HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 749 CS Sewage Treatment and Disposal Systems
SPONSOR(S): Bowen
TIED BILLS: **IDEN./SIM. BILLS:** SB 1874

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR
1) Environmental Regulation Committee	7 Y, 0 N, w/CS	Kliner	Kliner
2) Local Government Council	8 Y, 0 N, w/CS	Camechis	Hamby
3) Agriculture & Environment Appropriations Committee	12 Y, 0 N, w/CS	Dixon	Dixon
4) State Resources Council	9 Y, 0 N, w/CS	Kliner	Hamby
5)			

SUMMARY ANALYSIS

Florida's Department of Health (DOH) regulates the public health of public water systems and onsite sewage treatment systems. Current law provides for onsite sewage treatment permitting for the construction, installation, modification, abandonment, or repair of onsite sewage treatment and disposal systems in areas where publicly-owned or investor-owned sewerage systems are not available. When a central sewerage system is available, however, local governments may require connection of onsite systems to the central system within 365 days of the central system's availability.

This bill requires counties, municipalities, and sewer districts proposing to expand or build new central sewer facilities to provide information regarding:

- The history of onsite sewage treatment and disposal systems currently in use in the area;
- A comparison of the projected costs to the owner of a typical lot or parcel of connecting to and using the proposed sewerage system versus installing, operating, and properly maintaining an onsite sewage treatment system that is approved by the DOH and that provides for the comparable level of environmental and health protection as the proposed central sewerage system and other factors deemed relevant by the local authority.

In addition, the bill allows local governments to meet growth management concurrency requirements for "sanitary sewers" for new development through the use of any onsite treatment and disposal systems approved by the DOH. The bill authorizes a local government to grant a variance to an owner of a performance-based onsite sewage treatment and disposal system permitted by the department as long as the onsite system is functioning properly and satisfying the conditions of the operating permit; however, the bill explicitly provides that a local government is not required to issue a variance under any circumstance. The bill also clarifies that a local government located within certain areas is not required to issue a variance under any circumstance, and nothing in this provision should be construed as limiting local government authority to enact ordinances under section 4 of ch. 99-395, Laws of Florida. The bill clarifies that an impaired body of water as defined under the Federal Clean Water Act as one of the issues that must be examined in the report conducted by the local government authority before a new central plant not previously approved is being considered. It also clarifies the enforcement authority of the DOH when an onsite system has failed. The bill provides authority to the DEP to delegate certain authority to local governments that request authority to issue certain permits. Further, it increases the continuing education hours for septic tank contractors from 6 to 12.

This bill does not appear to have a fiscal impact on the state.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. HOUSE PRINCIPLES ANALYSIS:

Limited government: The bill may increase workload of county, municipality, and sewer districts due to a new requirement to include certain information in reports regarding creation or expansion of central sewerage systems.

B. EFFECT OF PROPOSED CHANGES:

Present Situation

Background – The Federal Clean Water Act and Wastewater Discharge
The federal Water Pollution Control Act of 1972, commonly referred to as the Clean Water Act (CWA)[1], established the basic framework for pollution control in the nation's water bodies. Its primary goal was to maintain clean and useful water bodies. By setting national standards and regulations for the discharge of pollution, the CWA was intended to restore and protect the health of the nation's water bodies.

The CWA established the foundation for wastewater discharge control in the United States. According to the Environmental Protection Agency (EPA), the CWA's primary objective is to "restore and maintain the chemical, physical and biological integrity of the nation's waters."[2] The CWA established a control program for ensuring that communities have clean water by regulating the release of contaminants into our country's waterways. Permits that limit the amount of pollutants discharged are required of all municipal and industrial wastewater dischargers under the National Pollutant Discharge Elimination System (NPDES) permit program. In addition, a construction grants program was set up to assist publicly owned wastewater treatment works build the improvements required to meet these new limits.

According to the EPA, over 75 percent of the nation's population is served by centralized wastewater collection and treatment systems. The remaining population uses septic or other onsite systems. Approximately 16,000 municipal wastewater treatment facilities are in operation nationwide. The CWA requires that municipal wastewater treatment plant discharges meet a minimum of 'secondary treatment'. Over 30 percent of the wastewater treatment facilities today produce cleaner discharges by providing even greater levels of treatment than secondary.

State Regulation for Sewage Systems
Statutory regulation of Florida county water and sewerage systems is found in ch. 153, F.S., which authorizes local governments to:

- Construct water supply systems and sewage disposal systems;
- Operate, manage, control, and make improvements to the systems;
- Issue bonds to pay for the costs associated with the construction of the systems; and
- Levy rates and fees to pay for the management of the systems.

Chapter 180, F.S., authorizes municipalities to provide similar services. The construction and expansion of central sewerage systems are typically financed through bonds that are issued based on a guarantee of a given capacity over time. Knowing how many citizens may connect to a central system allows local governments to predict revenue which, in turn, assists local governments in securing funding from lending institutions for sewerage projects.

[1] Public Law 92-500
[2] http://www.epa.gov/owm/primer.pdf

Part II of ch. 153, F.S., authorizes the creation of county water and sewer districts, which are special taxing districts created to reach and provide services to unincorporated areas in need of sewer and water services.

Chapter 381, F.S., authorizes the Florida Department of Health to regulate public water systems and onsite sewage treatment systems. Section 381.0065, F.S., regulates onsite sewage treatment and disposal systems, and requires a permit for the construction, installation, modification, abandonment, or repair of onsite sewage treatment and disposal systems in areas where publicly-owned or investor-owned sewerage systems are not available. Pursuant to s. 381.00655, F.S., if a publicly owned or investor-owned system is available, however, the owner of the central system may require connection of onsite systems to central sewerage systems within 365 days of the central system's availability.

To ensure that certain types of public facilities and services (e.g., sewer, water, and roads) needed to serve residents are constructed and made available contemporaneously with the impact of new development, lawmakers directed local governments to incorporate the concept of concurrency in the 1980s.[3]

Growth and Concurrency Obligations

A centerpiece of Florida's 1985 growth management legislation was concurrency.[4] At its core, concurrency is a requirement that development must not proceed unless infrastructure capacity and specific urban services are in place to service the new development. Concurrency was intended to address major infrastructure problems facing the state, especially increasing road congestion. As the state added approximately 300,000 residents each year during the 1970s and into the 1980s, a trend that has continued almost unabated for the last forty years, local and state road infrastructure became increasingly plagued by traffic congestion. In addition, other problems were apparent as well, including potable water availability, the need to treat wastewater to meet higher federal standards, and increasing problems relating to inadequate stormwater management.[5] Section 163.3180, F.S., mandates that sanitary sewer, solid waste, drainage, potable water, parks and recreation, schools and transportation facilities, including mass transit, are subject to the concurrency requirement on a statewide basis.[6]

Central Wastewater Collection and Treatment[7]

The most common form of pollution control in the United States consists of a system of sewers and wastewater treatment plants. The sewers collect municipal wastewater from homes, businesses, and industries and deliver it to facilities for treatment before it is discharged to water bodies or land, or reused. Conventional wastewater collection systems transport sewage from homes or other sources by gravity flow through buried piping systems to a central treatment facility. These systems are usually reliable and consume no power. However, the slope requirements to maintain adequate flow by gravity may require deep excavations in hilly or flat terrain, as well as the addition of sewage pump stations, which can significantly increase the cost of conventional collection systems. Manholes and other sewer appurtenances also add substantial costs to conventional collection systems.

Cities began to install wastewater collection systems in the late nineteenth century because of an increasing awareness of waterborne disease and the popularity of indoor plumbing and flush toilets. In the year 2000, approximately 208 million people in the U.S. were served by centralized collection.

[3] Back to Basics on School Concurrency, David M. Powell, © 1999 Florida State University Law Review
[4] Florida Growth Management Act (Florida Statutes Chapter 163, Part II, 1985)
[5] A Review of Local Government Concurrency Practices in Florida, Dr. Timothy S. Chapin, Department of Urban and Regional Planning, Florida State University, Working Paper prepared for the DeVoe L. Moore Center, August, 2005
[6] Chapter 9J-5.0055, Florida Administrative Code provides more specific guidance to local governments as the state concurrency mandate is translated into local policies and procedures.
[7] EPA primer on municipal systems at http://www.epa.gov/owm/primer.pdf

Central wastewater treatment facilities utilize multiple treatment processes in order to address the multifaceted difficulties associated with certain waste types, including:

- The effects of biochemical oxygen demand, or BOD;
- Removal of pathogens;
- Processing of nutrient matter; and
- Removal and treatment of detergents, household cleaning aids, heavy metals, pharmaceuticals, synthetic organic pesticides and herbicides, industrial chemicals, and the wastes from their manufacture.

Preliminary Treatment

Preliminary treatment typically involves use of a screen to remove large floating objects, such as rags, cans, bottles and sticks that may clog pumps, small pipes, and down stream processes. The screens vary from coarse to fine and are constructed with parallel steel or iron bars with openings of about half an inch, while others may be made from mesh screens with much smaller openings. Some plants use devices known as comminutors or barminutors, which combine the functions of a screen and a grinder. These devices catch and then cut or shred the heavy solid and floating material.

Secondary Treatment

After the wastewater has been through Primary Treatment processes, it flows into the next stage of treatment called secondary. Secondary treatment processes can remove up to 90 percent of the organic matter in wastewater by using biological treatment processes. The "attached growth" process includes using trickling filters units, biotowers, and rotating biological contactors. Attached growth processes are effective at removing biodegradable organic material from the wastewater. In "suspended growth" processes, the microbial growth is suspended in an aerated water mixture where the air is pumped in, or the water is agitated sufficiently to allow oxygen transfer. The use of lagoons and transfers to land are also utilized if appropriate to the system process.

On-site Systems

Generally, septic systems are used to treat and dispose of relatively small volumes of wastewater, usually from houses and businesses that are located relatively close together. Septic systems are also called onsite wastewater treatment systems, decentralized wastewater treatment systems, on-lot systems, individual sewage disposal systems, cluster systems, package plants, and private sewage systems. Systems are considered "decentralized" because they do not involve central wastewater collection and treatment.

According to the EPA, the typical septic treatment system includes a septic tank, which digests organic matter and separates matter that floats (e.g., oils and grease) and settling solids from the wastewater. Soil-based systems discharge the liquid (effluent) from the septic tank into a series of perforated pipes buried in a leach field, leaching chambers, or other special units designed to slowly release the effluent into the soil or surface water, sometimes referred to as a drainage field.

Alternative systems use pumps or gravity to help septic tank effluent trickle through sand, organic matter (e.g., peat, sawdust), constructed wetlands, or other media to remove or neutralize pollutants like disease-causing pathogens, nitrogen, phosphorus, and other contaminants. Some alternative systems are designed to evaporate wastewater or disinfect it before it is discharged to the soil or surface waters.[8] The EPA developed guidelines to assist communities in establishing comprehensive management programs for onsite/decentralized wastewater systems to improve water quality and protect public health. The voluntary guidelines address the sensitivity of the environment in the community and the complexity of the system used. The five model management programs are:

[8] http://cfpub2.epa.gov/owm/septic/home.cfm - Frequently Asked Questions

- System inventory and awareness of maintenance needs.
- Management through maintenance contracts.
- Management through operating permits.
- Utility operation and maintenance.
- Utility ownership and management.[9]

According to the U.S. Census Bureau, approximately 26 million homes (one-fourth of all homes) in America are served by decentralized wastewater treatment systems. The Census Bureau reports that the distribution and density of septic systems vary widely by region and state, from a high of about 55 percent in Vermont to a low of around 10 percent in California. The New England states have the highest proportion of homes served by septic systems: New Hampshire and Maine both report that about one-half of all homes are served by individual systems. More than one-third of the homes in the southeastern states depend on these systems, including approximately 48 percent in North Carolina and about 40 percent in both Kentucky and South Carolina. More than 60 million people in the nation are served by septic systems. About one-third of all new development is served by septic or other decentralized treatment systems.[10] According to the Florida Department of Health, 31 percent of the Florida population is served by an estimated 2.3 million onsite sewage treatment and disposal systems (OSTDS). These systems discharge over 426 million gallons of treated effluent per day into the subsurface soil environment.[11]

In Florida, the effect of waste disposal, whether through an on-site system or a centralized system, will implicate laws relating to the Total Maximum Daily Load Program (TMDL), which describes the amount of each pollutant a water body can receive without violating state water quality standards.

TMDL Program

Section 305(b) of the CWA requires states to submit to Congress a biennial report on the water quality of their lakes, streams, and rivers. A partial list of water bodies that qualify as "impaired" (i.e., do not meet specific pollutant limits for their designated uses) must be submitted to the U.S. Environmental Protection Agency (EPA) under section 303(d) of the CWA. States are required to develop total maximum daily loads (TMDL) for each pollutant that exceeds the legal limits for that water body. Section 303(d) and the development of TMDLs were generally ignored by the states until numerous lawsuits were filed by environmental groups.[12]

Currently, DEP develops and implements TMDLs through a watershed-based management approach that addresses the state's 52 major hydrologic basins into five groups. Each basin group is subject to a five phase TMDL cycle on a rotating basis. Phase 1 is a preliminary evaluation of the quality of a water body, phase two is monitoring and assessing to verify water quality impairments, phase 3 is the development and adoption of TMDLs for waters verified as impaired, phase 4 is the development of basin management action plans to achieve the TMDL, and phase 5 is the implementation of the plan and monitoring of results.

In the 2005 Regular Session, the TMDL program was amended to authorize DEP to develop basin management action plans (BMAP) as part of the development and implementation of a TMDL for a water body. The law requires plans to integrate appropriate management strategies available to the state through existing water quality protection programs to achieve the TMDL, restore designated uses of the water body, provide for phased implementation of strategies, establish a schedule for implementing strategies, establish a basis for evaluating the plan's effectiveness, identify feasible funding strategies, and equitably allocate pollutant reductions to basins as a whole or to each point or

[9] http://www.epa.gov/owm/septic/pubs/septic_guidelines_factsheet.pdf
[10] http://cfpub2.epa.gov/owm/septic/faqs.cfm?program_id=70#358
[11] http://www.doh.state.fl.us/environment/ostds/intro.htm
[12] Florida implements the TMDL program in s. 403.067, F.S.

non-point source. The bill provides that plans may provide pollutant load reduction credits to pollution dischargers that have implemented strategies to reduce pollutant loads.[13]

The law creates incentives to participate in the BMAP process and establishes a more direct linkage between the actions specified in the BMAP and activities regulated by DEP. Consistent with the existing provisions in s. 403.067, F. S., non-point sources are still managed through a non-regulatory, incentive-based program. However, in order to promote the same predictable pollution reduction performance among non-regulated entities as exists for permitted entities, the law provides the following:

• Non-regulated activities are not eligible for the incentives associated with the presumption of compliance with state water quality standards and the waiver of liability for pollution if adopted best management practices are not properly and timely implemented.
• Non-regulated activities that choose not to implement adopted best management practices must demonstrate compliance with applicable water quality standards.
• DEP is authorized to take enforcement actions where a party fails to properly implement best management practices or provide data demonstrating compliance with water quality standards.

Effect of Proposed Changes

The bill requires counties, municipalities, and sewer districts that propose to expand or build new central sewer facilities to provide information in a report, including:

- Available information from the Department of Health (DOH) on the history of onsite sewage treatment and disposal systems currently in use in the area; and
- A comparison of the projected costs to the owner of a typical lot or parcel of connecting to and using the proposed sewerage system versus installing, operating and properly maintaining an onsite sewage treatment system, approved by the DOH that provides for the comparable level of environmental and health protection as the proposed central sewerage system and other factors deemed relevant by the local authority.

In addition, the bill allows local governments to meet growth management concurrency requirements for "sanitary sewers" for new development through the use of any onsite treatment and disposal systems approved by the DOH.

The bill authorizes a local government to grant a variance to an owner of a performance-based onsite sewage treatment and disposal system permitted by the DOH as long as the onsite system is functioning properly and satisfying the conditions of the operating permit; however, the bill explicitly provides that a local government is not required to issue a variance under any circumstance. The bill also clarifies that a local government located within an area of critical state concern or located in an area that was designated as an area of critical state concern for at least 20 consecutive years prior to removal of the designation, an area within the Broward County C-11 basin, and an area designated by the Lake Okeechobee Protection Act, is not required to issue a variance under any circumstance, and nothing in this provision should be construed as limiting local government authority to enact ordinances under s. 4 of ch. 99-395, L.O.F. The bill provides authority to the DEP to delegate certain authority to local governments that request authority to issue certain water system and onsite sewage treatment system permits. The bill clarifies that an impaired body of water as defined under the Federal Clean Water Act is one of the issues that must be examined in the report conducted by the local government authority before a new central plant not previously approved is being considered. The bill also clarifies the enforcement authority of the DOH when an onsite system has failed. Further, it increases the continuing education hours for septic tank contractors from 6 to 12.

C. SECTION DIRECTORY:

[13] House of Representatives State Resources Council Staff Analysis for CS/HB 1839, 2005 Regular Session

Section 1. Amends s. 153.54, F.S., to require county to include certain information in reports.

Section 2. Amends s. 153.73, F.S., to require sewer districts to include certain information in reports.

Section 3. Amends s. 163.3180, F.S., to allow local governments to meet growth management concurrency requirements for "sanitary sewers" for new development with any DOH-approved onsite systems.

Section 4. Amends s. 180.03, F.S., to require municipalities to include certain information in reports.

Section 5. Amends s. 381.0062, F.S., to provide authority to the DEP to delegate certain authority to local governments that request authority to issue certain water system permits.

Section 6. Amends s. 381.0065, F.S., to provide authority to the DEP to delegate certain authority to local governments that request authority to issue certain onsite sewage treatment system permits.

Section 7. Amends s. 381.00655, F.S., to allow local governments to grant variances.

Section 8. Amends s. 318.0067, F.S., to clarify the enforcement authority of the department.

Section 9. Amends s.489.554, F.S., to increase continuing education hours.

Section 10. Provides an effective date of July 1, 2006.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues: None.

2. Expenditures: None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues: Indeterminate and dependent upon whether a local government grants a variance from requirement to connect to central sewerage systems.

2. Expenditures: Indeterminate as to scope. The bill may increase workload and costs of county, municipality, and sewer districts due to the requirement to include certain information in reports.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR: This bill may benefit certain private sector owners of onsite sewerage systems that do not wish to connect to central sewerage treatment systems if a local government grants a variance.

D. FISCAL COMMENTS: None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision: The mandates provision may apply because the bill requires counties and cities to provide certain information in reports prior to construction of a proposed sewerage system or the extension of an existing sewerage system that was not previously approved or not in a designated urban service area. Collecting such information may require the expenditure of funds. However, the bill may be exempt from the mandate requirements if the fiscal impact of the bill, on an aggregate basis for all cities and counties in the state, is less than $1.9 million over the long term. At this time, the fiscal impact of the bill is unknown.

If the bill is not exempt from the mandates requirements imposed by Art. VII, section 18 of the Florida Constitution, the Legislature must determine that the law fulfills an important state interest and the bill must be approved by two–thirds of the House and Senate membership.

2. Other: None.

B. RULE-MAKING AUTHORITY: None.

C. DRAFTING ISSUES OR OTHER COMMENTS: None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE & COMBINED BILL CHANGES

On March 22, the Committee on Environmental Regulation approved one amendment offered by the bill's sponsor. First, the amendment revises the requirements for the feasibility study. Local governmental units are still required to perform a feasibility study so long as the proposed sewerage system was not one previously approved for construction or expansion or is not in a designated urban service area. The details of the study were clarified to include:

- The age, condition, maintenance history of the onsite system being reviewed.
- A fiscal evaluation comparing connection to the central system as opposed to installation and operation of an onsite system that provides a comparable level of environmental and health protection as the central system.
- An evaluation to determine whether the density required accommodating the onsite system would meet the local government's comprehensive plan for density in the area and environmental protection of the local government's surface groundwater.
- Consideration of the local government's obligations for water body cleanup and protection under state or federal programs.

The amendment limits the "opt out" provision to an owner of a performance-based onsite sewage treatment and disposal system that is permitted by the department and which provides for treatment meeting advanced secondary treatment standards. Such an owner shall not be required to connect to a publicly owned or investor-owned sewerage system as long as the onsite system is functioning properly and satisfying the conditions of the operating permit.

The amendment further limits the exemptions to the mandatory connection law in Florida by limiting the situations when a homeowner is not required to hook up to a central system, to wit:

- No exemption where area is subject to existing bond requirements or other financial commitments.

- No exemption when an area is subject to state or federal requirement or court order requiring hookup.
- No exemption in Monroe County or any municipality located therein.
- No exemption in an area located within a basin containing a water body listed pursuant to the federal clean water act.
- No exemption in an area that is designated in a local comprehensive plan as an urban service area.

On March 29, 2006, the Local Government Council adopted a strike-all amendment to the bill that removed the requirement for detailed feasibility studies and required inclusion of certain information in reports by cities, counties, and sewer districts. The bill also deleted the "opt-out" provision for property owners and authorized local governments to grant a variance to an owner of certain sewage treatment systems from requirements to connect to central systems. The amendment specifically provided that local governments, including those within areas of critical state concern, are not required to issue such variances under any circumstance.

On April 11, 2006, the Agriculture and Environment Appropriations Committee adopted an amendment to the bill that clarified the enforcement authority of the Department of Health when an onsite system has failed. It also increased the number of hours required for continuing education for septic tank contractors from 6 to 12.

On April 19, 2006, the State Resources Council adopted four amendments offered by the bill sponsor (including an amendment to amendment no. 2, offered by a committee member). The amendments:

- Adds language regarding impaired body of water as defined under the Federal Clean Water Act as one of the issues that must be examined in the report conducted by the local government authority before a new central plant not previously approved is being considered.
- Adds the Broward County C-11 basin, and an area designated by the Lake Okeechobee Protection Act, to the section which provides that a variance is not required.
- Adds the language "significantly degrades the ground water or surface water" as a standard for DOH enforcement.
- Codifies authority to the DEP to delegate certain authority to local governments that request authority to issue certain permits.