

**HOUSE OF REPRESENTATIVES LOCAL BILL STAFF ANALYSIS**

**BILL #:** HB 753  
**SPONSOR(S):** Saunders

Monroe County

**TIED BILLS:**

**IDEN./SIM. BILLS:** SB 1226, SB 422

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	<b>REFERENCE</b>	<b>ACTION</b>	<b>ANALYST</b>	<b>STAFF DIRECTOR</b>
1)	<u>Military &amp; Local Affairs Policy Committee</u>	<u>10 Y, 0 N</u>	<u>Nelson</u>	<u>Hoagland</u>
2)	<u>Agriculture &amp; Natural Resources Policy Committee</u>	<u></u>	<u>Kliner</u>	<u>Reese</u>
3)	<u>Economic Development &amp; Community Affairs Policy Council</u>	<u></u>	<u></u>	<u></u>
4)	<u></u>	<u></u>	<u></u>	<u></u>
5)	<u></u>	<u></u>	<u></u>	<u></u>

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**SUMMARY ANALYSIS**

This bill amends an uncodified section of law relating to sewage requirements in Monroe County. The bill provides criteria for the use of shallow injection wells to backup deep primary injection wells in wastewater facilities with the design capacity of one million gallons or greater per day.

Use of the shallow backup well is allowed only when the primary injection well is out of service as the result of equipment failure, power failure, or the need for mechanical integrity testing or repair. Operation of the backup well is limited to no more than 500 hours in any five-year period unless specifically authorized in writing by the Department of Environmental Protection, and fluid injected into the well must meet applicable treatment standards.

This bill does not appear to have a fiscal impact on state government. The bill appears to have a positive fiscal impact on wastewater facilities in Monroe County and the customers of such facilities.

This bill has an effective date of upon becoming a law.

## HOUSE PRINCIPLES

Members are encouraged to evaluate proposed legislation in light of the following guiding principles of the House of Representatives

- Balance the state budget.
- Create a legal and regulatory environment that fosters economic growth and job creation.
- Lower the tax burden on families and businesses.
- Reverse or restrain the growth of government.
- Promote public safety.
- Promote educational accountability, excellence, and choice.
- Foster respect for the family and for innocent human life.
- Protect Florida's natural beauty.

## FULL ANALYSIS

### I. SUBSTANTIVE ANALYSIS

#### A. EFFECT OF PROPOSED CHANGES:

##### **Present Situation**

##### Injection Wells

The Department of Environmental Protection (DEP) is charged with protecting the State of Florida's underground sources of drinking water (USDW).<sup>1</sup> Billions of gallons of wastewater are produced in Florida every day, the improper disposal of which could impact public health and the environment.<sup>2</sup> One method employed for disposing of treated domestic wastewater is the underground injection well. An injection well is an open vertical hole at least 90 feet in depth, cased<sup>3</sup> and grouted to at least 60 feet in depth, which is used to dispose of effluent from an onsite sewage treatment and disposal system.<sup>4</sup> Injection wells are required to be constructed, maintained and operated so that the injected fluid remains in the injection zone, and the unapproved interchange of water between aquifers is prohibited.

There are five classes of injection wells:

- Class I wells are used to inject hazardous waste, nonhazardous waste, or municipal waste far below the lowermost USDW. The injection zone is deep (typically from 1,700 to more than 10,000 in depth) and separated from the USDWs by an impermeable "confining layer."<sup>5</sup> There are more than 125 active Class I wells in Florida. The majority of these facilities dispose of nonhazardous, secondary-treated effluent from domestic wastewater treatment plants.
- Class II wells inject fluids associated with the production of oil and natural gas or fluids used to enhance hydrocarbon recovery.
- Class III wells inject fluids for extraction of minerals. There are no Class III wells in Florida.

<sup>1</sup> Pursuant to Rule 62.528.200(66), F.A.C, a USDW is defined as an aquifer which supplies drinking water for human consumption, or contains a total dissolved solids concentration of less than 10,000 milligrams per liter of water.

<sup>2</sup> <http://www.dep.state.fl.us/water/wastewater/index.htm>.

<sup>3</sup> Pursuant to Rule 62-528.200(8), F.A.C., "casing" means a pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole.

<sup>4</sup> Section 381.0065(2)(f), F.S.

<sup>5</sup> [Http://www.epa.gov/safewater/uic/wells\\_class1.html](http://www.epa.gov/safewater/uic/wells_class1.html).

- Class IV wells are used to dispose of hazardous or radioactive wastes into or above USDW. These wells are banned in Florida.
- Class V injection wells generally inject nonhazardous fluid into or above a USDW. The fluid injected must meet appropriate criteria as determined by the classification of the receiving aquifer. Common types of Class V wells include air conditioning return flow wells, swimming pool drainage wells, storm water drainage wells, lake level control wells, domestic waste wells, and aquifer storage and recovery wells. There are more than 8,000 Class V wells in this state.<sup>6</sup>

The depth of the various classes of injection wells is not specified in law or rule. Rather, these wells are characterized by how they relate to the underground geology, how they are constructed in order to protect groundwater, what they discharge, and other defining criteria.

DEP requires sewage treatment plants—depending on the size, complexity and type(s) of their discharge—to meet certain reliability standards, including the ability to operate under emergency circumstances or during other conditions when normal operation is not possible. Thus, all facilities must have an adequate “backup” discharge system, whether it is a secondary well(s), or the ability to utilize surface water discharge or reuse methods.<sup>7</sup>

### Monroe County (The Florida Keys)

In 1979, the Legislature enacted s. 380.0552, F.S., designating the Florida Keys (Keys) as an area of critical state concern. This law requires state, regional, and local agencies and units of government in the Keys area to coordinate their plans and conduct their programs and regulatory activities consistent with a number of principles for guiding development that include the protection of the environment and the quality of water.

Chapter 99-395, L.O.F., originally was passed, in large measure, to bolster the area of critical state concern requirements. It was designed to improve nearshore water quality—which has been demonstrated to suffer from poor wastewater management practices—and to provide improved protection for the Keys’ reef system given the uncertain affect of wastewater discharges.<sup>8</sup> Wastewater in the Keys currently is subjected to advanced wastewater treatment, which includes the reduction of nutrients, toxicity, suspended solids and organics.

Section 6 of ch. 99-395, L.O.F., applies to all sewage treatment, reuse, and disposal facilities and all onsite sewage treatment and disposal systems in Monroe County. This uncodified section of law requires, in relevant part, that facilities discharging at least one million gallons per day utilizing Class V injection wells use wells that are cased to at least 2,000 feet deep or to such greater depth as may be required by DEP rule. Smaller facilities, with a design capacity of less than one million gallons per day, are authorized to use shallow Class V disposal wells that are at least 90 feet deep and cased to a minimum depth of 60 feet or to such greater cased depth and total well depth as required by DEP rule.

As a result of the limited amount of land surface, wastewater facilities in Monroe County have few disposal options. Water discharges are prohibited, and reuse and other land disposal possibilities are generally unavailable. Consequently, injection wells often serve as the single practical option.

Class V injection wells are the prevailing domestic sewage disposal method for residential and commercial facilities in the Keys. A typical Class V well in the Keys has 60 feet of casing and a depth of 90 feet. The injection formation is a very permeable limestone, either the Miami Oolite or Key Largo Limestone. The injected water, whether it is domestic effluent or stormwater, is much less dense than the native groundwater (which is sea water quality) and thus rises due to buoyancy. Potential effects on surface water are the reason that deep—or Class I—wells (which have confining strata between the

<sup>6</sup> <http://www.dep.state.fl.us/water/uic/>.

<sup>7</sup> February 11, 2010, telephone conversation with Geof Mansfield, Florida Department of Environmental Protection, Director of Compliance & Enforcement.

<sup>8</sup> February 10, 2010, e-mail from Geof Mansfield, Florida Department of Environmental Protection, Director of Compliance & Enforcement

injection zone—about 2500 feet deep—and the surface) have been installed at Key West and Key Largo.

### Effect of bill

This bill amends s. 6, ch.99-395, L.O.F., relating to Monroe County. It provides the criteria for the use of shallow backup Class V injection wells at wastewater facilities with the design capacity of a million or more gallons per day. Such a backup injection well must meet the following criteria:

- The well may be used only when the primary injection well is out of service because of equipment failure, power failure, or the need for mechanical integrating testing or repair.
- The well may not be used for a total of more than 500 hours during any five-year period, unless specifically authorized in writing by the DEP.
- It must be at least 90 feet deep and cased to a minimum depth of 60 feet, or to such greater cased depth and total well depth as may be required by DEP rule.
- Fluids injected into the well must meet the same sewage discharge requirements as the primary injection well.

According to the DEP, the bill will provide significant cost savings as deep wells are extremely expensive to construct. By limiting the time period during which a shallow back-up well can be used, no adverse affects are expected to occur in adjacent ground or surface waters.<sup>9</sup>

It appears that this bill primarily will affect the Key Largo Wastewater Treatment District by allowing a shallow Class V well to be used as backup to the new Class I well. The district intends to have its Class I well operational by August of this year.<sup>10</sup> The Key West facility should not be impacted by the bill as it currently has a deep injection backup well in place.

The Florida Keys Aqueduct Authority, the entity that supplies all potable water to the Keys through a pipeline from Dade County, currently has an advanced wastewater treatment plant project in the design phase (Cudjoe Regional) which may benefit from this legislation in the future. Potentially, the bill could also provide relief to other wastewater facilities as these entities are reconfigured and built in response to the changing dynamics in the Keys.

The bill provides an effective date of upon becoming law.

#### B. SECTION DIRECTORY:

Section 1: Amends s. 6, ch.99-395, L.O.F., relating to sewage requirements in Monroe County.

Section 2: Provides an effective date.

## II. NOTICE/REFERENDUM AND OTHER REQUIREMENTS

A. NOTICE PUBLISHED? Yes  No

IF YES, WHEN? December 7, 2009

WHERE? *The Key West Citizen*, a daily newspaper of general circulation published in Monroe County.

B. REFERENDUM(S) REQUIRED? Yes  No

<sup>9</sup> Department of Environmental Protection Draft Bill Analysis for HB 1053 (2009).

<sup>10</sup> February 10, 2010, telephone conversation with Chuck Fishburn, general manager of the Key Largo Wastewater Treatment District.

IF YES, WHEN?

C. LOCAL BILL CERTIFICATION FILED? Yes, attached [x] No []

D. ECONOMIC IMPACT STATEMENT FILED? Yes, attached [x] No []

According to DEP's estimates, local governments that own domestic wastewater facilities could experience savings of more than \$4 million in backup injection well construction costs and \$5,000 per year in reduced well testing costs.

There currently are no private utilities in the Florida Keys operating disposal wells associated with a wastewater treatment facility with a design capacity of greater than one million gallons per day. However, a private utility that installs or takes ownership of such a system will benefit from the reduced construction costs. A private utility also will benefit from the reduced testing requirements for a shallow well compared to a deep well.<sup>11</sup>

### III. COMMENTS

A. CONSTITUTIONAL ISSUES:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

#### **Drafting Issues**

None.

#### **Other Comments**

HB 1053 (2009), a general bill that was identical to HB 753, was unanimously passed by both the Agriculture & Natural Resources Policy Committee and the General Government Policy Council, and passed the House on April 27, 2009. That bill died in Messages.

### IV. AMENDMENTS/COUNCIL OR COMMITTEE SUBSTITUTE CHANGES

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<sup>11</sup> Department of Environmental Protection Draft Bill Analysis for HB 1053 (2009).