

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/HB 851 Onsite Sewage Treatment and Disposal Systems

SPONSOR(S): Agriculture & Natural Resources Subcommittee; Drake

TIED BILLS: **IDEN./SIM. BILLS:** SB 658

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Agriculture & Natural Resources Subcommittee	12 Y, 1 N, As CS	Moore, R.	Harrington
2) Agriculture & Natural Resources Appropriations Subcommittee			
3) State Affairs Committee			

SUMMARY ANALYSIS

There are approximately 2.6 million onsite sewage treatment and disposal systems (OSTDSs), more commonly known as septic tanks, serving approximately 30 percent of the state's population. Each year, nearly 100,000 OSTDSs are pumped out, generating approximately 100 million gallons of septage. Septage is the mixture of sludge, fatty materials, human feces, and wastewater removed during the pumping or cleaning of an OSTDS. Approximately 40 percent of Florida's septage is treated at a Department of Health (DOH) permitted septage treatment facility and applied to a land application site, which is also permitted by DOH. The remaining septage is treated at a Department of Environmental Protection (DEP) regulated domestic wastewater treatment plant or disposed of in a DEP regulated Class I landfill.

Beginning June 30, 2016, OSTDS septage may not be applied to a land application site. The bill eliminates the upcoming prohibition on the land application of septage.

The bill may have a positive fiscal impact on the private sector because the treatment of and subsequent land application of septage is less costly than using alternative methods (e.g., treatment at a wastewater treatment plant or disposal in a Class I landfill).

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Background

Each person in the state generates approximately 100 gallons of domestic wastewater¹ per day.² This wastewater must be managed to protect public health, water quality, recreation, fish and wildlife, and the aesthetic appeal of our waterways.³ In Florida, domestic wastewater is treated by onsite sewage treatment and disposal systems⁴ (OSTDSs), commonly referred to as septic tanks, or by centralized domestic wastewater treatment plants⁵ (WWTPs).⁶

The Department of Health (DOH) is responsible for regulating OSTDSs with a design capacity of 10,000 gallons per day or less.⁷ As a result, DOH regulates approximately 30 percent of the state's domestic wastewater from an estimated 2.6 million OSTDSs.⁸

Each year in Florida, nearly 100,000 OSTDSs are pumped out, generating approximately 100 million gallons of septage requiring treatment and disposal.⁹ Septage is the mixture of sludge, fatty materials, human feces, and wastewater removed during the pumping of an OSTDS.¹⁰ It does not include the contents of portable toilets, holding tanks, or grease interceptors.¹¹ The treatment and disposal of septage is regulated by the EPA under 40 CFR Part 503. DOH administers the program through ch. 64E-6, F.A.C.

Approximately 40 percent of Florida's septage is treated at a DOH-permitted septage treatment facility and applied to a DOH-permitted land application site.¹² The remaining septage is treated at a DEP regulated WWTP or disposed of in a DEP regulated Class I landfill.¹³ Septage treated at a WWTP loses its identity as septage and becomes part of the facility's biosolids.¹⁴ Biosolids are regulated more stringently than septage, with a variety of treatment, management and land application requirements governed by ch. 62-640, F.A.C.¹⁵

¹ "Domestic wastewater" is defined in r. 62-600.200(25), F.A.C., as the wastewater derived principally from dwellings, business buildings, institutions, and the like; sanitary wastewater; sewage.

² DEP's Domestic Wastewater Program, available at <http://www.dep.state.fl.us/water/wastewater/dom/index.htm>.

³ Sections 381.0065(1) and 403.021, F.S.

⁴ Section 381.0065(2)(k), F.S., defines an "OSTDS" as 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.

⁵ Section 403.866, F.S., defines a "domestic wastewater treatment plant" as any plant or other works used for the purpose of treating, stabilizing, or holding domestic wastes.

⁶ Sections 381.0065(2)(k) and (3), F.S.; chs. 62-600, and 62-701, F.A.C.

⁷ Sections 381.006(7) and 381.0065, F.S.; rule 62-600.120, F.A.C.; DEP's *Wastewater - Septic Systems*, available at <http://www.dep.state.fl.us/water/wastewater/dom/septic.htm>.

⁸ DOH's *Onsite Sewage*, available at <http://www.floridahealth.gov/environmental-health/onsite-sewage/index.html>.

⁹ DOH's *Report on Alternative Methods for the Treatment and Disposal of Septage*, available at http://www.floridahealth.gov/environmental-health/onsite-sewage/_documents/septage_alternatives.pdf.

¹⁰ Section 381.0065(2)(n), F.S.

¹¹ Rule 64E-6.002(48), F.A.C.

¹² Rule 64E-6.010(7), F.A.C.; DOH's *Report on Alternative Methods for the Treatment and Disposal of Septage*, available at http://www.floridahealth.gov/environmental-health/onsite-sewage/_documents/septage_alternatives.pdf

¹³ DOH's *Report on Alternative Methods for the Treatment and Disposal of Septage*, available at http://www.floridahealth.gov/environmental-health/onsite-sewage/_documents/septage_alternatives.pdf.

¹⁴ DEP's analysis of HB 687 (2015), on file with the Agriculture & Natural Resources Subcommittee.

¹⁵ DEP's analysis of HB 687 (2015), on file with the Agriculture & Natural Resources Subcommittee.

Septage received at a DOH permitted septage treatment facility is screened using bar screens having a maximum gap of ½ inch or rock screens or other similar mesh material having a maximum ¾ inch opening, and treated with lime to raise the pH to 12 for a minimum of two hours or to 12.5 for thirty minutes.¹⁶ Septage land application rates are limited by nitrogen content and, if applicable, phosphorous content.¹⁷

Land application is limited to:

- Sod farms;
- Pasture lands;
- Forests;
- Highway shoulders and medians;
- Plant nursery use;
- Land reclamation projects; and
- Soils used for growing human food chain crops.¹⁸

Pasture vegetation must not be cut for hay or silage or grazed for 30 days following septage application.¹⁹ No human food chain crops except hay, silage, or orchard crops may be harvested from the site for 60 days following septage application.²⁰ Vegetables and fruits that come into contact with the ground surface must not be grown on land used for septage application for 18 months after application.²¹

DOH prohibits septage from being land applied if the application is closer than:

- 3000 feet of any Class I water body or Outstanding Florida Water;
- 200 feet of any surface water bodies, except canals or bodies of water used for irrigation located completely within and not discharging from the site;
- 500 feet of any shallow public water supply well;
- 300 feet of any private drinking water supply well;
- 300 feet of any habitable building; or
- 75 feet of property lines and drainage ditches.²²

DOH requires the land application site to:

- Have a minimum of 24 inches of unsaturated soil above the ground water table at the time of septage application. If the wet season high ground water table is within two feet of the surface or is not determined in an Agricultural Use Plan, then the water table at the time of application must be determined using a monitoring well;²³
- Prohibit land application during rain events that are significant enough to cause runoff, or when the soil is saturated;²⁴
- Have sufficient buffer areas or stormwater management structures to retain the run-off from a 10-year one-hour storm;²⁵
- Have a topographic grade that does not exceed 8 percent;²⁶
- Have a layer of permeable soil at least two feet thick that covers the surface of the land application area;²⁷ and
- Be free from.²⁸

¹⁶ Rule 64E-6.010(7)(a), F.A.C.

¹⁷ Rule 64E-6.010(7)(q), F.A.C.

¹⁸ Rule 62E-6.010(7)(a)2., F.A.C.

¹⁹ Rule 62E-6.010(7)(a)2.a., F.A.C.

²⁰ Rule 62E-6.010(7)(a)2.b., F.A.C.

²¹ Rule 62E-6.010(7)(a)2.c., F.A.C.

²² Rule 62E-6.010(7)(j), F.A.C.

²³ Rule 62E-6.010(7)(k), F.A.C.

²⁴ Rule 64E-6.010(7)(l), F.A.C.

²⁵ *Id.*

²⁶ Rule 64E-6.010(7)(m), F.A.C.

²⁷ Rule 64E-6.010(7)(p), F.A.C.

²⁸ This requirement applies to the land application site as well as the area 200 feet wide adjacent to, and exterior of, the site.

- Subsurface fractures,
- Solution cavities;
- Sink holes;
- Excavation core holes;
- Abandoned holes; or
- Other natural or manmade conduits which would allow contamination of ground water.²⁹

In 2010, the Legislature passed SB 550, which created a five-year OSTDS inspection program, which DOH was to fully implement by January 1, 2016, and banned the land application of septage by the same date.³⁰ It also required DOH, in consultation with DEP, to provide a report to the Governor and the Legislature, by February 1, 2011, recommending alternative methods for enhanced treatment of septage for land application, including a schedule for reducing land application, appropriate treatment levels, alternative disposal methods, enhanced permitting requirements, and costs to local governments, affected businesses, and individuals for alternative treatment and disposal methods.³¹ In 2012, the Legislature passed HB 1263 repealing the OSTDS inspection program, but the January 1, 2016, prohibition on the land application of septage remained.³²

During Special Session 2015A, the prohibition on the land application of septage from OSTDSs was extended until June 30, 2016.³³

DOH's Report on Alternative Methods for the Treatment and Disposal of Septage

DOH's report, dated February 1, 2011, provided alternatives to the land application of septage, as follows:³⁴

- Treatment at WWTPs - Treating septage at WWTPs utilizes existing WWTPs and further centralizes wastewater treatment. However, the quantity of septage that can be treated is dependent upon the WWTPs processes and design capacity. Additionally, accepting septage at a WWTP has the potential to upset wastewater treatment processes resulting in increased operation and maintenance requirements and costs. Also, some WWTPs choose not to accept grease with septage, which necessitates the transport of grease for separate treatment and land application.
- Disposal at Class I landfills - Acceptance of septage at Class I landfills increases microbial activity resulting in increased waste decomposition and more rapid waste stabilization, requires less area than land application, and no additional land is required if septage is managed at an existing landfill. However, accepting septage can increase landfill instability (e.g., differential settlement and slope instability) and difficulty in operating equipment due to a wet slick medium.
- Increased treatment for land application - While possible, Florida's current law already meets the EPA's federal requirements.
- Enhancements to existing land application practices - Such as:
 - Requiring third-party oversight of septage treatment and land application activities, including:
 - Having Class C WWTP operators visit to oversee operations;
 - Increasing frequency of DOH inspections;
 - Establishing regional DOH inspections; and
 - Limiting application sites to use by one applier.
 - Changing operational procedures, including:
 - Metering receiving at treatment facilities;
 - Requiring larger stabilization and holding tanks at treatment facilities;
 - Requiring longer treatment exposure times and post-treatment holding times;
 - Requiring electronic pH meters to replace testing with paper strips;

²⁹ Rule 64E-6.010(7)(n), F.A.C.

³⁰ Section 35, ch. 2010-205, Laws of Florida.

³¹ *Id.*

³² Section 32, ch. 2012-184, Laws of Florida.

³³ Section 50, ch. 2015-222, Laws of Florida.

³⁴ DOH's *Report on Alternative Methods for the Treatment and Disposal of Septage*, available at

http://www.floridahealth.gov/environmental-health/onsite-sewage/_documents/septage_alternatives.pdf.

- Requiring sampling of stabilized septage;
- Tracking yearly nutrient loading based on septage sampling; and
- Requiring annual soil sampling of active application sites.³⁵
- Incineration, bioenergy production, and conversion to fertilizer. However, these alternatives have not yet captured a significant portion of the septage industry and would require large capital commitments from government or industry.³⁶

If the prohibition on the land application of septage were to become effective, DOH recommended the following:

- Legislation requiring local governments to make provisions for the treatment and disposal of septage generated within their geographic jurisdiction;
- Legislation requiring county comprehensive plans to include provisions for the treatment and disposal of septage if the plan includes areas already developed or to be developed using OSTDSs;
- Legislation requiring WWTPs to make provisions for receiving and treating septage if there are OSTDSs within their franchise area;
- Legislation that provides incentives for WWTPs and landfills to accept grease; and
- Legislation requiring local governments to provide for the disposal of grease.³⁷

DOH further recommended that, instead of discontinuing the land application of septage, land application practices be enhanced with increased third-party inspection and oversight along with enhanced nutrient and soil sampling.³⁸

DEP's Study of the Land Application of Septage

Legislation was introduced during the 2014 legislative session that, if passed, would have required DEP, in consultation with DOH and other entities, to examine and report on the potential options for the safe and appropriate disposal or reuse of septage.³⁹ While such legislation did not pass, DEP is currently conducting a study focusing on the leaching potential of land applied septage to ground water, with monitoring focused on ground water beneath and up-gradient from application sites.⁴⁰ Site history information, up-gradient monitoring and monitoring tracer analyses is expected to help differentiate between water quality impacts from the application, adjacent land use activities, and past and ongoing fertilizer applications at the sites.⁴¹ The study includes 12 sites, which are located mostly in spring areas.⁴² Each site has four wells, for a total of 48 wells being monitored.⁴³ Monitoring is expected to continue until late 2016, and DEP will produce a report on the results.⁴⁴

Effect of Proposed Changes

The bill removes the June 30, 2016, prohibition on the land application of septage. Effective June 30, 2016, the bill repeals s. 51, ch. 2015-222, Laws of Florida, which is a conforming change made by the bill.

B. SECTION DIRECTORY:

Section 1. Amends s. 381.0065, F.S., removing the prohibition on the land application of septage.

³⁵ *Id.* These enhancements could be accomplished within DOH's existing statutory rulemaking authority.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ HB 1113 and SB 1160 (2014); DEP's analysis of HB 687 (2015), on file with the Agriculture & Natural Resources Subcommittee.

⁴⁰ DEP's analysis of HB 687 (2015), on file with the Agriculture & Natural Resources Subcommittee.

⁴¹ *Id.*

⁴² *DEP's Legislative Update: Septage Land Application Site Monitoring* (December 23, 2015), on file with the Agriculture & Natural Resources Subcommittee.

⁴³ *Id.*

⁴⁴ *Id.*

Section 2. Repeals s. 51, ch. 2015-222, Laws of Florida.

Section 3. Provides effective dates.

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:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill may have a positive fiscal impact on the private sector because the bill deletes the prohibition on the land application of septage. Land application of septage from OSTDSs provides a method for disposal that is typically lower in cost than alternative methods (e.g. treatment at a WWTP or disposal at a Class I landfill).

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

The bill does not appear to require counties or municipalities to take an action requiring the expenditure of funds, reduce the authority that counties or municipalities have to raise revenue in the aggregate, or reduce the percentage of state tax shared with counties or municipalities.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

On January 12, 2016, the Agriculture & Natural Resources Subcommittee adopted a strike-all amendment and reported the bill favorably with committee substitute. The strike-all amendment removed the provisions relating to Global RBCA and amended the title.

This analysis is drafted to the committee substitute as approved by the subcommittee.