape practices
2 or combination of practices based on research, field-testing, and expert review,
3 determined to be the most effective and practicable on-location means, including
4 economic and technological considerations, for improving water quality, conserving
5 water supplies and protecting natural resources.
6 *County* means the unincorporated areas of the county.
7 *County approved best management practices training program* means a training
8 program approved by the Administrator that includes at a minimum, a) the most current
9 version of the *"Florida Green Industries Best Management Practices for Protection of*
10 *Water Resources in Florida, June 2002,"* as revised and, b) all of the provisions and
11 requirements of this Article; or c) an alternative training program under Section 10-14.111
12 of this Article.
13 *Code enforcement officer, official, or inspector* means any designated County
14 employee or agent whose duty it is to enforce the County's codes and ordinances
15 pursuant to Chapter 6 of the Leon County Code of Laws.
16 *Commercial fertilizer applicator* means any person who applies fertilizer on turf
17 and/or landscape plants in the County in exchange for money, goods, services or other
18 valuable consideration.
19 *Fertilize, fertilizing,* or *fertilization* means the act of applying fertilizer to turf,
20 specialized turf, or landscape plants.
21 *Fertilizer* means any substance or mixture of substances that contains one or more
22 recognized plant nutrients and promotes plant growth, or controls soil acidity or
23 alkalinity, or provides other soil enrichment, or provides other corrective measures to the
24 soil.

1 *Institutional fertilizer applicator* means any person, other than a non-commercial,
2 or commercial applicator (unless such definitions also apply under the circumstances),
3 that applies fertilizer for the purpose of maintaining turf and/or landscape plants.
4 Institutional fertilizer applicators shall include, but shall not be limited to, owners and
5 managers of public lands, schools, parks, athletic fields, religious institutions, utilities,
6 industrial or business sites and any residential properties maintained in condominium
7 and/or common ownership.
8 *Landscape Plant* means any native or exotic tree, shrub, or groundcover
9 (excluding turf).
10 *Lawn* has the same definition as *turf.*
11 *Low maintenance zone* means an area a minimum of six (6) feet wide adjacent to
12 water courses which is planted and managed in order to eliminate the need for
13 fertilization and minimize the need for watering, mowing, etc.
14 *Non-commercial fertilizer applicator* means any person other than a commercial
15 fertilizer applicator or institutional fertilizer applicator who applies fertilizer on turf
16 and/or landscape plants, such as an individual owner of a single-family residential unit.
17 *Pasture* means land used for livestock grazing that is managed to provide feed
18 value.
19 *Person* means any natural person, business, corporation, limited liability
20 company, partnership, limited partnership, association, club, organization, and/or any
21 group of people acting as an organized entity.
22 *Prohibited application period* means the time period during which a flood watch
23 or warning, or a tropical storm watch or warning, or a hurricane watch or warning, or a 3-

day cone of uncertainty is in effect for any portion of Leon County, issued by the National Weather Service, or if heavy rain is expected.

Readily available nitrogen means the water soluble fraction of formulated fertilizer determined by the sum of the percentage of Nitrate and Ammoniacal Nitrogen plus Other Water Soluble Nitrogen and/or Urea Nitrogen in the guaranteed analysis section of the label.

Turf, sod, or lawn means a piece of grass-covered soil held together by the roots of the grass.

Sec. 10-14.103. Applicability.

This Article shall be applicable to and shall regulate any and all applicators of fertilizer and areas of application of fertilizer within the unincorporated areas of the county, unless such applicator is specifically exempted by the terms of this Article. This Article shall be applicable to and shall regulate any and all application of fertilizer within the unincorporated areas of the county unless otherwise provided in Article IV of Chapter 10 of the Leon County Land Development Code (LDC). In case of a conflict between the requirements in Article IV of Chapter 10, LDC, and this Article, the provisions in Article IV of Chapter 10, LDC, shall prevail. This Article shall be prospective only, and shall not impair any existing contracts.

Sec. 10-14.104. Timing of fertilizer application.

No applicator shall apply fertilizers to turf and/or landscape plants during the prohibited application period.

Sec. 10-14.105. Fertilizer content and application rates; irrigation with reclaimed wastewater.

(a) Fertilizers applied to turf and/or landscape plants within the unincorporated areas of the county shall be formulated and applied in accordance with requirements and directions provided by Rule 5E-1.003(2), Florida Administrative Code, *Labeling Requirements For Urban Turf.* Fertilizer content in reclaimed wastewater used for irrigation shall be applied in accordance with Section 10-14.105(d).

(b) Except as provided in Section 10-14.105(a), fertilizers shall be applied to turf and/or landscape plants at the lowest rate necessary. Nitrogen shall not be applied at an application rate greater than 0.7 lbs of readily available nitrogen per 1000 ft^2 at any one time based on the soluble fraction of formulated fertilizer, with no more that 1 lb total N per 1000 ft^2 to be applied at any one time and not to exceed the annual nitrogen recommendations in the Fertilization Guidelines for Established Turfgrass Lawns set forth below for convenience:

Fertilization Guidelines for Established Turfgrass Lawns within the unincorporated areas of the county:

Species	Nitrogen recommendations (lbs N / 1000 ft^2 / year)
Bahia grass	2-3
Bermuda grass	3-5
Centipede grass	1-2
St. Augustine grass	2-4
Zoysia grass	3-5

(c) Nitrogen fertilizer may not be applied to turf or landscape plants except as provided above unless a tissue deficiency has been verified by an approved test.

(d) The use of water from a reclaimed wastewater system must be in accordance with an approved reclaimed wastewater reuse nutrient management plan. The plan shall contain, at a minimum, the frequency and volume of application, restricted periods of application (if any), application rates and required best management practices. If fertilizer other than that contained in the reclaimed water is to be applied, the nutrient management plan shall show that the cumulative nutrient loading does not exceed those established in this Article.

Sec. 10-14.106. Impervious surfaces.

Fertilizer shall not be applied, spilled, or otherwise deposited on any impervious surfaces. Any fertilizer applied, spilled, or deposited, either intentionally or accidentally, on any impervious surface shall be immediately and completely removed to the greatest extent practicable. Fertilizer released on an impervious surface must be immediately contained and either legally applied to turf or any other legal site, or returned to the original or other appropriate container. In no case shall fertilizer be washed, swept, or blown off impervious surfaces into stormwater drains, ditches, conveyances, or water bodies.

Sec. 10-14.107. Fertilizer free zones.

Fertilizer shall not be applied within three (3) feet of any pond, stream, water course, lake, drainage ditch, or wetland as defined by the Florida Department of Environmental Protection (Chapter 62-340, Florida Administrative Code) or from the top of a retaining wall associated with any of these features. If more stringent County Code regulations apply, this provision does not relieve the requirement to adhere to the more stringent regulations. See Article IV of Chapter 10 of the Leon County Land

1 Development Code. Newly planted turf and/or landscape plants may be fertilized in this
2 zone only for the first sixty (60) day establishment period.

3 **Sec. 10-14.108. Low maintenance zones.**

4 A voluntary six (6) foot low maintenance zone is strongly recommended, but not
5 mandated, from any pond, stream, water course, lake, wetland or from the top of a
6 retaining wall associated with any of these features. A swale/berm system is
7 recommended for installation at the landward edge of this low maintenance zone to
8 capture and filter runoff. No mowed or cut vegetative material should be deposited or
9 left remaining in this zone or deposited in the water. Care should be taken to prevent the
10 over-spray of aquatic weed products in this zone. If more stringent County regulations
11 apply, this provision does not relieve the requirement to adhere to the more stringent
12 regulations. See Article IV of Chapter 10 of the Leon County Land Development Code.

13 **Sec. 10-14.109. Mode of application.**

14 Spreader deflector shields are required when fertilizing via rotary spreaders.
15 Deflectors must be positioned such that fertilizer granules are deflected away from all
16 impervious surfaces, fertilizer-free zones and water bodies, including wetlands.

17 **Sec. 10-14.110. Exemptions.**

18 The provisions set forth above in this Article shall not apply to:

19 (a) Bona fide farm operations as defined in the Florida Right to Farm Act, Section
20 823.14, F.S., provided that fertilizers are applied in accordance with the appropriate Best
21 Management Practices Manual adopted by the Florida Department of Agriculture and
22 Consumer Services, Office of Agricultural Water Policy for the crop in question.

23 (b) Other properties not subject to or covered under the Florida Right to Farm Act
24 that have pastures used for grazing livestock provided that fertilizers are applied in

accordance with the appropriate Best Management Practices Manual adopted by the Florida Department of Agriculture and Consumer Services, Office of Agricultural Water Policy for the crop in question.

Sec. 10-14.111. Training and certification; presence on site of trained applicator during application of fertilizer.

(a) Within 180 days of the effective date of this Article and every three years thereafter, all applicators of fertilizer within the unincorporated areas of the county, other than private homeowners on their own property, shall abide by and successfully complete a County-approved best management practices training program as defined in this Article. Upon successful completion and compliance with the requirements in this Article, a certificate of completion and a certification card valid for a period of three years will be provided by the entity providing the training. Persons working as employees and under the direct and physical supervision of commercial applicators that hold a current certificate of completion and certification card shall be exempt from the requirement to complete a County-approved best management practices training program.

(b) At least one person holding a current County-approved best management practices training Certificate shall be present at all times on any job site while work applying fertilizer is in progress.

(c) Homeowners, and any other applicators not otherwise required to be certified are encouraged to follow the requirements of this Article as well as the recommendations of the University of Florida IFAS *Florida Yards and Neighborhoods* program when applying fertilizers.

(d) Persons holding a Certificate of Training issued in conjunction with the Florida Green Industries Best Management Practices Program for protection of water resources in Florida; or, other State approved certificate of training or, a certification

1 issued by another local government, that includes at a minimum *"Florida Green*
2 *Industries Best Management Practices for Protection of Water Resources in Florida,*
3 *June 2002,"* or newer as the basis for instruction, may obtain certification by the County
4 after contacting the County's Environmental Compliance Division or designee and
5 presenting proof of the currently active status of training as described in paragraph (a)
6 above, and attesting that he/she has received and read a copy of this Article. The
7 Environmental Compliance Division may adopt policies related to this exception, and
8 shall maintain a list of approved alternative training programs.

9 **Sec. 10-14.112. Enforcement**

10 This article shall be enforced by the Leon County Code Enforcement Board, as set out in
11 Chapter 6 of the Leon County Code of Laws.

12 (a) It is the intent hereof that the administrative, civil, and criminal penalties
13 imposed herein be of such amount as to ensure immediate and continued compliance with
14 this Article.

15 (b) Any applicator that violates the provisions of this Article may be responsible
16 for the County's costs of prosecution of any violation, including any costs to remedy or
17 clean up any environmental condition caused by an act, which constitutes a violation of
18 this Article.

19 **Sec. 10-14.113. Variances**

20 Any applicator of fertilizer regulated by the provisions of this Article may apply
21 to the Board of Adjustment and Appeals for a variance from the requirements of this
22 Article.

(1) Standards and procedures. The applicant must identify the specific provisions of the fertilizer regulations for which a variance is requested, and shall address the following:

(a) Whether, as a result of soil or tissue content at the point of the proposed application or for other geographical, environmental or geological reasons or other circumstances, such person should not be required to adhere to the strict provisions of this Article; and

(b) Whether such person is able and willing to use a less strict application method or alternative materials or methods; and

(c) A plan for fertilizer application, including where the fertilizer will be applied, the frequency of application, contents of fertilizer to be applied, and period of time for which the variance is requested.

(2) Following receipt of the variance application, the Board of Adjustment and Appeals shall, at a timely regularly scheduled meeting:

a. Approve the variance request or any portion thereof;

b. Approve the variance request or any portion thereof subject to conditions;

c. Disapprove the variance request, specifying the reasons therefore in writing; or

d. Continue consideration of the variance request to a time certain.

(3) Criteria for granting variance. The Board of Adjustment and Appeals may grant the variance request if it determines that:

a. The applicant satisfactorily demonstrates that all practical alternatives have been evaluated, and the soil or tissue content at the point of the proposed application is such that the provisions of the fertilizer regulations create a hardship for the applicant; or

b. The applicant satisfactorily demonstrates that all practical alternatives have been evaluated, and due to unique geographical, environmental or geological reasons or other unique circumstances, the applicant should not be required to adhere to the strict provisions of the fertilizer regulations; and

c. The applicant satisfactorily demonstrates that its plan for fertilizer application is consistent with the purpose and intent of the fertilizer regulations to the greatest extent feasible and that adverse impacts, if any, are appropriately mitigated.

(4) *Time periods for variances.* Any Board of Adjustment and Appeals order approving a variance request to the fertilizer regulations shall establish an expiration date for the variance.

SECTION 2. Conflicts. All ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed to the extent of such conflict, as of the effective date of this Ordinance, except to the extent of any conflicts with the Tallahassee-Leon County Comprehensive Plan, as amended, which provisions shall prevail over any parts of this Ordinance which are inconsistent, either in whole or in part, with the Comprehensive Plan.

SECTION 3. Severability. If any section, subsection, sentence, clause, phrase or portion of this article is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. Effective date. This ordinance shall be effective according to law.

DULY PASSED AND ADOPTED BY the Board of County Commissioners of Leon County, Florida, this ____ day of _____, 2009.

LEON COUNTY, FLORIDA

BY: _____
BRYAN DESLOGE, CHAIRMAN
BOARD OF COUNTY COMMISSIONERS

ATTEST:
BOB INZER, CLERK OF THE COURT
LEON COUNTY, FLORIDA

BY: _____

APPROVED AS TO FORM:
LEON COUNTY ATTORNEY'S OFFICE

BY: _____
HERBERT W.A. THIELE, ESQ.
COUNTY ATTORNEY

ORDINANCE NO. 08-O-72AA

AN ORDINANCE OF THE CITY OF TALLAHASSEE, FLORIDA AMENDING CHAPTER 9, ENVIRONMENT, OF THE CITY OF TALLAHASSEE CODE OF GENERAL ORDINANCES TO REGULATE THE USE OF FERTILIZER WITHIN THE CITY; PROVIDING DEFINITIONS; PROVIDING FOR ENFORCEMENT AND PENALTIES; PROVIDING FOR SEVERABILITY, CONFLICTS, AND AN EFFECTIVE DATE.

WHEREAS, as a result of impairment to the City of Tallahassee's surface waters caused by excessive nutrients under the Florida Impaired Waters Rule, or, as a result of increasing levels of nitrogen in the surface and/or ground water within the aquifers or springs within the boundaries of the City, the City Commission of the City of Tallahassee has determined that the improper use of fertilizers on lands within the City contributes to adverse effects on surface and/or ground water. Accordingly, the City Commission of the City of Tallahassee finds that additional measures than are otherwise required by the most recent edition of the "*Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, June 2002*" may be required by this ordinance.

NOW, THEREFORE, BE IT ORDAINED by the People of the City of Tallahassee, Florida as follows:

SECTION 1. Chapter 9, Environment, of the City of Tallahassee Code of General Ordinances is amended to create Article V, Fertilizer Use, as follows:

ARTICLE V. FERTILIZER USE

Sec. 9-120. Purpose and Intent.

This Article regulates the proper use of fertilizers by any fertilizer applicator; requires proper training of commercial and institutional fertilizer applicators; establishes training and licensing requirements; establishes a prohibited and restricted application period; specifies

allowable fertilizer application rates and methods, fertilizer-free zones, low maintenance zones, and exemptions. The Article requires the use of Best Management Practices that provide specific management guidelines to minimize negative secondary and cumulative environmental effects associated with the misuse of fertilizers. These secondary and cumulative effects have been observed in and on the City's natural and constructed stormwater and drainage conveyances, creeks, canals, springs, lakes, ponds, and other water bodies. Collectively, these water bodies are an asset critical to the environmental, recreational, cultural and economic well being of the City's residents and the health of the public. Overgrowth of algae and vegetation hinder the effectiveness of flood attenuation provided by natural and constructed stormwater and drainage conveyances. Regulation of nutrients contained in fertilizer will help improve and maintain water and habitat quality.

Sec. 9-121. Definitions. The following words, terms and phrases, when used in this Article, shall have the meanings ascribed to them in this Article, except where the context clearly indicates a different meaning.

Administrator means the City Manager of the City, or his/her designee.

Application or *apply* means the actual physical deposit of fertilizer to turf or landscape plants.

Applicator means any person who applies fertilizer on turf and/or landscape plants in the City.

Best management practices under this Article means turf and landscape practices or combination of practices based on research, field-testing, and expert review, determined to be the most effective and practicable on-location means, including economic and technological

considerations, for improving water quality, conserving water supplies and protecting natural resources.

City means the corporate limits of the City of Tallahassee.

City approved best management practices training program means a training program approved by the Administrator that includes at a minimum, a) the most current version of the *"Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, June 2002,"* as revised and, b) all of the provisions and requirements of this Article; or c) an alternative training program under Section 9-130 of this Article.

Code enforcement officer, official, or inspector means any designated City employee or agent whose duty it is to enforce the City's codes and ordinances pursuant to Article V of Chapter 2 of this Code.

Commercial fertilizer applicator means any person who applies fertilizer on turf and/or landscape plants in the City in exchange for money, goods, services or other valuable consideration.

Fertilize, fertilizing, or *fertilization* means the act of applying fertilizer to turf, specialized turf, or landscape plants.

Fertilizer means any substance or mixture of substances that contains one or more recognized plant nutrients and promotes plant growth, or controls soil acidity or alkalinity, or provides other soil enrichment, or provides other corrective measures to the soil.

Institutional fertilizer applicator means any person, other than a non-commercial, or commercial applicator (unless such definitions also apply under the circumstances), that applies fertilizer for the purpose of maintaining turf and/or landscape plants. Institutional fertilizer applicators shall include, but shall not be limited to, owners and managers of public lands,

schools, parks, athletic fields, religious institutions, utilities, industrial or business sites and any residential properties maintained in condominium and/or common ownership.

Landscape Plant means any native or exotic tree, shrub, or groundcover (excluding turf).

Lawn has the same definition as *turf.*

Low maintenance zone means an area a minimum of six (6) feet wide adjacent to water courses which is planted and managed in order to eliminate the need for fertilization and minimize the need for watering, mowing, etc.

Non-commercial fertilizer applicator means any person other than a commercial fertilizer applicator or institutional fertilizer applicator who applies fertilizer on turf and/or landscape plants, such as an individual owner of a single-family residential unit.

Pasture means land used for livestock grazing that is managed to provide feed value.

Person means any natural person, business, corporation, limited liability company, partnership, limited partnership, association, club, organization, and/or any group of people acting as an organized entity.

Prohibited application period means the time period during which a flood watch or warning, or a tropical storm watch or warning, or a hurricane watch or warning, or a 3-day cone of uncertainty is in effect for any portion of Leon County, issued by the National Weather Service, or if heavy rain is expected.

Readily available nitrogen means the water soluble fraction of formulated fertilizer determined by the sum of the percentage of Nitrate and Ammoniacal Nitrogen plus Other Water Soluble Nitrogen and/or Urea Nitrogen in the guaranteed analysis section of the label.

Turf, sod, or lawn means a piece of grass-covered soil held together by the roots of the grass.

Sec. 9-122. Applicability.

This Article shall be applicable to and shall regulate any and all applicators of fertilizer and areas of application of fertilizer within the City, unless such applicator is specifically exempted by the terms of this Article. This Article shall be applicable to and shall regulate any and all application of fertilizer within the City unless otherwise provided in Chapter 5 of the Tallahassee Land Development Code (LDC). In case of a conflict between the requirements of Chapter 5, LDC, and this Article, the provisions of Chapter 5, LDC, shall prevail. This Article shall be prospective only, and shall not impair any existing contracts.

Sec. 9-123. Timing of fertilizer application.

No applicator shall apply fertilizers to turf and/or landscape plants during the prohibited application period.

Sec. 9-124. Fertilizer content and application rates; irrigation with reclaimed wastewater.

(a) Fertilizers applied to turf and/or landscape plants within the City shall be formulated and applied in accordance with requirements and directions provided by Rule 5E-1.003(2), Florida Administrative Code, *Labeling Requirements For Urban Turf.* Fertilizer content in reclaimed wastewater used for irrigation shall be applied in accordance with Section 9-124(d).

(b) Except as provided in Section 9-124(a), fertilizers shall be applied to turf and/or landscape plants at the lowest rate necessary. Nitrogen shall not be applied at an application rate greater than 0.7 lbs of readily available nitrogen per 1000 ft^2 at any one time based on the soluble fraction of formulated fertilizer, with no more that 1 lb total N per 1000 ft^2 to be applied at any one time and not to exceed the annual nitrogen recommendations in the Fertilization Guidelines for Established Turfgrass Lawns set forth below for convenience:

Fertilization Guidelines for Established Turfgrass Lawns within Tallahassee

Species	Nitrogen recommendations (lbs N / 1000 ft^2 / year)
Bahia grass	2-3
Bermuda grass	3-5
Centipede grass	1-2
St. Augustine grass	2-4
Zoysia grass	3-5

(c) Nitrogen fertilizer may not be applied to turf or landscape plants except as provided above unless a tissue deficiency has been verified by an approved test.

(d) The use of water from a reclaimed wastewater system must be in accordance with an approved reclaimed wastewater reuse nutrient management plan. The plan shall be approved by the City's Water Resources Engineering Division; and it shall contain, at a minimum, the frequency and volume of application, restricted periods of application (if any), application rates and required best management practices. If fertilizer other than that contained in the reclaimed water is to be applied, the nutrient management plan shall show that the cumulative nutrient loading does not exceed those established in this Article.

Sec. 9-125. Impervious surfaces.

Fertilizer shall not be applied, spilled, or otherwise deposited on any impervious surfaces. Any fertilizer applied, spilled, or deposited, either intentionally or accidentally, on any impervious surface shall be immediately and completely removed to the greatest extent practicable. Fertilizer released on an impervious surface must be immediately contained and either legally applied to turf or any other legal site, or returned to the original or other

appropriate container. In no case shall fertilizer be washed, swept, or blown off impervious surfaces into stormwater drains, ditches, conveyances, or water bodies.

Sec. 9-126. Fertilizer free zones.

Fertilizer shall not be applied within three (3) feet of any pond, stream, water course, lake, drainage ditch, or wetland as defined by the Florida Department of Environmental Protection (Chapter 62-340, Florida Administrative Code) or from the top of a retaining wall associated with any of these features. If more stringent City Code regulations apply, this provision does not relieve the requirement to adhere to the more stringent regulations. See Chapter 5 of the Tallahassee Land Development Code. Newly planted turf and/or landscape plants may be fertilized in this zone only for the first sixty (60) day establishment period.

Sec. 9-127. Low maintenance zones.

A voluntary six (6) foot low maintenance zone is strongly recommended, but not mandated, from any pond, stream, water course, lake, wetland or from the top of a retaining wall associated with any of these features. A swale/berm system is recommended for installation at the landward edge of this low maintenance zone to capture and filter runoff. No mowed or cut vegetative material should be deposited or left remaining in this zone or deposited in the water. Care should be taken to prevent the over-spray of aquatic weed products in this zone. If more stringent City regulations apply, this provision does not relieve the requirement to adhere to the more stringent regulations. See Chapter 5 of the Tallahassee Land Development Code.

Sec. 9-128. Mode of application.

Spreader deflector shields are required when fertilizing via rotary spreaders. Deflectors must be positioned such that fertilizer granules are deflected away from all impervious surfaces, fertilizer-free zones and water bodies, including wetlands.

Sec. 9-129. Exemptions.

The provisions set forth above in this Article shall not apply to:

(a) Bona fide farm operations as defined in the Florida Right to Farm Act, Section 823.14, F.S., provided that fertilizers are applied in accordance with the appropriate Best Management Practices Manual adopted by the Florida Department of Agriculture and Consumer Services, Office of Agricultural Water Policy for the crop in question.

(b) Other properties not subject to or covered under the Florida Right to Farm Act that have pastures used for grazing livestock provided that fertilizers are applied in accordance with the appropriate Best Management Practices Manual adopted by the Florida Department of Agriculture and Consumer Services, Office of Agricultural Water Policy for the crop in question.

Sec. 9-130. Training and certification; presence on site of trained applicator during application of fertilizer.

(a) Within 180 days of the effective date of this Article and every three years thereafter, all applicators of fertilizer within the City, other than private homeowners on their own property, shall abide by and successfully complete a City-approved best management practices training program as defined in this Article. Upon successful completion and compliance with the requirements in this Article, a certificate of completion and a certification card valid for a period of three years will be provided by the entity providing the training. Persons working as employees and under the direct and physical supervision of commercial applicators that hold a current certificate of completion and certification card shall be exempt from the requirement to complete a City-approved best management practices training program.

(b) At least one person holding a current City-approved best management practices training Certificate shall be present at all times on any job site while work applying fertilizer is in progress.

(c) Homeowners, and any other applicators not otherwise required to be certified are encouraged to follow the requirements of this Article as well as the recommendations of the University of Florida IFAS *Florida Yards and Neighborhoods* program when applying fertilizers.

(d) Persons holding a Certificate of Training issued in conjunction with the Florida Green Industries Best Management Practices Program for protection of water resources in Florida; or, other State approved certificate of training or, a certification issued by another local government, that includes at a minimum *"Florida Green Industries Best Management Practices for Protection of Water Resources in Florida, June 2002,"* or newer as the basis for instruction, may obtain certification by the City after contacting the City's Water Resources Engineering Division and presenting proof of the currently active status of training as described in paragraph (a) above, and attesting that he/she has received and read a copy of this Article. The Water Resources Engineering Division may adopted policies related to this exception, and shall maintain a list of approved alternative training programs.

Sec. 9-131. Enforcement

This Article shall be enforced as provided in Chapter 2 of this Code.

(a) It is the intent hereof that the administrative, civil, and criminal penalties imposed herein be of such amount as to ensure immediate and continued compliance with this Article.

(b) Any applicator that violates the provisions of this Article may be responsible for the City's costs of prosecution of any violation, including any costs to remedy or clean up any environmental condition caused by an act, which constitutes a violation of this Article.

Sec. 9-132. Variances

Any applicator of fertilizer regulated by the provisions of this Article may apply to the Environmental Variance/Code Board pursuant to the requirements in Chapter 2, Administration, of this Code and in Section 5-126, Environmental Variances, of the Tallahassee Land Development Code for a variance from the requirements of this Article. In addition to the requirements in Sections 2-197 and 2-198 of this Code and in Section 5-126 of the Land Development Code, the applicant must submit the following information:

(a) Whether, as a result of soil or tissue content at the point of the proposed application or for other geographical, environmental or geological reasons or other circumstances, such person should not be required to adhere to the strict provisions of this Article; and

(b) Whether such person is able and willing to use a less strict application method or alternative materials or methods; and

(c) A plan for fertilizer application, including where the fertilizer will be applied, the frequency of application, contents of fertilizer to be applied, and period of time for which the variance is requested.

SECTION 2. SEVERABILITY AND CONFLICT: If any portion of this ordinance is declared by a Court of competent jurisdiction to be invalid or unenforceable such declaration shall not be deemed to affect the remaining portions of this ordinance. All ordinances or parts of ordinances in conflict herewith be and the same are hereby repealed to the extent of such conflict.

SECTION 3. EFFECTIVE DATE: This ordinance shall be effective immediately upon passage.

INTRODUCED in the City Commission on the 10th day of December 2008.

PASSED by the City Commission on the 29th day of January, 2009.

CITY OF TALLAHASSEE

By: _____
John R. Marks, III
Mayor

ATTEST:

By: _____
Gary Herndon
City Treasurer-Clerk

APPROVED AS TO FORM:

By: _____
James R. English
City Attorney

A bill to be entitled

An act relating to water resources; creating part IV of ch. 369, F.S.; providing a short title; providing legislative findings and intent with respect to the need to protect and restore springs and groundwater; providing definitions; requiring the Department of Environmental Protection to delineate the springsheds of specified springs; requiring the department to adopt spring protection zones by secretarial order; requiring the department to adopt total maximum daily loads and basin management action plans for spring systems; providing effluent requirements for domestic wastewater treatment facilities; providing requirements for onsite sewage treatment and disposal systems; providing requirements for agricultural operations; authorizing the Department of Environmental Protection, the Department of Health, and the Department of Agriculture and Consumer Services to adopt rules; amending s. 403.1835, F.S.; including certain areas of critical state concern and the spring protection zones established by the act among projects that are eligible for certain financial assistance; requiring the Department of Environmental Protection, the Department of Agriculture and Consumer Services, and water management districts to assess nitrogen loading and begin implementing management plans within the spring protection zones by a specified date; creating s. 403.093, F.S.; providing legislative intent to consider creation of a statewide

onsite sewage treatment and disposal system inspection program; requiring a report to the Governor, the President of the Senate, and the Speaker of the House of Representatives by a specified date; requiring the Department of Environmental Protection to provide procedures for implementing an inspection program; requiring minimum standards; directing disposition of revenues to fund the costs of the program; directing remaining revenues be used to fund the grant program; amending s. 259.105, F.S.; providing priority under the Florida Forever Act for projects within a springs protection zone; creating s. 403.9335, F.S.; providing legislative findings; providing for model ordinances for the protection of urban and residential environments and water; requiring the Department of Environmental Protection to adopt a model ordinance by a specified date; requiring municipalities and counties having impaired water bodies or segments to adopt the ordinance; creating s. 403.9337, F.S.; providing definitions; prohibiting use of certain fertilizers after a specified date; providing for exemptions; transferring by a type II transfer the Bureau of Onsite Sewage from the Department of Health to the Department of Environmental Protection; amending s. 369.317, F.S.; clarifying mitigation offsets in the Wekiva Study Area; establishing a task force to develop recommendations relating to stormwater management system design; specifying study criteria; providing for task force membership,

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59 meetings, and expiration; requiring the task force to
60 submit findings and legislative recommendations to the
61 Legislature by a specified date; providing effective
62 dates.
63
64 Be It Enacted by the Legislature of the State of Florida:
65
66 Section 1. Part IV of chapter 369, Florida Statutes,
67 consisting of sections 369.401, 369.402, 369.403, 369.404,
68 369.405, 369.406, 369.407, and 369.408, is created to read:
69 369.401 Short title.—This part may be cited as the "Florida
70 Springs Protection Act."
71 369.402 Legislative findings and intent.—
72 (1) Florida's springs are a precious and fragile natural
73 resource that must be protected. Springs provide recreational
74 opportunities for swimmers, canoeists, wildlife watchers, cave
75 divers, and others. Because of the recreational opportunities
76 and accompanying tourism, many of the state's springs greatly
77 benefit state and local economies. In addition, springs provide
78 critical habitat for plants and animals, including many
79 endangered or threatened species, and serve as indicators of
80 groundwater and surface water quality.
81 (2) In general, Florida's springs, whether found in urban
82 or rural settings, or on public or private lands, are threatened
83 by actual, or potential, flow reductions and declining water
84 quality. Many of Florida's springs show signs of ecological
85 imbalance, increased nutrient loading, and lowered water flow.
86 Groundwater sources of spring discharges are recharged by
87 seepage from the surface and through direct conduits such as

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88 sinkholes and can be adversely affected by polluted runoff from
89 urban and agricultural lands and discharges resulting from poor
90 wastewater management practices.
91 (3) Springs and groundwater can be restored through good
92 stewardship, including effective planning strategies, best-
93 management practices, and appropriate regulatory programs that
94 preserve and protect the springs and their springsheds.
95 369.403 Definitions.—As used in this part, the term:
96 (1) "Cooperating entities" means the Department of
97 Environmental Protection, the Department of Health, the
98 Department of Agriculture and Consumer Services, the Department
99 of Community Affairs, the Department of Transportation, and each
100 water management district and those county and municipal
101 governments having jurisdiction in the areas of the springs
102 identified in s. 369.404.
103 (2) "Department" means the Department of Environmental
104 Protection.
105 (3) "Estimated sewage flow" means the quantity of domestic
106 and commercial wastewater in gallons per day which is expected
107 to be produced by an establishment or single-family residence as
108 determined by rule of the Department of Health.
109 (4) "First magnitude spring" means a spring that has a
110 median discharge of greater than or equal to 100 cubic feet per
111 second for the period of record, as determined by the
112 department.
113 (5) "Karst" means landforms, generally formed by the
114 dissolution of soluble rocks such as limestone or dolostone,
115 forming direct connections to the groundwater such as springs,
116 sinkholes, sinking streams, closed depressions, subterranean

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drainage, and caves.

(6) "Onsite sewage treatment and disposal system" or "septic system" means a system that contains a standard subsurface, filled, or mound drainfield system; an aerobic treatment unit; a graywater system tank; a laundry wastewater system tank; a septic tank; a grease interceptor; a pump tank; a solids or effluent pump; a waterless, incinerating, or organic waste-composting toilet; or a sanitary pit privy that is installed or proposed to be installed beyond the building sewer on land of the owner or on other land to which the owner has the legal right to install a system. The term includes any item placed within, or intended to be used as a part of or in conjunction with, the system. This term does not include package sewage treatment facilities and other treatment works regulated under chapter 403.

(7) "Second magnitude spring" means a spring that has a median discharge of 10 to 100 cubic feet per second for the period of record, as determined by the department.

(8) "Spring" means a point where groundwater is discharged onto the earth's surface, including under any surface water of the state, including seeps. The term includes a spring run.

(9) "Springshed" means those areas within the groundwater and surface water basins which contribute to the discharge of a spring.

(10) "Usable property" means the area of the property expressed in acres exclusive of all paved areas and prepared road beds within public or private rights-of-way or easements and exclusive of surface water bodies.

369.404 Designation of spring protection zones.—

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(1) All counties or municipalities in which there are located first or second magnitude springs are hereby designated as spring protection zones.

(2) By July 1, 2010, the department is directed to propose for adoption rules to implement the requirements of this section.

(a) Such rules at a minimum shall create a priority list of first and second magnitude springs designating them as high, medium, or low priority based on the following measurements of nitrate concentration in the water column at the point that the spring discharges onto the earth's surface as an average annual concentration:

1. High - nitrate greater than or equal to 1.0 milligrams per liter as determined using existing water quality data;

2. Medium - nitrate greater than or equal to 0.5 milligrams per liter and less than 1.0 milligrams per liter as determined using existing water quality data; and

3. Low - all first or second magnitude springs not categorized as either High or Medium.

(b) Based on the priority determination of the department for first and second magnitude springs, the corresponding deadlines apply to the requirements of s. 369.405 to spring protection zones as designated in this section.

1. For high-priority springs, the deadline for compliance shall be no later than July 1, 2016;

2. For medium-priority springs, the deadline for compliance shall be no later than July 1, 2019; and

3. For low-priority springs, the deadline for compliance shall be no later than July 1, 2024.

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175 (3) By July 1, 2010, the department is directed to propose
176 for adoption rules that provide the minimum scientific
177 methodologies, data, or tools that shall be used by a county or
178 municipal government to support the request for an exemption as
179 provided for in subsection (4).
180 (4) A county or municipal government, upon application to
181 the department, may seek to have specific geographic areas
182 exempted from the requirements of sections 369.405, 369.406, and
183 369.407 by demonstrating that activities within such areas will
184 not impact the springshed in a manner that leads to new or
185 continued degradation.
186 (5) Pursuant to subsection (4), the department may approve
187 or deny an application for an exemption, or may modify the
188 boundaries of the specific geographic areas for which an
189 exemption is sought. The ruling of the department on the
190 applicant's request shall constitute a final agency action
191 subject to review pursuant to ss. 120.569 and 120.57.
192 (6) By July 1, 2010, the department must conduct a study
193 and report its findings of nitrate concentrations within spring
194 protection zones designated pursuant to s. 369.404.
195 369.405 Requirements for spring protection zones.—The
196 requirements of this section are subject to the timelines
197 established in s. 369.404.
198 (1) Domestic wastewater discharge and wastewater residual
199 application must comply with the requirements of this
200 subsection.
201 (a) All existing wastewater discharges from facilities
202 having permitted capacities greater than or equal to 100,000
203 gallons per day must achieve annual average total nitrogen

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204 concentrations less than or equal to 3 milligrams per liter, as
205 nitrogen.
206 (b) All existing wastewater discharges from facilities
207 having permitted capacities less than 100,000 gallons per day
208 but greater than 10,000 gallons per day must achieve annual
209 average concentrations less than or equal to 10 milligrams per
210 liter, as nitrogen.
211 (2) Onsite sewage treatment and disposal systems in areas
212 permitted to or that contain septic systems in densities greater
213 than or equal to 640 systems per square mile must connect to a
214 central wastewater treatment facility or other centralized
215 collection and treatment system. For the purposes of this
216 subsection, density must be calculated using the largest number
217 of systems possible within a square mile.
218 (3) Agricultural operations must implement applicable best-
219 management practices, including nutrient management, adopted by
220 the Department of Agriculture and Consumer Services to reduce
221 nitrogen impacts to groundwater. By December 31, 2009, the
222 Department of Agriculture and Consumer Services, in cooperation
223 with the other cooperating entities and stakeholders, must
224 develop and propose for adoption by rule equine, and cow and
225 calf best-management practices pursuant to this paragraph.
226 Implementation must be in accordance with paragraph
227 403.067(7)(b).
228 (4) Stormwater systems must comply with the requirements of
229 this section. The department is directed to propose for adoption
230 rules to implement the requirements of this subsection by July
231 1, 2010.
232 (a) Local governments in cooperation with the water

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233 management districts must develop and implement a remediation
234 plan for all existing drainage wells containing strategies to
235 reduce nitrogen loading to groundwater to the maximum extent
236 practicable. The department shall review and approve the
237 remediation plan prior to implementation. All new drainage wells
238 must comply with the department's underground injection control
239 rules.
240 (b) Local governments must develop and implement a
241 remediation plan for all stormwater management systems
242 constructed prior to 1982 which have not been modified to
243 provide stormwater treatment containing strategies to reduce
244 nitrogen loading to groundwater to the maximum extent
245 practicable.
246 (c) Local governments in cooperation with the water
247 management districts must develop and implement a remediation
248 plan to reduce nitrogen loading to groundwater including
249 reducing existing direct discharges of stormwater into
250 groundwater through karst features to the maximum extent
251 practicable. The department shall review and approve the
252 remediation plan prior to implementation.
253 (d) The Department of Transportation must identify any
254 untreated stormwater discharges into groundwater through natural
255 subterranean drainages such as sinkholes and develop and
256 implement a remediation plan to reduce nitrogen loading to
257 groundwater, including reducing existing such groundwater
258 discharges to the maximum extent practicable. The department
259 shall review and approve the remediation plan prior to
260 implementation.
261 (5) This subsection does not limit the department's

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262 authority to require additional treatment or other actions
263 pursuant to chapter 403, as necessary, to meet surface and
264 groundwater quality standards.
265 369.406 Additional requirements for all spring protection
266 zones.—
267 (1) All newly constructed or expanded domestic wastewater
268 facilities operational after July 1, 2012, must meet the
269 advanced wastewater treatment requirements of s. 403.086(4).
270 (2) For all development not permitted as of July 1, 2009,
271 which has septic system densities greater than or equal to 640
272 systems per square mile, connection to a central wastewater
273 treatment facility or other centralized collection and treatment
274 system is required. For the purposes of this subsection, density
275 must be calculated using the largest number of systems possible
276 within a square mile.
277 (3) All new septic systems installed on or after January 1,
278 2010 that are located on properties abutting a water body or
279 water segment that is listed as impaired pursuant to s. 403.067,
280 or properties within a designated spring protection zone
281 pursuant to s. 369.404, must be designed to meet a target annual
282 average groundwater concentration of no more than 3 milligrams
283 per liter total nitrogen at the owner's property line.
284 Compliance with these requirements does not require groundwater
285 monitoring. The department must initiate and develop by rule
286 design standards for achieving this target annual average
287 groundwater concentration. At a minimum, this standard must take
288 into consideration the relationship between the treatment level
289 achieved by the septic system and the area of usable property
290 available for rainwater dilution. Such design standards adopted

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291 by the department must provide multiple options that may be used
292 to meet the standards established in s. 369.406(3).
293 (4) Prior to adoption of the design standards by the
294 department, compliance with the requirements in subsection (3)
295 is presumed if one of the following conditions is met:
296 (a) The lot associated with the establishment or single-
297 family home is served by a septic system meeting the baseline
298 system standards set forth in rules of the Department of Health,
299 and the ratio of estimated sewage flow in gallons per day to
300 acres of usable property is 100 to 1 or less.
301 (b) The lot associated with the establishment or single-
302 family home is served by a septic system meeting at least the
303 advanced secondary treatment standards for nitrogen as set forth
304 in rules of the Department of Health, combined with a drip
305 irrigation system, a shallow low pressure dosed or a time-dosed
306 drainfield system.
307 (c) The lot associated with the establishment or single-
308 family home is scheduled to connect to a central wastewater
309 treatment facility within 6 months after the application for the
310 permit.
311 (5) Subsection (4) does not supersede the jurisdictional
312 flow limits established in s. 381.0065(3)(b).
313 (6) Land application of septage is prohibited and subject
314 to a $250 fine for a first offense and $500 fine for a second or
315 subsequent offense pursuant to the authority granted to the
316 Department of Health in s. 381.0065(3)(h).
317 (7) Any septic system, when requiring repair, modification,
318 or reapproval, must meet a 24-inch separation from the wet
319 season water table and the surface water setback requirements in

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320 s. 381.0065(4). All treatment receptacles must be within one
321 size of the requirements in rules of the Department of Health
322 and must be tested for watertightness by a state-licensed septic
323 tank contractor or plumber.
324 (8) Each owner of a publicly owned or investor-owned
325 sewerage system must notify all owners of septic systems,
326 excluding approved graywater systems, of the availability of
327 central sewerage facilities for purposes of connection pursuant
328 to s. 381.00655(1) within 60 days after receipt of notification
329 from the Department of Health that collection facilities for the
330 central sewerage system have been cleared for use.
331 (a) Notwithstanding s. 381.00655(2)(b), a publicly owned or
332 investor-owned sewerage system may not waive the requirement for
333 mandatory onsite sewage disposal connection to an available
334 publicly owned or investor-owned sewerage system, except as
335 provided in paragraph (b).
336 (b) With the approval of the Department of Health, a
337 publicly owned or investor-owned sewerage system may waive the
338 requirement for mandatory onsite sewage disposal connection for
339 a sewage treatment system that meets or exceeds standards
340 established for septic systems if it determines that such
341 connection is not required in the public interest due to water
342 quality or public health considerations.
343 (9) In hardship cases the Department of Health may grant
344 variances to the provisions of this section and any rules
345 adopted under this section in accordance with s. 381.0065(4)(h).
346 (10) After July 1, 2010, land application of Class A, Class
347 B, or Class AA wastewater residuals, as defined by department
348 rule, is prohibited. This prohibition does not apply to Class AA

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349 residuals that are marketed and distributed as fertilizer
350 products in accordance with department rule.
351 (11) Animal feeding operations must implement the
352 requirements of rules adopted by the department to reduce
353 nitrogen impacts to groundwater. By December 31, 2009, the
354 department, in cooperation with the other cooperating entities
355 and stakeholders, must develop and propose for adoption, revised
356 rules for animal feeding operations which address requirements
357 for lined wastewater storage ponds and the development and
358 implementation of nutrient management plans, including the land
359 spreading of animal waste not treated and packaged as
360 fertilizer.
361 (12) All county and municipal governments must, at a
362 minimum, adopt the department's model ordinance for Florida-
363 Friendly Fertilizer Use on Urban Landscapes located in the
364 Florida-Friendly Landscape Guidance Models for Ordinances,
365 Covenants and Restrictions (2009) by December 31, 2010.
366 (13) The department and the water management districts
367 shall adopt design criteria for stormwater treatment systems
368 located within spring protection zones to minimize the movement
369 of nitrogen into the groundwater and to prevent the formation of
370 sinkholes within stormwater systems.
371 (14) This subsection does not limit the department's
372 authority to require additional treatment or other actions
373 pursuant to chapter 403, as necessary, to meet surface and
374 groundwater quality standards.
375 369.407 Florida Springs Onsite Sewage Treatment and
376 Disposal System Compliance Grant Program.—
377 (1) The Florida Springs Onsite Sewage Treatment and

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378 Disposal System Compliance Grant Program is established in the
379 department and shall be administered by it. The purpose of the
380 program is to provide grants to low-income property owners in
381 spring protection zones using septic systems to assist the
382 property owners in complying with rules for these systems
383 developed by the department, or the water management districts,
384 or to connect to a central wastewater treatment facility or
385 other centralized collection and treatment system pursuant to s.
386 369.405(2) or s. 381.00655(1). The grant program is effective
387 upon final adoption of the department rules and may be applied
388 to costs incurred on or after such date.
389 (2) Any property owner in a spring protection zone having
390 an income less than or equal to 200 percent of the federal
391 poverty level who is required by rule of the department or the
392 water management districts to alter, repair, or modify any
393 existing septic system to a nitrate-reducing system pursuant to
394 s. 369.406(3), or to assist property owners with connecting to
395 available publicly owned or investor-owned sewerage system
396 pursuant to s. 381.00655(1), may apply to the department for a
397 grant to assist the owner with the costs of compliance or
398 connection.
399 (3) The amount of the grant is limited to the cost
400 differential between the replacement of a comparable existing
401 septic system and that of an upgraded nitrate-reducing treatment
402 system pursuant to s. 369.406(3), or the actual costs incurred
403 from connection to a central wastewater treatment facility or
404 other centralized collection and treatment system pursuant to s.
405 385.00655(1), but may not exceed $5,000 per property.
406 (4) The grant must be in the form of a rebate to the

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407 property owner for costs incurred in complying with the
408 requirements for septic systems pursuant to s. 369.406(3), or
409 incurred from connection to a central wastewater treatment
410 facility or other centralized collection and treatment system
411 pursuant to s. 381.00655(1). The property owner must provide
412 documentation of those costs in the grant application to the
413 department.
414 (5) The department shall adopt rules providing forms,
415 procedures, and requirements for applying for and disbursing
416 grants, including bid requirements, and for documenting
417 compliance or connection costs incurred.
418 (6) The department, in coordination with the water
419 management districts, shall continue to evaluate, by any means
420 it deems appropriate, the level of nitrate deposited in Florida
421 springs by septic systems.
422 369.408 Rules.—
423 (1) The department, the Department of Health, and the
424 Department of Agriculture and Consumer Services may adopt rules
425 pursuant to ss. 120.536(1) and 120.54 to administer the
426 provisions of this part, as applicable.
427 (2)(a) The Department of Agriculture and Consumer Services
428 shall be the lead agency coordinating the reduction of
429 agricultural nonpoint sources of pollution for springs
430 protection. The Department of Agriculture and Consumer Services
431 and the department, pursuant to s. 403.067(7)(c)4., shall study
432 and if necessary, in cooperation with the other cooperating
433 entities, applicable county and municipal governments, and
434 stakeholders, initiate rulemaking to implement new or revised
435 best-management practices for improving and protecting springs.

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436 As needed to implement the new or revised practices, the
437 Department of Agriculture and Consumer Services, shall revise
438 its best-management practices rules to require implementation of
439 the modified practice within a reasonable time period as
440 specified in the rule.
441 (b) The Department of Agriculture and Consumer Services,
442 the department, and the University of Florida's Institute of
443 Food and Agricultural Sciences shall cooperate in the conduct of
444 necessary research and demonstration projects to develop
445 improved or additional nutrient management tools, including the
446 use of controlled release fertilizer, which can be used by
447 agricultural producers as part of an agricultural best-
448 management practices program. The development of such tools
449 shall reflect a balance between water quality improvements and
450 agricultural productivity and, where applicable, shall be
451 incorporated into revised best-management practices adopted by
452 rule of the Department of Agriculture and Consumer Services.
453 (3) The department shall as a part of the rules developed
454 for this part include provisions that allow for the variance of
455 the compliance deadlines provided for in paragraph (b) of s.
456 369.404(2). Such variance shall, at a minimum, be based on the
457 financial ability of the responsible county or municipality to
458 meet the requirements of this part.
459 (4) The department must initiate and develop rules to
460 implement subsections (3), (4), and (5) of s.369.406, in
461 conjunction with the Department of Health, but may not adopt
462 such rules until such date as the type II transfer of the Bureau
463 of Onsite Sewage becomes effective.
464 Section 2. Subsection (7) of section 403.1835, Florida

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465 Statutes, is amended to read:
466 403.1835 Water pollution control financial assistance.—
467 (7) Eligible projects must be given priority according to
468 the extent each project is intended to remove, mitigate, or
469 prevent adverse effects on surface or groundwater ~~ground water~~
470 quality and public health. The relative costs of achieving
471 environmental and public health benefits must be taken into
472 consideration during the department's assignment of project
473 priorities. The department shall adopt a priority system by
474 rule. In developing the priority system, the department shall
475 give priority to projects that:
476 (a) Eliminate public health hazards;
477 (b) Enable compliance with laws requiring the elimination
478 of discharges to specific water bodies, including the
479 requirements of s. 403.086(9) regarding domestic wastewater
480 ocean outfalls;
481 (c) Assist in the implementation of total maximum daily
482 loads and basin management action plans adopted under s.
483 403.067;
484 (d) Enable compliance with other pollution control
485 requirements, including, but not limited to, toxics control,
486 wastewater residuals management, and reduction of nutrients and
487 bacteria;
488 (e) Assist in the implementation of surface water
489 improvement and management plans and pollutant load reduction
490 goals developed under state water policy;
491 (f) Promote reclaimed water reuse;
492 (g) Eliminate environmental damage caused by failing onsite
493 sewage treatment and disposal systems, with priority given to

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494 systems located within an area designated as an area of critical
495 state concern under s. 380.05 or located in a spring protection
496 zone designated pursuant to s. 369.404 ~~or those that are causing~~
497 ~~environmental damage~~; or
498 (h) Reduce pollutants to and otherwise promote the
499 restoration of state ~~Florida's~~ surface waters and groundwaters
500 ~~ground waters~~.
501 Section 3. All state agencies and water management
502 districts shall asses nitrogen loading from all publically owned
503 buildings and facilities owned or managed by each respective
504 agency or district located within a spring protection zone using
505 a consistent methodology, evaluate existing management
506 activities, and develop and begin implementing management plans
507 to reduce adverse impacts to the springs no later than December
508 31, 2011.
509 Section 4. Section 403.093, Florida Statutes, is created to
510 read:
511 403.093 Onsite sewage treatment and disposal systems;
512 inspection.—
513 (1) In order to increase protection of state water bodies
514 and provide for potential cost savings to the people of this
515 state, it is the intent of the Legislature to consider creation
516 of a statewide onsite sewage treatment and disposal system
517 inspection program.
518 (2) The department shall develop a report that details the
519 process to be used and resources needed. The report shall be
520 provided to the Governor, the President of the Senate, and the
521 Speaker of the House of Representatives by January 15, 2011. The
522 report shall, at a minimum:

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523 a. Provide a method to ensure that each onsite sewage
524 treatment and disposal system be inspected at least once every 5
525 years.
526 b. Recommend exemptions from the inspection requirement for
527 onsite sewage treatment and disposal systems. In identifying
528 systems for potential exemption, the department shall consider
529 the risk a system or a certain density of systems poses to water
530 bodies. Such evaluation shall also account for the proximity of
531 the system or systems to a water body or water segment that is
532 listed as impaired pursuant to s. 403.067 or is within a spring
533 protection zone designated pursuant to s. 369.404.
534 c. Identify the appropriate mechanism for tracking
535 inspections and providing notification to the owner of an onsite
536 sewage treatment and disposal system that requires repairs or
537 modifications.
538 d. A projection of the revenues that may be generated and
539 those expenses that may be needed to administer an inspection
540 program. These projections are to be based on an inspection fee
541 that will cover the full costs of the proposed program.
542 (3) It is the intent of the Legislature that revenues
543 derived from an inspection program be used to fund the
544 administrative costs of the program and the remaining revenues
545 be used to fund the grant program created pursuant to s.
546 369.407.
547 Section 5. Paragraph (m) is added to subsection (9) of
548 section 259.105, Florida Statutes, to read:
549 259.105 The Florida Forever Act.—
550 (9) The Acquisition and Restoration Council shall recommend
551 rules for adoption by the board of trustees to competitively

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552 evaluate, select, and rank projects eligible for Florida Forever
553 funds pursuant to paragraph (3)(b) and for additions to the
554 Conservation and Recreation Lands list pursuant to ss. 259.032
555 and 259.101(4). In developing these proposed rules, the
556 Acquisition and Restoration Council shall give weight to the
557 following criteria:
558 (m) Any part of the project area falls within a springs
559 protection zone as defined by ss. 369.401-369.407.
560 Section 6. Section 403.9335, Florida Statutes, is created
561 to read:
562 403.9335 Protection of urban and residential environments
563 and water.—
564 (1) The Legislature finds that the implementation of the
565 department's Model Ordinance for Florida-Friendly Fertilizer Use
566 on Urban Landscapes located in the Florida-Friendly Landscape
567 Guidance Models for Ordinances, Covenants, and Restrictions
568 (2009) manual, which was developed consistent with the
569 recommendations of the Florida Consumer Fertilizer Task Force,
570 in concert with the provisions of the Labeling Requirements for
571 Urban Turf Fertilizers found in chapter 5E-1 Florida
572 Administrative Code, will assist in protecting the quality of
573 Florida's surface water and groundwater resources. The
574 Legislature further finds that local circumstances, including
575 the varying types and conditions of water bodies, site-specific
576 soils and geology, and urban or rural densities and
577 characteristics, necessitates that additional or more stringent
578 fertilizer-management practices may be needed at the local
579 government level.
580 (2) All county and municipal governments are encouraged to

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581 adopt and enforce the provisions in the department's Model
582 Ordinance for Florida-Friendly Fertilizer Use on Urban
583 Landscapes as a mechanism for better protecting local surface
584 water and groundwater quality.
585 (3) Each county and municipal government located within the
586 watershed of a water body or water segment that is listed by the
587 department as impaired by nutrients pursuant to s. 403.067, or
588 designated as a spring protection zone pursuant to 369.404,
589 shall adopt, at a minimum, the provisions of the department's
590 Model Ordinance for Florida-Friendly Fertilizer Use on Urban
591 Landscapes. A county or municipal government may adopt
592 additional or more stringent provisions than the model ordinance
593 if the following criteria are met:
594 (a) The county or municipal government has demonstrated, as
595 part of a comprehensive program to address nonpoint sources of
596 nutrient pollution which is science-based, economically and
597 technically feasible, that additional or more stringent
598 provisions to the model ordinance are necessary to adequately
599 address urban fertilizer contributions to nonpoint source
600 nutrient loading to a water body.
601 (b) The county or municipal government documents
602 consideration of all relevant scientific information including
603 input from the department, the Department of Agriculture and
604 Consumer Services and the University of Florida Institute of
605 Food and Agricultural Sciences, if provided, on the need for
606 additional or more stringent provisions to address fertilizer
607 use as a contributor to water quality degradation. All
608 documentation shall be made part of the public record prior to
609 adoption of the additional or more stringent criteria.

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610 (4) Any county or municipal government that has adopted its
611 own fertilizer use ordinance before January 1, 2009, is exempt
612 from the provisions of this section. Ordinances adopted or
613 amended after January 1, 2009, shall adopt the provisions in the
614 most recent version of the model fertilizer ordinance and shall
615 be subject to the criteria described in subsections (1) and (2)
616 above.
617 (5) Nothing herein shall be construed to regulate the use
618 of fertilizer on farm operations as defined in s. 823.14 or on
619 lands classified as agricultural lands pursuant to s. 193.461.
620 Section 7. Section 403.9337, Florida Statutes, is created
621 to read:
622 403.9337 Urban turf fertilizers.—
623 (1) As used in this section, the term:
624 (a) "No-phosphate fertilizer" or "no-phosphorus fertilizer"
625 means fertilizer that contains less than 0.5 percent phosphate
626 by weight.
627 (b) "Urban turf" means noncropland planted, mowed, and
628 managed grasses, including, but not limited to, residential
629 lawns; turf on commercial property; filter strips; and turf on
630 property owned by federal, state, or local governments and other
631 public lands, including roadways, roadsides, parks, campsites,
632 recreation areas, school grounds, and other public grounds. The
633 term does not include pastures, hay production and grazing land,
634 turf grown on sod farms, or any other form of agricultural
635 production; golf courses or sports turf fields; or garden
636 fruits, flowers, or vegetables.
637 (c) "Soil test" means a test performed on soil planted or
638 sodded, or that will be planted or sodded, by a laboratory

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639 approved by the Department of Agriculture and Consumer Services
640 and performed within the last 2 years to indicate if the level
641 of available phosphorus in the soil is sufficient to support
642 healthy turf growth.
643 (d) "Tissue test" means a test performed on plant tissue
644 growing in the soil planted or sodded, or that will be planted
645 or sodded, by a laboratory approved by the Department of
646 Agriculture and Consumer Services and performed within the last
647 2 years to indicate if the level of available phosphorus in the
648 soil is sufficient to support healthy turf.
649 (2) Other than no-phosphate and no-phosphorus fertilizers,
650 fertilizer containing phosphorus may not be applied to urban
651 turf anywhere in this state on or after July 1, 2011, unless a
652 soil or tissue test that is conducted pursuant to a method
653 approved by the Department of Agriculture and Consumer Services
654 indicates:
655 (a) For turf that is being initially established by seed or
656 sod, the level of available phosphorus is insufficient to
657 establish new turf growth and a root system. However, during the
658 first year, a one-time application only of up to 1 pound of
659 phosphate per 1,000 square feet of area may be applied.
660 (b) For established turf, the level of available phosphorus
661 is insufficient to support healthy turf growth. However, no more
662 than 0.25 pound of phosphate per 1,000 square feet of area per
663 each application may be applied, not to exceed 0.5 pound of
664 phosphate per 1,000 square feet of area per year.
665 Section 8. Effective July 1, 2010, all of the powers,
666 duties, functions, records, personnel, and property; unexpended
667 balances of appropriations, allocations, and other funds;

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668 administrative authority; administrative rules; pending issues;
669 and existing contracts of the Bureau of Onsite Sewage Programs
670 in the Department of Health, as authorized and governed by ss.
671 20.43, 20.435, 153.73, 153.54, 163.3180, 180.03, 381.006,
672 381.0061, 381.0064-381.0068, and 489.551-558, are transferred by
673 a type II transfer, pursuant to s. 20.06(2), to the Florida
674 Department of Environmental Protection. In addition all existing
675 powers, duties, functions, records, personnel, and property;
676 unexpended balances of appropriations, allocations, and other
677 funds; administrative authority; administrative rules; pending
678 issues; and existing contracts associated with county health
679 departments' onsite sewage programs are transferred to the
680 Department of Environmental Protection. The Department of
681 Environmental Protection in cooperation with the Department of
682 Health must develop a plan to implement the type II transfer and
683 deliver the proposal to the Governor, the President of the
684 Senate and the Speaker of the House of Representatives by
685 January 15, 2010.
686 Section 9. Subsection (6) of section 369.317, Florida
687 Statutes, is amended to read:
688 369.317 Wekiva Parkway.—
689 (6) The Orlando-Orange County Expressway Authority is
690 hereby granted the authority to act as a third-party acquisition
691 agent, pursuant to s. 259.041 on behalf of the Board of Trustees
692 or chapter 373 on behalf of the governing board of the St. Johns
693 River Water Management District, for the acquisition of all
694 necessary lands, property and all interests in property
695 identified herein, including fee simple or less-than-fee simple
696 interests. The lands subject to this authority are identified in

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697 paragraph 10.a., State of Florida, Office of the Governor,
698 Executive Order 03-112 of July 1, 2003, and in Recommendation 16
699 of the Wekiva Basin Area Task Force created by Executive Order
700 2002-259, such lands otherwise known as Neighborhood Lakes, a
701 1,587+/- acre parcel located in Orange and Lake Counties within
702 Sections 27, 28, 33, and 34 of Township 19 South, Range 28 East,
703 and Sections 3, 4, 5, and 9 of Township 20 South, Range 28 East;
704 Seminole Woods/Swamp, a 5,353+/- acre parcel located in Lake
705 County within Section 37, Township 19 South, Range 28 East; New
706 Garden Coal; a 1,605+/- acre parcel in Lake County within
707 Sections 23, 25, 26, 35, and 36, Township 19 South, Range 28
708 East; Pine Plantation, a 617+/- acre tract consisting of eight
709 individual parcels within the Apopka City limits. The Department
710 of Transportation, the Department of Environmental Protection,
711 the St. Johns River Water Management District, and other land
712 acquisition entities shall participate and cooperate in
713 providing information and support to the third-party acquisition
714 agent. The land acquisition process authorized by this paragraph
715 shall begin no later than December 31, 2004. Acquisition of the
716 properties identified as Neighborhood Lakes, Pine Plantation,
717 and New Garden Coal, or approval as a mitigation bank shall be
718 concluded no later than December 31, 2010. Department of
719 Transportation and Orlando-Orange County Expressway Authority
720 funds expended to purchase an interest in those lands identified
721 in this subsection shall be eligible as environmental mitigation
722 for road construction related impacts in the Wekiva Study Area.
723 If any of the lands identified in this subsection are used as
724 environmental mitigation for road construction related impacts
725 incurred by the Department of Transportation or Orlando-Orange

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726 County Expressway Authority, or for other impacts incurred by
727 other entities, within the Wekiva Study Area or within the
728 Wekiva parkway alignment corridor, and if the mitigation offsets
729 these impacts, then the St. Johns River Water Management
730 District and the Department of Environmental Protection shall
731 consider the activity regulated under part IV of chapter 373 to
732 meet the cumulative impact requirements of s. 373.414(8)(a).
733 Section 10. (1) A task force is established to develop
734 legislative recommendations relating to stormwater management
735 system design in the state. The task force shall:
736 (a) Review the Joint Professional Engineers and Landscape
737 Architecture Committee Report conducted pursuant to s. 17,
738 chapter 88-347, Laws of Florida, and determine the current
739 validity of the report and the need to revise any of the
740 conclusions or recommendations.
741 (b) Determine how a licensed and registered professional
742 might demonstrate competency for stormwater management system
743 design.
744 (c) Determine how the Board of Professional Engineers and
745 the Board of Landscape Architecture might administer
746 certification tests or continuing education requirements for
747 stormwater management system design.
748 (d) Provide recommendations for grandfathering the rights
749 of licensed professionals who currently practice stormwater
750 management design in a manner that will allow them to continue
751 to practice without meeting any new requirements the task force
752 recommends be placed on licensed professionals in the future.
753 (2)(a) The Board of Landscape Architecture, the Board of
754 Professional Engineers, the Florida Engineering Society, the

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755 Florida Chapter of the American Society of Landscape Architects,
756 the Secretary of Environmental Protection, and the Secretary of
757 Transportation shall each appoint one member to the task force.
758 (b) Members of the task force may not be reimbursed for
759 travel, per diem, or any other costs associated with serving on
760 the task force.
761 (c) The task force shall meet a minimum of four times
762 either in person or via teleconference; however, a minimum of
763 two meetings shall be public hearings with testimony.
764 (d) The task force shall expire on November 1, 2009.
765 (3) The task force shall provide its findings and
766 legislative recommendations to the President of the Senate and
767 the Speaker of the House of Representatives by November 1, 2009.
768 Section 11. Except as otherwise expressly provided in this
769 act, this act shall take effect July 1, 2009.

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Leon Co. Proposed Requirements	SB 274C2 Springs Protection
Primary Springs Protection Zone adopted by BOCC.	Establish Springs Protection Zones (SPZ). All Counties or Municipalities with Magnitude 1 or 2 springs are designated SPZ. DEP to establish rules based on priority High - >=1.0 mg/L, compliance by July 1, 2016; Med - >=0.5 mg/L, compliance by July 1, 2019; Low – all 1st or 2nd magnitude springs not rated as high or medium, compliance by July 1, 2024. Densities greater than 640 systems / sq mile (1.00 acre / system) connect to central sewer.
New: Performance-based OSTDS NSF/ANSI 245 with drip Irrigation. 70% Nitrogen reduction or 10mg/L at outlet.	**New (after July 1, 2009)** 3 mg/L total nitrogen at owner's property line. Does not require groundwater monitoring. **Pre-Standard Requirements:** Density Limitations – SPZ estimated sewage flow ratio to useable acreage 100 to 1 or less. (3bdrm – 3 acres) Lots served by OSTDS achieving advanced secondary treatment standards for nitrogen combined with drip irrigation
Repair/Modification: Modification: Performance-based OSTDS NSF/ANSI 245 with drip Irrigation. 70% Nitrogen reduction or 10mg/L at outlet. Repair: Performance-based OSTDS NSF/ANSI 245 with drip Irrigation. Exempts laundry systems as repairs 70% Nitrogen reduction or 10mg/L at outlet. Repair under Exemption: Install to new construction standards with respect to water table separation, 24-inch, and drainfield sizing.	**Repair/Modification/Reapproval:** All OSTDS requiring repair modification or reapproval must meet 24-inch water table separation. Tank must be tested for watertightness and within 1 tank size.

Leon Co. Proposed Requirements

Exemptions:
Primary residence and owner occupied

Household income at or below 80% most current Florida Housing Finance Corporation Income Limits Schedule. (family of 2 - $40,700, family of 4 - $50,900,)
and
Market value of the home determined by Property Appraiser at or below current value threshold as specified in Local Housing Assistance Plan. ($204,000)

Comply with new construction standards for drainfield sizing and water table separations.

Maintenance:
Performance-based maintenance requirements of 64E-6 apply.

Operating permit required
IM/Commercial Annual - $150.00
Residential Biennial – $100.00

Inspections 2 x Maintenance entity, 1 x Health Department.

Repair Under Exemption: Require 5 year Operating Permit @ $100.00 and tank must be pumped and inspected within that 5 year permit life.

Mandatory Sewer Connection:
Current 64E-6, FAC standards apply. At failure 90 day to connect to available sewer (HD enforced). 360 days to connect once notified by utility provider that sewer is available (Utility enforced).

SB 274C2 Springs Protection

Exemptions:
Provides that DEP create program administered by DEP to provide low-income property owners in SPZ grants. <= 200% Federal poverty level (family of 2 - $29,140, family of 4 - $44,100). Amount of grant is limited to the cost differential between replacement with standard and upgraded nitrogen-reduction system not to exceed $5,000.00 per property or connection to sewer.

Maintenance:
Develop & implement a mandatory statewide OSTDS inspection program phased in over a 10-year cycle. Every system inspected on a 5-year recurring cycle. Initially target systems inspected under other departmental criteria. Provide for exemptions for density of dwellings is fewer than 1 per 3 acres unless property abuts an impaired water body under ss. 369.404. At lease 50% of fees dedicated to the grant program.

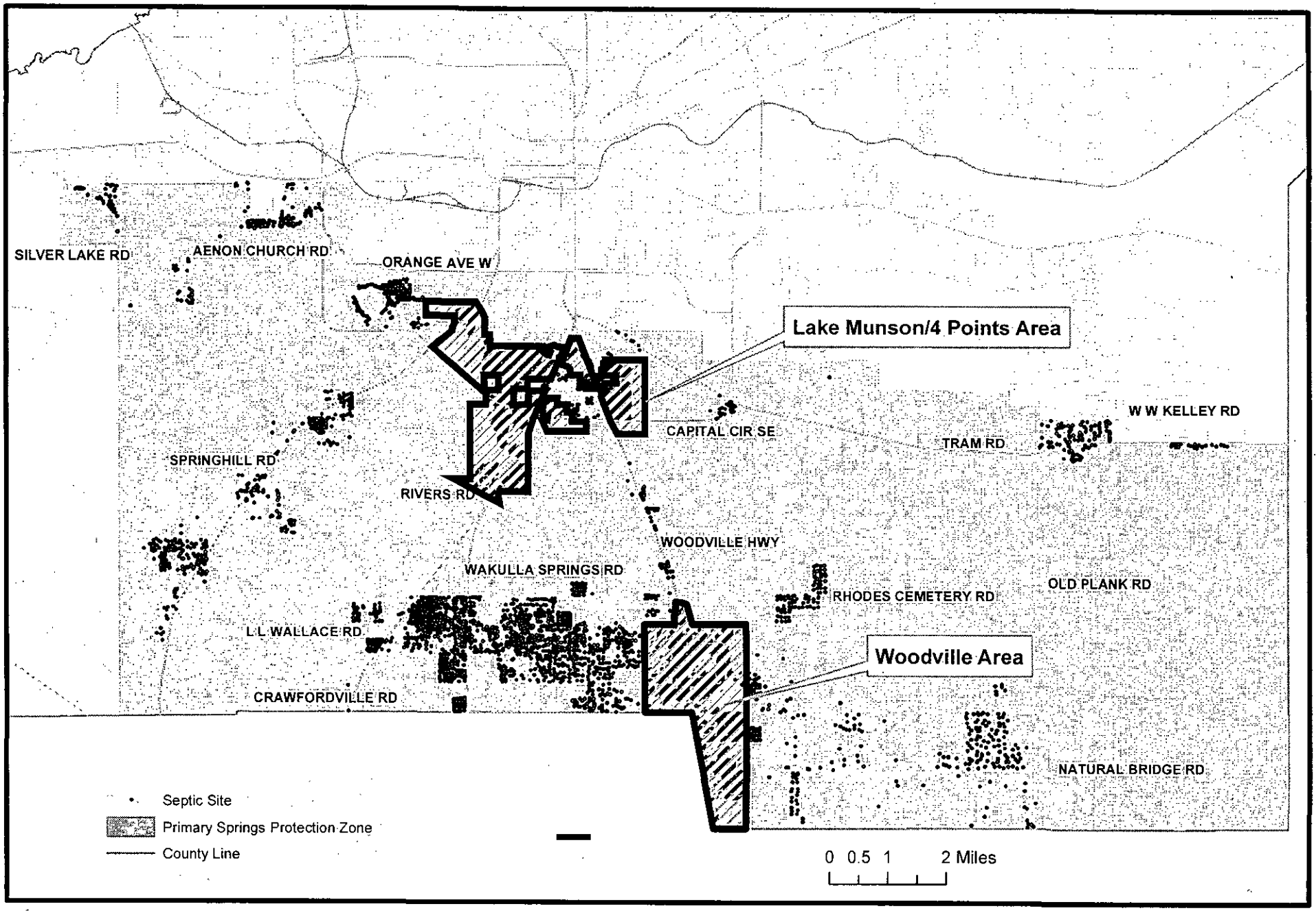
Mandatory Sewer Connection:
Notification of availability must be made within 60 days by Utility provider.

Publicly owned or investor owned may not waive requirement for mandatory connection.

Exemption to connection may be waived for PBTS the meet or exceed standards established for OSTDS within SPZ

Type II Transfer: DOH Bureau and CHD OSTDS functions to DEP.

City of Tallahassee Sanitary Sewer Master Plan
Target Areas in the Primary Springs Protection Zone



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EPA's Cost Comparison
Bringing Central Sewer and Alternate Wastewater Treatment Technologies
To a Model "Rural" and "Fringe" Community

The EPA estimated the cost for providing sewer and alternative wastewater treatment technologies to a model "rural" and "fringe" community. EPA's terms "rural" and "fringe" community were used for illustrative purposes and do not equate with the County's land use and planning terms. EPA's rural community model assumed a population of 450 people living in 135 homes, on one-acre lots or larger lots. EPA's model fringe community is located 10 miles from the nearest city, has a population of 770 people in 220 homes, but is expected to grow to a total population of 1,550 people in 443 homes located on ½-acre lots. Both model communities are serviced by conventional onsite wastewater systems consisting of septic tanks and leach fields. Wastewater options the EPA considered for the rural model community follows:

- Centralized System – New conventional gravity collection servicing the entire rural community and construction of a new centralized treatment facility, with treatment consisting of a facultative oxidation pond and disinfection.

- Cluster Systems – New alternative collection (small diameter gravity sewers (SDGS)) and construction of new small cluster treatment systems, each consisting of a sand filter and a central leach field (cluster systems would be installed only where onsite systems are currently failing; properly functioning onsite systems would continue in use).

- On-Site Systems – Replacement of failing conventional onsite systems (septic tanks and leach fields) with new onsite systems consisting of septic tanks, intermittent sand filters where necessary, and leach fields; low pressure pipe (LPP) distribution would be used to transport the wastewater from the septic tanks up to and through the leach fields. The sand filters and LPP distribution address the issues of a high ground-water table and low-permeability soils.

EPA considered additional alternatives for the fringe model community. EPA's cost summaries and comparison for each technology option are presented below (capital costs were annualized over 30 years (the life of the system) for each technology option using a discount rate of 7 percent; all costs are presented in 1995 dollars) (Table 1).

Table 1 - EPA's Summary of Costs for Each Technology Option						
	Summary of Rural Community Technology Costs			Summary of Fringe Community Technology Costs		
Technology Option	Total Capital Cost (1995 $)	Annual Operating and Maintenance (O&M) Cost (1995 $)	Total Annual Cost (Annualized Capital Plus O&M - $1995 $)	Total Capital Cost (1995 $)	Annual O&M Cost (1995 $)	Total Annual Cost (Annualized Capital Plus O&M - $1995 $)
Centralized Systems	$2,321,840 - $3,750,530	$29,740 - $40,260	$216,850 - $342,500	$3,322,900 - $5,841,800	$83,800 - $95,900	$351,600 - $566,700
Alternative Small Diameter Gravity System (SDGS) Collection and Small Cluster Systems	$598,100	$7,290	$55,500	$3,783,700	$18,000	$322,900
Onsite Systems	$510,000	$13,400	$54,500	$2,117,100	$59,240	$229,900
EPA's Model Service Area	Consists of 450 people in 135 homes			Consists of 1,550 people in 443 homes, includes future growth.		
Note: While EPA's costs are in 1995 dollars, this analysis may be utilized to compare annual cost differences among alternate wastewater treatment technologies.						

EXECUTIVE SUMMARY

Testing of the Bio-Microbics MicroFAST® Model 0.5 was conducted under the provisions of NSF/ANSI Standard 245 for Wastewater Treatment Systems – Nitrogen Reduction (March 2007). NSF/ANSI Standard 245 was developed by the NSF Joint Committee on Wastewater Technology.

The performance evaluation was conducted at the NSF Wastewater Technology Test Facility located in Waco, Texas using wastewater diverted from the Waco municipal wastewater collection system, which serves predominantly residential development. The evaluation consisted of sixteen weeks of dosing at design flow, seven and one half weeks of stress testing and two and one half weeks of dosing at design flow. Dosing was initiated on August 14, 2006. After a three-week start up period, sample and data collection for the test was officially started on September 4, 2006. Sampling started in the fall and continued into the spring, covering a range of operating temperatures.

Over the course of the evaluation, the average influent total nitrogen was 38 mg/L. The Bio-Microbics MicroFAST® Model 0.5 produced an average effluent total nitrogen of 17 mg/L, which results in a 55% reduction in the incoming total nitrogen.

The Bio-Microbics MicroFAST® Model 0.5 is Certified as an NSF/ANSI Standard 40 Residential Wastewater Treatment System. The Model 0.5 Standard 40 evaluation produced an average effluent $CBOD_5$ of 3 mg/L, ranging between <2 and 8 mg/L, and an average effluent total suspended solids concentration of 5 mg/L, ranging between <2 mg/L and 29 mg/L. Their effluent successfully met the performance requirements established by NSF/ANSI Standard 40 for Class I effluent.

> The maximum 7-day arithmetic mean was 4 mg/L for $CBOD_5$ and 14 mg/L for total suspended solids, both below the allowed maximums of 40 and 45 mg/L respectively. The maximum 30-day arithmetic mean was 4 mg/L for $CBOD_5$ and 11 mg/L for total suspended solids, both below the allowed maximums of 25 mg/L and 30 mg/L respectively. The effluent pH during the entire evaluation ranged between, 6.1 and 7.0, within the required range of 6.0 to 9.0. The Bio-Microbics MicroFAST® 0.5 met the requirements for noise levels (less than 60 dbA at a distance of 20 feet), color, threshold odor, oily film and foam.

Over the course of the Standard 245 evaluation the influent averaged 240 mg/L BOD_5, 310 mg/L TSS, 38 mg/L total nitrogen, 290 mg/L alkalinity, a temperature of 27 °C and a median pH of 6.8, meeting the requirements of Standard 245. The effluent averages over the course of the test were 3 mg/L $CBOD_5$, 4 mg/L TSS and 17 mg/L total nitrogen, representing a 55% reduction, and the effluent pH ranged between 6.8 and 7.0 SU. The effluent values met the requirements of the Standard.

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EXECUTIVE SUMMARY

Testing of the Hoot Model ANR-450 was conducted under the provisions of NSF/ANSI Standard 245 for Wastewater Treatment Systems – Nitrogen Reduction (March 2007). NSF/ANSI Standard 245 was developed by the NSF Joint Committee on Wastewater Technology.

The performance evaluation was conducted at the NSF Wastewater Technology Test Facility located in Waco, Texas using wastewater diverted from the Waco municipal wastewater collection system, which serves a predominantly residential development. The evaluation consisted of sixteen weeks of dosing at design flow, seven and one half weeks of stress testing and two and one half weeks of dosing at design flow. Dosing was initiated on April 17, 2006. After a three-week start up period, sample and data collection for the test was officially started on May 8, 2006. Sampling started in the spring and continued into the winter, covering a range of operating temperatures.

Over the course of the evaluation, the average influent total nitrogen was 38 mg/L, ranging between 19 and 64 mg/L. The Hoot Model ANR-450 produced an average effluent total nitrogen of 5.8 mg/L, which results in a 85% reduction in the influent total nitrogen.

The Hoot Model ANR-450 is Certifed as an NSF/ANSI Standard 40 Class I system. Their Standard data is available for review in Appendix C of their NSF/ANSI Standard 40 Wastewater Technology Report. Their effluent successfully met the performance requirements established by NSF/ANSI Standard 40 for Class I effluent.

The Standard 245 evaluation produced an average influent BOD_5 of 230 mg/L and an average effluent of 7 mg/L. The average influent TSS was 3000 mg/L and the effluent was 4 mg/L, which met the requirements of the Standard. The Influent TKN was 38 mg/L, ranging between 19 and 64 mg/L. The average influent Alkalinity was 280 mg/L, ranging between 100 and 320 mg/L. The average influent temperature was 29 °C, ranging between 25-31 °C. The average influent pH was 6.8, ranging between 6.4 and 7.0. The average effluent pH was 6.8, ranging between 6.4 and 7.5. The average effluent Total Nitrogen was 5.8 mg/L, which represents an 85% reduction over the course of the test.

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EXECUTIVE SUMMARY

Testing of the Norweco Singulair Model TNT-500 was conducted under the provisions of NSF/ANSI Standard 245 for Wastewater Treatment Systems – Nitrogen Reduction (March 2007). NSF/ANSI Standard 245 was developed by the NSF Joint Committee on Wastewater Technology.

The performance evaluation was conducted at the NSF Wastewater Technology Test Facility located in Waco, Texas using predominantly residential wastewater diverted from the Waco municipal wastewater collection system. The evaluation consisted of sixteen weeks of dosing at design flow, seven and one half weeks of stress testing, and two and one half weeks of dosing at design flow. Dosing was initiated on June 27, 2005. After a three-week start up period, sample and data collection for the test was officially started on July 18, 2005. Sampling started in the summer and continued into the winter, covering a range of operating temperatures.

Over the course of the evaluation, the average influent Total Nitrogen was 38 mg/L, ranging between 15 and 58 mg/L. The Norweco Singulair Model TNT-500 produced an average effluent Total Nitrogen of 12 mg/L, which results in a 68% reduction in the influent Total Nitrogen.

The Norweco Singulair Model TNT-500 was previously certified as an NSF/ANSI Standard 40 Class I system, producing an average effluent $CBOD_5$ of 3 mg/L (ranging between <2 and 11 mg/L) and an average effluent total suspended solids was 8 mg/L (ranging between <2 mg/L and 48 mg/L). The effluent successfully met the performance requirements established by NSF/ANSI Standard 40 for Class I effluent.

> The maximum 7-day arithmetic mean was 15 mg/L for $CBOD_5$ and 30 mg/L for total suspended solids, both below the allowed maximums of 40 and 45 mg/L respectively. The maximum 30-day arithmetic mean was 7 mg/L for $CBOD_5$ and 17 mg/L for total suspended solids, both below the allowed maximums of 25 mg/L and 30 mg/L respectively. The effluent pH during the entire evaluation ranged between, 6.3 and 7.4, within the required range of 6.0 to 9.0. The Model TNT-500 met the requirements for noise levels (less than 60 dbA at a distance of 20 feet), color, threshold odor, oily film and foam.

Over the course of the Standard 245 evaluation the influent averaged 240 mg/L BOD_5, 270 mg/L TSS, 38 mg/L Total Nitrogen, 310 mg/L alkalinity, 28 °C and a median pH of 6.7, meeting the requirements of the Standard. The effluent averages over the course of the test were 3 mg/L $CBOD_5$, 8 mg/L TSS and 12 mg/L Total Nitrogen, representing a 68% reduction, and the effluent pH ranged between 6.3 and 7.4 SU. The effluent values met the requirements of the Standard.

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NSF Product and Service Listings

These Listings were Last Updated on **Friday, May 01, 2009** at 4:15 AM Eastern Time.
Please contact NSF International to confirm the status of any Listing, report errors, or make suggestions.

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NSF/ANSI STANDARD 245
Wastewater Treatment Systems - Nitrogen Reduction

Cert-Link® (Click here to visit this Company's Website)

BIO-MICROBICS, INC.

8450 COLE PARKWAY
SHAWNEE, KS 66227
800-753-FAST
913-422-0707

Facility : SHAWNEE, KS

Model Number	Rated Capacity Gallons/Day
MicroFast 0.5[1]	500
MicroFast 0.75[2]	750
MicroFast 0.9[3]	900
MicroFast 1.5[4]	1500

[1] Beginning with serial number MCF2265B.
[2] Beginning with serial number MCF4000B.
[3] Beginning with serial number MCF3026B.
[4] Beginning with serial number MCF6006B.

BUSSE INNOVATIVE SYSTEME GMBH

ZAUCHEWEG 6
D-04316 LEIPZIG
GERMANY
49 341 6598425

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Facility : LEIPZIG, GERMANY

Model Number	Rated Capacity Gallons/Day
MF-B-400	500

ECOLOGICAL TANKS, INC.

Cert-Link® (Click here to visit this Company's Website)

2247 HIGHWAY 151 NORTH
DOWNSVILLE, LA 71234
800-277-8179
318-644-0397

Facility : DOWNSVILLE, LA

Model Number	Rated Capacity Gallons/Day
AA500-35NR[1]	500
AS600+4NR w/EZ top[1] [2]	600

[1] Suffix NR denotes nitrogen reduction. Model AS600+4NR w/EZ top and AA500-35NR complete models include a pretreatment tank.
[2] Model AS600+4 NR also as a component of the models AS600 5+5 TRIO NR, AS600 5+75 TRIO NR, AS600 4+75-C NR, AS600+5-C NR, AS600 +5 CP NR, and AS600 +5 C CP NR have not been tested and Certified by NSF.
Complete models:
AS600 5+5 TRIO NR includes a 500 gallon pretreatment tank and a 500 gallon pump tank.
AS600 5+75 TRIO NR includes a 500 gallon pretreatment tank and a 750 gallon pump tank.
AS600 4+75-C NR includes a 400 gallon pretreatment tank and a 750 gallon pump tank.
AS600 +5-C NR includes a 500 gallon pretreatment tank.
AS600 +5 CP NR includes a 500 gallon detached pretreatment tank.
AS600 +5 C CP NR includes a 500 gallon detached pretreatment tank.

HOOT AEROBIC SYSTEMS, INC.

Cert-Link® (Click here to visit this Company's Website)

2885 HIGHWAY 14 EAST
LAKE CHARLES, LA 70607
337-474-2804

Facility : LAKE CHARLES, LA

Model Number	Rated Capacity Gallons/Day
ANR-450	450

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NORWECO, INC.

FIRELANDS INDUSTRIAL PARK
220 REPUBLIC STREET
NORWALK, OH 44857-1156
419-668-4471

Facility : NORWALK, OH

Model Number	Rated Capacity Gallons/Day
Singulair TNT-500	500
Singulair TNT-500	600
Singulair TNT-750	750
Singulair TNT-750	800
Singulair TNT-1000	1000
Singulair TNT-1250	1250
Singulair TNT-1500	1500
Singulair TNTLP-500[1]	500
Singulair TNTLP-500[1]	600
Singulair TNTLP-1000[1]	1000
Singulair TNTOP-500[2]	500
Singulair TNTOP-500[2]	600
Singulair TNTOP-1000[2]	1000
Singulair TNTOR-500[3]	500
Singulair TNTOR-600[3]	600

[1] Suffix LP denotes low profile tank.
[2] Suffix OP denotes one piece tank.
[3] Suffix OR denotes Oregon model.

SEPTITECH®, INC.

70 COMMERCIAL STREET
SUITE #3
LEWISTON, ME 04240
800-318-7967
207-333-6940

Facility : LEWISTON, ME

Model Number	Rated Capacity Gallons/Day
N-M400	500
N-M400D	500
N-M550	750
N-M1200	1200
N-M750	1000
N-M1500	1500

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NOTE: This company may sell products complying with all applicable requirements for Certification nationally and internationally, but has advised NSF of authorized representatives physically located in the following:

Arizona	California	Connecticut	Maine	Maryland
Massachusetts	New Hampshire	North Carolina	Ohio	Rhode Island
Vermont	Washington	West Virginia		

Contact the Listed company directly for further product information and availability in your area.

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Total Nitrogen Reductions - PBTS Test Center Results
From Florida DOH 12/6/07 by E. Roeder

Component/ Configuration	Type of Testing	Total Nitrogen (TN (mg/L))				Vendor
		In	Out	Reduction		
Advantex 20x Mode 1	N-testing concurrently with NSF-40	33	12	21	-64%	Orenco
Advantex 20x Mode 3	N-testing after NSF-40	35	12	23	-66%	Orenco
Aerocell ATS SCAT-8-AC-C500	NSF-40+Nitrogen	40	9.3	30.7	-77%	Quantics
Enviro-Guard 0.75 (Multi-Flo)	NSF+Nitrogen with reduced sampling	46	20	26	-57%	Consolidated Treatment
HOOT 500 AND (with recirculation for nitrogen reduction)	N-testing (25 samples) with NSF-40	26.3	9.6	16.7	-63%	Hoot Aerobic Systems
FAST	NSF-40+Nitrogen	34.5	9.3	25.2	-73%	Bio-Microbics
*MICRO-FAST 0.5	Keys Study, Phase I (12 samples)	38	11	27	-71%	Bio-Microbics
*MICRO-FAST 0.5	Keys Study, Phase II, n=13/14)	48	11.5	36.5	-76%	Bio-Microbics
RETROFAST 0.375	ETV	39	19	20	-51%	Bio-Microbics
*Septitech Model 400	ETV	39	14	25	-64%	Septiech
Singulair 960 w/ Biokinetics phase 1 with recirculation	16 N-tests at NSF-testing facility	25	6.8	18.2	-73%	Norweco
Singulair 960 w/ Biokinetics phase 2 no recirculation	8 N-tests at NSF-testing facility	25	11.8	13.2	-53%	Norweco
Average		35.73	12.19	23.54	-66%	

Notes:
1. *Micro-Fact 0.5 is NSF 245 certified according to NSF's website.
2. Underlined results appear to meet the performance requirements of the draft ordinance and Comprehensive Plan Policy 4.2.5 [C]; however NSF 245 certification and performance at these levels needs to be confirmed.

Table 1: Summary of Management Models

TABLE 1: SUMMARY OF MANAGEMENT MODELS

TYPICAL APPLICATIONS	PROGRAM DESCRIPTION	BENEFITS	LIMITATIONS
MODEL 1 - HOMEOWNER AWARENESS MODEL			
• Areas of low environmental sensitivity where sites are suitable for conventional onsite systems.	• Systems properly sited and constructed based on prescribed criteria. • Owners made aware of maintenance needs through reminders. • Inventory of all systems	• Code-compliant system. • Ease of implementation; based on existing, prescriptive system design and site criteria. • Provides an inventory of systems that is useful in system tracking and area-wide planning.	• No compliance/problem identification mechanism. • Sites must meet siting requirements. • Cost to maintain database and owner education program.
MODEL 2 - MAINTENANCE CONTRACT MODEL			
• Areas of low to moderate environmental sensitivity where sites are marginally suitable for conventional onsite systems due to small lots, shallow soils, or low-permeability soils. • Small clustered systems.	• Systems properly sited and constructed. • More complex treatment options, including mechanical components or small clusters of homes. • Requires service contracts to be maintained. • Inventory of all systems. • Service contract tracking system.	• Reduces the risk of treatment system malfunctions. • Protects homeowner investment.	• Difficulty in tracking and enforcing compliance because it must rely on the owner or contractor to report a lapse in a valid contract for services. • No mechanism provided to assess effectiveness of maintenance program.
MODEL 3 - OPERATING PERMIT MODEL			
• Areas of moderate environmental sensitivity such as wellhead or source water protection zones, shellfish growing waters, or bathing/water contact recreation. • *Systems treating high-strength wastes or large-capacity systems.*	• Establishes system performance and monitoring requirements. • Allows engineered designs but may provide prescriptive designs for specific receiving environments. • Regulatory oversight by issuing renewable *operating permits* that may be revoked for noncompliance. • Inventory of all systems. • Tracking system for operating permit and compliance monitoring. • Minimum for large-capacity systems.	• Allows systems in more environmentally sensitive areas. • Operating permit requires regular compliance monitoring reports. • Identifies noncompliant systems and initiates corrective actions. • Decreases need for regulation of large systems. • Protects homeowner investment.	• Higher level of expertise and resources for regulatory authority to implement. • Requires permit tracking system. • Regulatory authority needs *enforcement powers.*
MODEL 4 - RESPONSIBLE MANAGEMENT ENTITY (RME) OPERATION AND MAINTENANCE MODEL			
• Areas of moderate to high environmental sensitivity where reliable and sustainable system operation and maintenance (O&M) is required, e.g., sole source aquifers, wellhead or source water protection zones, critical aquatic habitats, or outstanding value resource waters. • Clustered systems.	• Establishes system performance and monitoring requirements. • Professional O&M services through RME (either public or private). • Provides regulatory oversight by issuing operating or NPDES permits directly to the RME. (System ownership remains with the property owner.) • Inventory of all systems. • *Tracking system for operating permit and compliance monitoring.*	• O&M responsibility transferred from the system owner to a professional RME that is the holder of the operating permit. • Identifies problems needing attention before failures occur. • Allows use of onsite treatment in more environmentally sensitive areas or for treatment of high-strength wastes. • Can issue one permit for a group of systems. • Protects homeowner investment.	• Enabling legislation may be necessary to allow RME to hold operating permit for an individual system owner. • RME must have owner approval for repairs; may be conflict if performance problems are identified and not corrected. • Need for easement/right of entry. • Need for oversight of RME by regulatory authority.
MODEL 5 - RESPONSIBLE MANAGEMENT ENTITY (RME) OWNERSHIP MODEL			
• Areas of greatest environmental sensitivity where reliable management is required. Includes sole source aquifers, wellhead or source water protection zones, critical aquatic habitats, or outstanding value resource waters. • Preferred management program for clustered systems serving multiple properties under different ownership (e.g., subdivisions).	• Establishes system performance and monitoring requirements. • Professional management of all aspects of decentralized systems through public/private RMEs that own or manage individual systems. • Qualified, trained, owners and licensed professional owners/operators. • Provides regulatory oversight by issuing operating or NPDES permit. • Inventory of all systems. • *Tracking system for operating permit and compliance monitoring.*	• High level of oversight if system performance problems occur. • Simulates model of central sewerage, reducing the risk of noncompliance. • Allows use of onsite treatment in more environmentally sensitive areas. • Allows effective area-wide planning/watershed management. • Removes potential conflicts between the user and RME. • Greatest protection of environmental resources and owner investment.	• Enabling legislation and/or formation of special district may be required. • May require greater financial investment by RME for installation and/or purchase of existing systems or components. • Need for oversight of RME by regulatory authority. • Private RMEs may limit competition. • Homeowner associations may not have adequate authority.

Note: If applicable, NPDES requirements under the CWA or UIC requirements under the SDWA supercede any less stringent or inconsistent provision.

Effective 03/19/2009
FHFC Posted 04/03/2009

2009 Income Limits
Florida Housing Finance Corporation
State Housing Initiatives Program (SHIP)

City (County)		Percentage Category	Number of Persons in Household 1	2	3	4	5	6	7	8
Panama City-Lynn Haven MSA		**30%**	**11,800**	**13,500**	**15,150**	**16,850**	**18,200**	**19,550**	**20,900**	**22,250**
(Bay)		50%	19,650	22,500	25,300	28,100	30,350	32,600	34,850	37,100
Median:	56,200	**80%**	**31,450**	**35,950**	**40,450**	**44,950**	**48,550**	**52,150**	**55,750**	**59,350**
		120%	47,160	54,000	60,720	67,440	72,840	78,240	83,640	89,040
Pensacola-Ferry Pass-Brent MSA		**30%**	**12,000**	**13,700**	**15,450**	**17,150**	**18,500**	**19,900**	**21,250**	**22,650**
(Escambia/Santa Rosa)		50%	20,000	22,850	25,700	28,550	30,850	33,100	35,400	37,700
Median:	57,100	**80%**	**32,000**	**36,550**	**41,150**	**45,700**	**49,350**	**53,000**	**56,650**	**60,300**
		120%	48,000	54,840	61,680	68,520	74,040	79,440	84,960	90,480
Port Saint Lucie MSA		**30%**	**12,550**	**14,350**	**16,150**	**17,950**	**19,400**	**20,800**	**22,250**	**23,700**
(Martin/Saint Lucie)		50%	20,950	23,900	26,900	29,900	32,300	34,700	37,100	39,450
Median:	59,600	**80%**	**33,500**	**38,300**	**43,050**	**47,850**	**51,700**	**55,500**	**59,350**	**63,150**
		120%	50,280	57,360	64,560	71,760	77,520	83,280	89,040	94,680
Punta Gorda MSA		**30%**	**11,400**	**13,050**	**14,650**	**16,300**	**17,600**	**18,900**	**20,200**	**21,500**
(Charlotte)		50%	19,050	21,750	24,500	27,200	29,400	31,550	33,750	35,900
Median:	54,400	**80%**	**30,450**	**34,800**	**39,150**	**43,500**	**47,000**	**50,450**	**53,950**	**57,400**
		120%	45,720	52,200	58,800	65,280	70,560	75,720	81,000	86,160
Sebastian-Vero Beach MSA		**30%**	**12,250**	**14,000**	**15,750**	**17,500**	**18,900**	**20,300**	**21,700**	**23,100**
(Indian River)		50%	20,400	23,300	26,250	29,150	31,500	33,800	36,150	38,500
Median:	58,300	**80%**	**32,650**	**37,300**	**42,000**	**46,650**	**50,400**	**54,100**	**57,850**	**61,600**
		120%	48,960	55,920	63,000	69,960	75,600	81,120	86,760	92,400
Tallahassee MSA										
Tallahassee HMFA		**30%**	**13,350**	**15,300**	**17,200**	**19,100**	**20,650**	**22,150**	**23,700**	**25,200**
(Gadsden/Leon/Jefferson)		50%	22,250	25,450	28,600	31,800	34,350	36,900	39,450	42,000
* Median:	63,600	**80%**	**35,650**	**40,700**	**45,800**	**50,900**	**54,950**	**59,050**	**63,100**	**67,200**
		120%	53,400	61,080	68,640	76,320	82,440	88,560	94,680	100,800
Wakulla County HMFA		**30%**	**12,450**	**14,250**	**16,000**	**17,800**	**19,200**	**20,650**	**22,050**	**23,500**
		50%	20,750	23,700	26,700	29,650	32,000	34,400	36,750	39,150
Median:	59,300	**80%**	**33,200**	**37,950**	**42,700**	**47,450**	**51,250**	**55,050**	**58,850**	**62,650**
		120%	49,800	56,880	64,080	71,160	76,800	82,560	88,200	93,960
Tampa-St.Petersburg-Clearwater MSA		**30%**	**12,450**	**14,200**	**16,000**	**17,750**	**19,150**	**20,600**	**22,000**	**23,450**
(Hernando/Hillsborough/Pasco/Pinellas)		50%	20,700	23,700	26,650	29,600	31,950	34,350	36,700	39,050
Median:	59,200	**80%**	**33,150**	**37,900**	**42,600**	**47,350**	**51,150**	**54,950**	**58,700**	**62,500**
		120%	49,680	56,880	63,960	71,040	76,680	82,440	88,080	93,720