

**The Florida Senate**  
**BILL ANALYSIS AND FISCAL IMPACT STATEMENT**

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

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Prepared By: The Professional Staff of the Committee on Appropriations

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BILL: CS/CS/CS/SB 1576

INTRODUCER: Appropriations Committee; Agriculture Committee; Environmental Preservation and Conservation Committee; and Senator Dean and others

SUBJECT: Springs

DATE: April 24, 2014

REVISED: \_\_\_\_\_

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	<u>Hinton</u>	<u>Uchino</u>	<u>EP</u>	<u>Fav/CS</u>
2.	<u>Akhavein</u>	<u>Becker</u>	<u>AG</u>	<u>Fav/CS</u>
3.	<u>Howard</u>	<u>Kynoch</u>	<u>AP</u>	<u>Fav/CS</u>

**Please see Section IX. for Additional Information:**

COMMITTEE SUBSTITUTE - Substantial Changes

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**I. Summary:**

CS/CS/CS/SB 1576 provides for the protection of springs in Florida. Specifically, the bill:

- Creates Part VIII of ch. 373, F.S.;
- Provides findings, intent, and definitions;
- Directs the Department of Environmental Protection (DEP), in coordination with the water management districts (WMDs), to delineate spring protection and management zones (SPMZs);
- Requires the establishment of minimum flows and levels (MFLs) in Outstanding Florida Springs (OFSs) by July 1, 2022 and the adoption of recovery or prevention strategies under certain circumstances;
- Directs the DEP to make determinations of impairment for OFSs and develop basin management action plans (BMAPs);
- Provides requirements for BMAPs in SPMZs;
- Directs local governments within SPMZs to adopt ordinances that meet or exceed those of the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes;
- Requires upgrading certain domestic wastewater treatment plants and onsite sewage treatment and disposal systems (OSTDSs), and implementation of nutrient reduction and monitoring methods for agricultural operations;
- Directs the DEP to create a program to evaluate, select, and rank project proposals;

- Prohibits certain activities in SPMZs related to new municipal or industrial wastewater disposal systems, new OSTDSs, new hazardous waste facilities, land application of Class A and B biosolids, and new agricultural operations;
- Assigns duties to several agencies to carry out the provisions of Part VIII of ch. 373, F.S.;
- Provides extensions to local governments and rural areas of critical economic concern for completing projects;
- Requires the Department of Agriculture and Consumer Services (DACs) and the DEP to study new or revised basin management action plans (BMPs); and
- Requires a yearly report by the DEP and the WMDs on the progress of TMDL, BMAP, MFL, and recovery or prevention strategies, beginning on July 1, 2015.

Based on the new springs program requirements, there is a significant fiscal impact to the DEP and the WMDs which is indeterminate. Funding to support the bill is to be provided in the Fiscal Year 2014-2015 General Appropriations Act, or similar legislation. For subsequent fiscal years, funding will be determined annually by the Legislature and provided in the General Appropriations Act. See Section V.

DACS will incur an indeterminate amount of costs for staff time and travel to participate in new studies and rule development efforts and an estimated \$50,000 in costs to contract with a third party to complete a required report related to public health, engineering, public perception, fiscal, and rate structure issues.

## II. Present Situation:

### Florida's Springs

Florida's springs are unique and beautiful resources. The historically crystal clear waters provide not only a variety of recreational opportunities and habitats, but also great economic value for recreation and tourism. The springs are major sources of stream flow in a number of rivers such as the Rainbow, Chassahowitzka, Homosassa, and Ichetucknee.<sup>1</sup> Additionally, Florida's springs provide a "window" into the Floridan Aquifer system, which provides most of the state's drinking water.

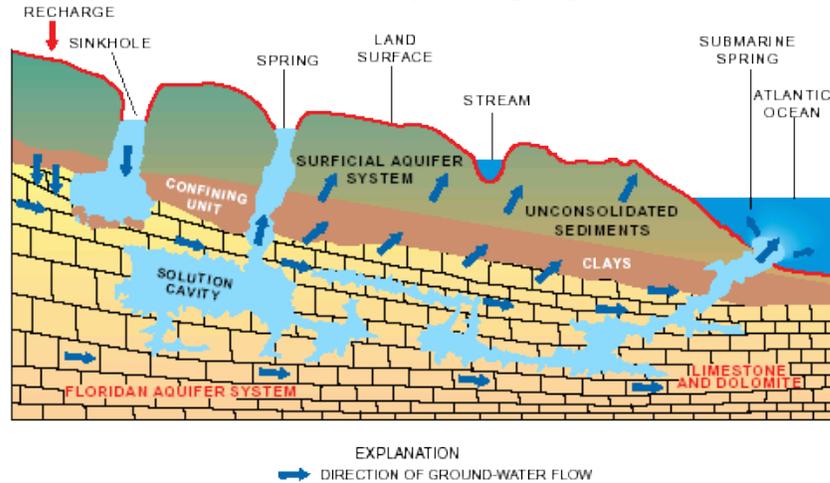
The Floridan Aquifer System is a limestone aquifer that has enormous freshwater storage and transmission capacity. The upper portion of the aquifer consists of thick carbonate rocks that have been heavily eroded and covered with unconsolidated sand and clay. The surficial aquifer is located within the sand deposits and forms the land surface that is present today. In portions of Florida, the surficial aquifer lies on top of deep layers of clay sediments that prevent the downward movement of water. Springs form when groundwater is forced out through natural openings in the ground.<sup>2</sup>

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<sup>1</sup> Department of Community Affairs, *Protecting Florida's Springs: An Implementation Guidebook*, 3-1 (Feb. 2008), available at <http://www.dep.state.fl.us/springs/reports/files/springsimplementguide.pdf> (last visited Mar. 27, 2014).

<sup>2</sup> *Id.* at 3-1 to 3-2.

### The Water Cycle – Springs<sup>3</sup>



Florida has more than 700 recognized springs. First magnitude springs are those that discharge 100 cubic feet of water per second or greater. Florida has 33 first magnitude springs in 18 counties that discharge more than 64 million gallons of water per day. Spring discharges, primarily from the Floridan Aquifer, are used to determine ground water quality and the degree of human impact on a spring's recharge area. Rainfall, surface conditions, soil type, mineralogy, the composition and porous nature of the aquifer system, flow, and length of time in the aquifer all contribute to ground water chemistry.<sup>4</sup>

The springshed is the area within the groundwater and surface water basins that contributes to the discharge of the spring. The spring recharge basin consists of all areas where water can be shown to contribute to groundwater flow discharging from the spring.

Spring protection zones are sub-areas of the groundwater and surface water basins of each spring or spring system that supply water to the spring and within which human activities, such as waste disposal or water use, are most likely to have negative impacts on the water discharging from the spring. When adverse conditions occur within a spring protection zone, the conditions can be minimized by:

- Land-use management and zoning by county or municipal government;
- Adoption of best management practices (BMPs);
- Educating the public concerning environmental sensitivity; and
- If necessary, regulatory action.<sup>5</sup>

### Nutrients

Phosphorus and nitrogen are essential nutrients for plants and animals and are the limiting nutrients in aquatic environments. The correct balance of both of these nutrients is necessary for

<sup>3</sup> U.S. Environmental Protection Agency, *The Water Cycle: Springs*, <http://water.usgs.gov/edu/watercyclesprings.html> (last visited Mar. 27, 2014).

<sup>4</sup> Florida Geological Survey, *Springs of Florida Bulletin No. 66*, available at <http://www.dep.state.fl.us/geology/geologictopics/springs/bulletin66.htm> (last visited Mar. 27, 2014).

<sup>5</sup> Upchurch, S.B. and Champion, K.M., *Delineation of Spring Protection Areas at Five, First-Magnitude Springs in North-Central Florida (Draft)*, 1 (Apr. 28, 2004), available at [www.waterinstitute.ufl.edu/suwannee-hydro-observ/pdf/delineation-of-spring-protection-zones.pdf](http://www.waterinstitute.ufl.edu/suwannee-hydro-observ/pdf/delineation-of-spring-protection-zones.pdf) (last visited Mar. 27, 2014).

a healthy ecosystem; however, excessive nitrogen and phosphorus can cause significant water quality problems. Typically, nitrogen is the limiting nutrient in spring systems. Therefore, even modest increases in nitrogen above optimum levels can accelerate algae growth, plant growth, and deplete oxygen levels.<sup>6</sup>

Phosphorus and nitrogen are derived from natural and anthropogenic sources. Natural inputs include the atmosphere, soils, and the decay of plants and animals. Anthropogenic sources include sewage disposal systems (wastewater treatment facilities and septic tanks), overflows of storm and sanitary sewers (untreated sewage), agricultural production and irrigation practices, and stormwater runoff.

Excessive nutrients may result in harmful algal blooms, nuisance aquatic weeds, and alteration of the natural community of plants and animals. Dense, harmful algal blooms can also cause human health problems, fish kills, problems for water treatment plants, and generally impair the aesthetics and tastes of waters. Growth of nuisance aquatic weeds tends to increase in nutrient-enriched waters, which can impact recreational activities. Increased algae production, as a result of increased nutrients, can alter plant communities and affect natural systems.

In pristine conditions, spring water is high quality and lacks contaminants. It can be used directly for public water supplies or for irrigation. When pollutants are introduced to the land surface, some will be retained, but some will travel into the aquifer and later appear in spring flow. Often, nutrients introduced close to a spring will quickly reach the spring, especially in unconfined areas of the aquifer. While springs are valuable recreational and tourist attractions, they are also an indicator of reduced quality of the water in the aquifer.<sup>7</sup>

### **Urban Fertilizer Usage and Florida's Model Ordinance**

Application of fertilizer in urban areas impacts springsheds when it runs off lawns and impervious surfaces into stormwater collection systems or directly into the surface water. The Department of Environmental Protection (DEP) has provided guidelines to minimize the impact of urban fertilizer usage and has adopted the "Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes." The model ordinance provides counties and municipalities with a range of ordinances to help minimize fertilizer inputs from urban applications. Some of the suggestions contained in the model ordinance are:

- Restricting the times fertilizer may be applied, such as restricting its application during the rainy season;
- Creating fertilizer free zones around sensitive waterbodies such as ponds, streams, watercourses, lakes, canals, or wetlands;
- Controlling application practices, for example, by restricting fertilizer application on impervious surfaces and requiring prompt cleanup of any fertilizer that is spilled on impervious surfaces; and

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<sup>6</sup> EPA, *Health and Environmental Effects Research*, [http://www.epa.gov/nheerl/research/aquatic\\_stressors/nutrient\\_loading.html#decreased\\_o2](http://www.epa.gov/nheerl/research/aquatic_stressors/nutrient_loading.html#decreased_o2) (last visited Mar. 27, 2014).

<sup>7</sup> *Supra* note 1, at 3-4.

- Managing grass clipping and vegetative matter by disposing of such materials properly rather than simply blowing them into the street, ditches, stormwater drains, or waterbodies.<sup>8</sup>

## Water Pollution Control Programs

### *Total Maximum Daily Loads (TMDLs) and Water Quality Standards (WQSs)*

Under s. 303 of the federal Clean Water Act (CWA), states are incentivized to adopt WQSs for their navigable waters and must review and update those standards at least once every three years. These standards include:

- Designation of a waterbody's beneficial uses, such as water supply, recreation, fish propagation, and navigation;
- Water quality criteria that define the amounts of pollutants, in either numeric or narrative standards, that the waterbody can contain without impairment of the designated beneficial uses; and
- Anti-degradation requirements.<sup>9</sup>

In 1999, the Legislature passed the Florida Watershed Restoration Act (WRA),<sup>10</sup> which codified the establishment of TMDLs for pollutants of waterbodies as required by the CWA.<sup>11</sup> Each TMDL, which must be adopted by rule, is a scientific determination of the maximum amount of a given pollutant that can be absorbed by the waterbody while still meeting WQSs. Waterbodies that do not meet the established WQSs are deemed impaired and, pursuant to the CWA, the DEP establishes a TMDL for the waterbody or section of the waterbody that is impaired.<sup>12</sup> A TMDL for an impaired waterbody is defined as the sum of the individual waste load allocations for point sources and the load allocations for nonpoint sources and natural background. Waste load allocations are pollutant loads attributable to existing and future point sources, such as discharges from industry and sewage facilities. Load allocations are pollutant loads attributable to existing and future nonpoint sources such as the runoff from farms, forests, and urban areas.<sup>13</sup>

The U.S. Environmental Protection Agency (EPA) and the DEP enforce WQSs through the implementation and enforcement of the National Pollutant Discharge Elimination System (NPDES) permitting program. Every point source that discharges a pollutant into waters of the United States must obtain an NPDES permit establishing the amount of a particular pollutant that an individual point source can discharge into a specific waterbody. The amount of the pollutant that a point source can discharge under a NPDES permit is determined through the establishment of a technology-based effluent limitation. If a waterbody fails to meet the applicable WQS

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<sup>8</sup> DEP, *Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes*, 6-9 (2010), available at <http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/dep-fert-modelord.pdf> (last visited Mar. 27, 2014).

<sup>9</sup> 33 U.S.C. s. 1313(c)(2)(A) (2014); 40 C.F.R. ss. 131.6 and 131.10-131.12.

<sup>10</sup> Chapter 99-223, Laws of Fla.

<sup>11</sup> Section 403.067, F.S.

<sup>12</sup> *Id.*

<sup>13</sup> Rule 62-620.200(37), F.A.C. Point source means any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. Nonpoint sources of pollution are essentially sources of pollution that are not point sources. They can include runoff from agricultural lands or residential areas; oil, grease and toxic materials from urban runoff; and sediment from improperly managed construction sites.

through the application of a technology-based effluent limitation, a more stringent pollution control program called the water quality based effluent limitation is applied.

### ***Basin Management Action Plans***

The DEP is the lead agency in coordinating the implementation of TMDLs and basin management action plans (BMAPs) through existing water quality protection programs. Such programs include:

- Permitting and other existing regulatory programs, including water quality based effluent limitations;
- Non-regulatory and incentive-based programs, including BMPs, cost sharing, waste minimization, pollution prevention, agreements established pursuant to s. 403.061(21), F.S., and public education;<sup>14</sup>
- Public works, including capital facilities; and
- Land acquisition.<sup>15</sup>

The DEP may establish a BMAP as part of the development and implementation of a TMDL for a specific water body. First, the BMAP equitably allocates pollutant reductions to individual basins, as a whole to all basins, or to each identified point source or category of nonpoint sources.<sup>16</sup> Then the BMAP establishes the schedule for implementing projects and activities to meet the pollution reduction allocations. The BMAP process has the flexibility to allow for adaptive changes if necessary. The BMAP development process provides an opportunity for local stakeholders, local government and community leaders, and the general public to collectively determine and share water quality clean-up responsibilities. The DEP works with stakeholders to develop effective BMAPs.<sup>17</sup>

BMAPs must include milestones for implementation and water quality improvement. They must also include an associated water quality monitoring component sufficient to evaluate whether reasonable progress in pollutant load reductions is being achieved over time. An assessment of progress toward these milestones must be conducted every five years and revisions to the plan must be made as appropriate.<sup>18</sup>

Producers of nonpoint source pollution included in a BMAP must comply with the established pollutant reductions by either implementing the appropriate BMPs or by conducting water quality monitoring.<sup>19</sup> A nonpoint source discharger may be subject to enforcement action by the DEP or a WMD based upon a failure to implement these responsibilities.<sup>20</sup>

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<sup>14</sup> Section 403.061, F.S., grants the DEP the power and the duty to control and prohibit pollution of air and water in accordance with the law and rules adopted and promulgated by it. Furthermore, s. 403.061(21), F.S., allows the DEP to advise, consult, cooperate, and enter into agreements with other state agencies, the federal government, other states, interstate agencies, etc.

<sup>15</sup> Section 403.067(7)(b), F.S.

<sup>16</sup> Section 403.067(7), F.S.

<sup>17</sup> DEP, *Basin Management Action Plans (BMAPs)*, <http://www.dep.state.fl.us/central/Home/Watershed/BMAP.htm> (last visited Mar. 27, 2014).

<sup>18</sup> Section 403.067(7)(a)5., F.S.

<sup>19</sup> BMPs for agriculture, for example, include activities such as managing irrigation water to minimize losses, limiting the use of fertilizers, and waste management.

<sup>20</sup> Section 403.067(7)(b)1.h., F.S.

Provisions of a BMAP must be included in subsequent NPDES permits. The DEP is prohibited from imposing limits or conditions associated with an adopted TMDL in a NPDES permit until the permit expires, the discharge is modified, or the permit is reopened pursuant to an adopted BMAP.<sup>21</sup>

NPDES permits issued between the time a TMDL is established and a BMAP is adopted contain a compliance schedule allowing time for the BMAP to be developed. Once the BMAP is developed, a permit will be reopened and individual allocations consistent with the BMAP will be established in the permit. The timeframe for this to occur cannot exceed five years. NPDES permittees may request an individual allocation during the interim, and the DEP may include an individual allocation in the permit.<sup>22</sup>

For an individual point source, reducing pollutant loads established under the TMDL and water quality based effluent limitation regulatory programs can be difficult to accomplish. It may require investment in expensive technology or other costly measures to reduce pollutant loads.<sup>23</sup>

### ***Agricultural Operations***

Only lands that are used primarily for bona fide agricultural purposes are classified as agricultural in Florida.<sup>24</sup> The term “bona fide agricultural purposes” means good faith commercial agricultural use of the land. Certain factors may be taken into account in determining whether an agricultural operation is bona fide:

- The length of time the land has been used for agriculture;
- Whether the use has been continuous;
- The purchase price paid;
- Size, as it relates to specific agricultural use, but a minimum acreage may not be required for agricultural assessment;
- Whether an indicated effort has been made to care sufficiently and adequately for the land in accordance with accepted commercial agricultural practices, including fertilizing, liming, tilling, mowing, reforestation, and other accepted agricultural practices;
- Whether the land is under lease and, if so, the effective length, terms, and conditions of the lease; and
- Other factors as may be applicable.<sup>25</sup>

### ***Best Management Practices on Agricultural Lands***

Agricultural BMPs are guidelines advising producers how to manage the water, nutrients, and pesticides they use to minimize agricultural impacts on Florida's natural resources. Agricultural activity is dependent on the application of fertilizer and pesticides and is linked to the contamination of watersheds with nutrients such as nitrogen and phosphorus. BMPs tend to cover four major areas, which overlap: nutrient management, or how producers use fertilizers;

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<sup>21</sup> Florida Senate Committee on Environmental Preservation and Conservation, *CS/SB 754 Analysis* (Mar. 14, 2013), available at <http://flsenate.gov/Session/Bill/2013/0754/Analyses/2013s0754.pre.ep.PDF> (last visited Mar. 27, 2014).

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> Section 193.461(3)(b), F.S.

<sup>25</sup> *Id.*

pest management, or how they use pesticides; water management, or how they use and discard water; and sediment management, or how they affect the sediments on and around their properties.<sup>26</sup>

BMPs reduce the amount of nutrients, sediments, and pesticides that enter the water system, and help reduce water use. Because much of the state is built on limestone, which allows water to return relatively unfiltered to the aquifer, pollutants can enter the water supply quickly, endangering humans and ecosystems.<sup>27</sup>

The Office of Agricultural Water Policy, a division of the Department of Agriculture and Consumer Services (DACS), is actively involved in developing BMPs. DACS works cooperatively with agricultural producers, industry groups, the DEP, the university system, the water management districts (WMDs), and other interested parties to develop and implement BMP programs that are economically and technically feasible.<sup>28</sup>

### *Onsite Sewage Treatment and Disposal Systems*

In Florida, septic systems are referred to as onsite sewage treatment and disposal systems or septic systems (OSTDS). An OSTDS can contain any one of the following components: a septic tank; a subsurface drainfield; an aerobic treatment unit (ATU); a graywater tank; a laundry wastewater tank; a grease interceptor; a pump tank; a waterless, incinerating or organic waste-composting toilet; and a sanitary pit privy.<sup>29</sup> Septic systems are located underground and treat sewage without the presence of oxygen. Sewage flows from a home or business through a pipe into the first chamber, where solids settle out. The liquid then flows into the second chamber where anaerobic bacteria in the sewage break down the organic matter, allowing cleaner water to flow out of the second chamber into a drainfield.<sup>30</sup> Engineers licensed in Florida may specially design OSTDSs to meet the needs of individual property owners. Engineer-designed OSTDS plans are subject to review by the local county health department and must be certified by the engineer as complying with all requirements pertaining to such system.<sup>31</sup>

Onsite Sewage Programs, part of the Department of Health (DOH), develops statewide rules and provides training and standardization for county health department employees responsible for issuing permits for the installation and repair of OSTDSs within the state.<sup>32</sup> The Bureau also

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<sup>26</sup> University of Florida Institute of Food and Agricultural Sciences, *Best Management Practices*, [http://solutionsforyourlife.ufl.edu/hot\\_topics/agriculture/bmps.html](http://solutionsforyourlife.ufl.edu/hot_topics/agriculture/bmps.html) (last visited Mar. 27, 2013).

<sup>27</sup> *Id.*

<sup>28</sup> DACS, Office of Agricultural Water Policy, *Home Page* (Jan. 8, 2014), <http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Water-Policy> (last visited Mar. 27, 2014).

<sup>29</sup> DEP, *Wastewater: Septic Systems*, <http://www.dep.state.fl.us/water/wastewater/dom/septic.htm> (last visited Mar. 27, 2014).

<sup>30</sup> EPA, *Primer for Municipal Wastewater Treatment Systems*, 22 (2004), available at [http://water.epa.gov/aboutow/owm/upload/2005\\_08\\_19\\_primer.pdf](http://water.epa.gov/aboutow/owm/upload/2005_08_19_primer.pdf) (last visited Mar. 27, 2014).

<sup>31</sup> See Rules 64E-6.003 and 6.004, F.A.C.

<sup>32</sup> The DOH does not permit the use of onsite sewage treatment and disposal systems where the estimated domestic sewage flow from the establishment is over 10,000 gallons per day (gpd) or the commercial sewage flow is over 5,000 gpd; where there is a likelihood that the system will receive toxic, hazardous or industrial wastes; where a sewer system is available; or of any system or flow from the establishment is currently regulated by the DEP. The DEP issues the permits for systems that discharge more than 10,000 gpd.

licenses over 700 septic tank contractors and oversees 2.6 million onsite wastewater systems in Florida.<sup>33</sup>

The EPA concluded in its 1997 Report to Congress that “adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals, particularly in less densely populated areas.” In Florida, development is dependent on OSTDSs due to the cost and time it takes to install central sewer. In rural areas and low-density developments, central sewer is not cost effective. Less than one percent of Florida systems are actively managed. The remainder generally only receive maintenance when they fail, often leading to costly repairs that could have been avoided with routine tank pump outs and service.<sup>34</sup>

### *Land Spreading of Septage*

Septage is defined as a mixture of sludge, fatty materials, human feces, and wastewater removed during the pumping of an OSTDS.<sup>35</sup> Approximately 100,000 septic tanks are pumped each year, generating 100 million gallons of septage requiring treatment and disposal.<sup>36</sup> The septage is treated and disposed of at a number of septage treatment facilities regulated by the DOH. When used for land application, the septage is stabilized by raising the pH to 12 for at least two hours or to a pH of 12.5 for 30 minutes.<sup>37</sup> The treated septage is then spread over the land at DOH-regulated land application sites.<sup>38</sup> In addition to septage, onsite systems serving restaurants include tanks that separate grease from the sewage stream. The grease is collected, hauled, treated, and land applied similarly to septage. There are currently 92 DOH-regulated land application sites that receive treated septage from 108 DOH-regulated septage treatment facilities. Approximately 40 percent of septage removed from septic tanks is treated at septage treatment facilities and then land applied.<sup>39</sup>

In 2010, the Legislature enacted a law prohibiting the land application of septage from septic tanks effective January 1, 2016.<sup>40</sup> In addition, the bill required the DOH, in consultation with the DEP, to provide a report to the Governor and the Legislature recommending alternative methods to establish enhanced treatment levels for the land application of septage by February 1, 2011. The report provided several alternatives to the land application of septage as it is currently performed.<sup>41</sup>

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<sup>33</sup> Hall, P. and Clancy, S.J., *Statewide Inventory of Onsite Sewage Treatment and Disposal Systems in Florida, Final Report*, 6 (June 29, 2009), available at <http://www.floridahealth.gov/healthy-environments/onsite-sewage/research/documents/research-reports/documents/inventory-report.pdf> (last visited Mar.27, 2014).

<sup>34</sup> DOH, *Report on Range of Costs to Implement a Mandatory Statewide 5-Year Septic Tank Inspection Program*, 1 (Oct. 1, 2008), available at <http://www.noticeandcomment.com/Report-on-Range-of-Costs-to-Implement-a-Mandatory-Statewide-5-Year-Septic-Tank-Inspection-Program-October-fn-14050.aspx> (last visited Mar. 27, 2014).

<sup>35</sup> Section 381.0065(2)(n), F.S.

<sup>36</sup> DOH, *Report on Alternative Methods for the Treatment and Disposal of Septage*, 1 (Feb. 1, 2011), available at [http://pk.b5z.net/i/u/6019781/f/FINAL\\_REPORT\\_ON\\_ALTERNATIVE\\_METHODS\\_FOR\\_THE\\_TREATMENT\\_AND DISPOSAL\\_OF\\_SEPTAGE\\_03282011\\_2\\_.pdf](http://pk.b5z.net/i/u/6019781/f/FINAL_REPORT_ON_ALTERNATIVE_METHODS_FOR_THE_TREATMENT_AND DISPOSAL_OF_SEPTAGE_03282011_2_.pdf) (last visited Mar. 27, 2014).

<sup>37</sup> Rule 64E-6.010(7)(a), F.A.C.

<sup>38</sup> See Rule 64E-6.010, F.A.C.

<sup>39</sup> *Supra* note 36.

<sup>40</sup> Section 381.0065(6), F.S.

<sup>41</sup> *Supra* note 36, at 2.

### Treatment of septage at domestic wastewater treatment facilities

Treating septage takes advantage of available wastewater treatment facilities' capacity while at the same time centralizing waste treatment operations. However, not all wastewater treatment facilities accept septage because it is a high strength waste, which has the potential to upset facilities' processes and may result in increased operation and maintenance requirements and costs. Furthermore, the distance between central facilities with available treatment capacity and the locations where septage is collected in rural areas can make transport to such facilities cost prohibitive.<sup>42</sup>

### Disposal of septage at landfills

Acceptance of septage at Class I landfills has positive impacts to the landfills because it increases microbial activity that results in increased waste decomposition and more rapid waste stabilization. However, landfill instability may result due to disposal of the wet waste stream. Increased difficulty in operating compaction equipment may result due to creation of a slick working surface. Many landfills choose not to accept loads of septage, making land application sites one of the only available options for the disposal of septage.<sup>43</sup>

### ***Advanced Treatment***

While most of Florida's OSTDSs are conventional OSTDSs, or passive septic systems, there are other advanced systems capable of providing additional or advanced treatment of wastewater prior to disposal in the drainfield. Advanced OSTDSs can utilize various approaches to improve treatment before discharge to a drainfield, or the drainfield itself can be modified. On occasion, engineers have included the drainfield as part of the treatment process, usually as a means to achieve fecal coliform reduction.<sup>44</sup>

Advanced systems differ in three respects from conventional treatment systems that consist of a septic tank with drainfield. First, the design of advanced systems is more variable than the approach for conventional systems. Second, they need more frequent checkups and maintenance, which is the reason they require operating permits. Third, the performance expectations are more specific, while failures for advanced systems are less defined.<sup>45</sup> Advanced systems are significantly more expensive to purchase, install, and operate.

Aerobic Treatment Units (ATUs) offer advanced treatment for wastewater. ATUs force compressed air through the liquid effluent in the tank to create a highly oxygenated (aerobic) environment for bacteria. Bacteria that thrive in oxygen-rich environments work to break down and digest the wastewater inside the aerobic treatment unit. Aerobic units come in a variety of sizes and shapes and can be made of concrete, fiberglass, or polyurethane. They are designed to collect and treat all the water from a home, including water from toilets, showers, bathtubs,

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<sup>42</sup> *Supra* note 36, at 2.

<sup>43</sup> *Supra* note 36, at 3.

<sup>44</sup> DOH, Assessment of Water Quality Protection, *Advanced Onsite Sewage Treatment and Disposal Systems: Performance, Management, Monitoring, Draft Final Report*, 14 (August 19, 2013), available at <http://www.floridahealth.gov/healthy-environments/onsite-sewage/research/advancedostdsfinalreportdraft.pdf> (last visited Mar. 27, 2014).

<sup>45</sup> Prepared for DEP by DOH, Bureau of Onsite Sewage Programs, *Revised Quality Assurance Project Plan Assessment of Water Quality Protection by Advanced Onsite Sewage Treatment and Disposal Systems (OSTDS): Performance, Management, Monitoring*, 8 (Aug. 22, 2011) available at <http://www.floridahealth.gov/healthy-environments/onsite-sewage/research/documents/final319qapp.pdf> (last visited Mar. 27, 2014).

sinks, and laundry. There are as many as three stages that ATUs take wastewater through before the effluent is dispersed into the drainfield.<sup>46</sup>

## **Water Pollution Management**

### *Urban Stormwater Management*

Unmanaged urban stormwater creates a wide variety of effects on Florida's surface waters and groundwaters. Factors that exacerbate unmanaged runoff include:

- Compaction of soil;
- Addition of impervious surfaces such as roads and parking lots;
- Alteration of natural landscape features such as natural depression areas that hold water, floodplains, and wetlands;
- Construction of highly efficient drainage systems that alter the ability of the land to assimilate precipitation; and
- Pollutant loading of receiving water bodies from stormwater discharge.<sup>47</sup>

Urbanization within a watershed decreases the amount of rainwater that seeps into the soil. Rainwater is critical for recharging aquifers, maintaining water levels in lakes and wetlands, and maintaining spring and stream flows. The increased volume, speed, and pollutant loading in stormwater discharged from developed areas leads to flooding, water quality problems, and loss of habitat.<sup>48</sup>

In 1982, to manage urban stormwater and minimize impacts to natural systems, Florida adopted a technology-based rule requiring the treatment of stormwater to a specified level of pollutant load reduction for new development. The rule included a performance standard for the minimum level of treatment and design criteria for BMPs to achieve the performance standard. It also included a rebuttable presumption that discharges from a stormwater management system designed in accordance with the BMP design criteria would meet WQSs.<sup>49</sup> The performance standard was to reduce post-development stormwater pollutant loading of total suspended solids<sup>50</sup> by 80 percent, or by 95 percent for Outstanding Florida Waters.<sup>51</sup>

In 1990, the DEP developed and implemented the State Water Resource Implementation Rule (originally known as the State Water Policy rule).<sup>52</sup> This rule sets forth the broad guidelines for the implementation of Florida's stormwater program and describes the roles of the DEP, the WMDs, and local governments. One of the primary goals of the program is to maintain the

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<sup>46</sup> Florida Health, Lee County, *Aerobic Treatment Unit Homeowner Education*, <http://www.floridahealth.gov/chdlee/EH/OSTDSatu.html> (last visited Mar. 27, 2014).

<sup>47</sup> DEP, *State Stormwater Treatment Rule Development Background*, <http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater/background.htm> (last visited Mar. 27, 2014).

<sup>48</sup> *Id.*

<sup>49</sup> *Id.*

<sup>50</sup> Total Suspended Solids is listed as a conventional pollutant under s. 304(a)(4) of the CWA. A conventional pollutant is a water pollutant that is amenable to treatment by a municipal sewage treatment plant.

<sup>51</sup> Rule 62-302.700, F.A.C., provides that an Outstanding Florida Water is a designated water body worthy of special protection because of its natural attributes. This special designation is applied to certain water bodies, and is intended to protect and preserve their existing states.

<sup>52</sup> *Supra* note 47. See also Rule. 62-40, F.A.C.

predevelopment stormwater characteristics of a site. The rule sets a minimum performance standard for stormwater treatment systems to remove 80 percent of the post-development stormwater pollutants “that cause or contribute to violations of WQSS.”<sup>53</sup>

The DEP and the WMDs jointly administer the Environmental Resource Permitting (ERP) program for activities that alter surface water flows.<sup>54</sup> Alteration or construction of new stormwater management systems in urban redevelopment areas is regulated by the ERP program pursuant to s. 373.413, F.S., and must comply with all other relevant sections of ch. 373, Part IV, F.S.

### ***Wastewater Treatment Plants***

Wastewater treatment is one of the most common forms of pollution control in the United States. Sewerage system components include collection sewers, pumping stations, and treatment plants. Sewage is collected and sent to a treatment plant to remove solids and biological contaminants. Once sewage has been treated, it is typically discharged into streams and other receiving waters, or reused.<sup>55</sup>

The basic function of wastewater treatment is to speed up natural processes by which water is purified. Typically, sewage is treated by primary and secondary processes. In the primary stage, solids are allowed to settle and are removed from the wastewater. The secondary stage uses biological processes to further purify wastewater.<sup>56</sup>

Limits in Florida for effluent to surface water from wastewater treatment plants are required to contain no more than 20 mg/L carbonaceous biochemical oxygen demand (CBOD5)<sup>57</sup> and 20 mg/L total suspended solids (TSS),<sup>58</sup> or 90 percent removal of each from the wastewater influent, whichever is more stringent.<sup>59</sup> There are other limits depending on where the effluent is being discharged.

### ***Advanced Wastewater Treatment***

Advanced wastewater treatment (AWT) systems perform additional treatment beyond secondary treatment. AWT systems can remove more than 99 percent of all impurities from sewage, producing an effluent that may be drinking-water quality. The related technology can be expensive, requiring a high level of technical expertise and well trained treatment plant operators, a steady energy supply, chemicals, and specific equipment that may not be readily available. An example of an AWT process is the modification of a conventional secondary treatment plant to remove additional phosphorus and nitrogen. The effluent standards for AWT on an annual average basis are:

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<sup>53</sup> *Supra* note 47.

<sup>54</sup> Chapter 373, Part IV, F.S. See also DEP, *Environmental Resource Permitting (ERP) Program*, <http://www.dep.state.fl.us/water/wetlands/erp/index.htm> (last visited Mar. 27, 2014).

<sup>55</sup> U.S. Environmental Protection Agency, Office of Water, *How Wastewater Treatment Works: The Basics*, Report no. 833-F-98-002, 1 (May 1998), available at <http://www.epa.gov/npdes/pubs/bastre.pdf> (last visited Mar. 27, 2014).

<sup>56</sup> *Id.*

<sup>57</sup> For more information on CBOD5, see Rule 62-601.200(6), F.A.C.

<sup>58</sup> For more information on TSS, see Rule 62-601.200(54), F.A.C.

<sup>59</sup> Rule 62-600.420, F.A.C.

- CBOD5 – 5 mg/L;
- Suspended solids – 5 mg/L;
- Total Nitrogen – 3 mg/L;
- Total Phosphorus – 1 mg/L; and
- High levels of disinfection.<sup>60</sup>

### ***Residuals***

Biosolids are the solid, semisolid, or liquid residue generated during the biological wastewater treatment process. Florida generates approximately 320,000 dry tons of biosolids annually. Biosolids are normally high in organic content and contain moderate amounts of nutrients such as nitrogen and phosphorus, making them valuable as a fertilizer or soil amendment.<sup>61</sup> They may be used beneficially or disposed of in landfills.<sup>62</sup>

Biosolids are classified as AA, A, or B. Class AA biosolids are considered the highest quality biosolids. They must be treated to a level that essentially eliminates pathogens and meets strict concentration limits for heavy metals. They may be used as fertilizer through commercial distribution and marketing.<sup>63</sup> Class A biosolids are biosolids that meet the same pathogen reduction requirements as Class AA biosolids, meet the same vector attraction (meaning the attraction of disease spreading animals) requirements as Class B biosolids, and meet a series of concentration limits for nine different elements.<sup>64</sup> Class B biosolids must be treated to significantly reduce pathogens and must meet certain concentration limits for heavy metals. Application rates are limited to crop nutrient needs. They are subject to site application restrictions and restrictions on harvesting, grazing, and public access. Also, cumulative heavy metals must be tracked for Class A and B biosolids; however, in Florida, land applied biosolids are almost exclusively Class B. In 2012, approximately 108,272 dry tons of Class B biosolids were land applied.<sup>65</sup>

### **Total Maximum Daily Load (TMDL) Restoration Grants Program**

The TMDL Water Quality Restoration Grants program was developed to provide grants to fund the implementation of BMPs to reduce pollutant loads to impaired waters from urban stormwater discharges.<sup>66</sup> The DEP funds research into BMPs to reduce pollutant loads from urban nonpoint sources of pollution.

The eligibility criteria for TMDL Water Quality Restoration Grants are:

- Projects that reduce stormwater pollutant loadings from urban areas that discharge to water bodies on the state's verified list of impaired waters;
- The project is at least at the 60 percent design phase;

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<sup>60</sup> Section 403.086(4), F.S.

<sup>61</sup> DEP, *Biosolids in Florida: 2012 Summary*, 1 (Dec. 2013), available at <http://www.dep.state.fl.us/water/wastewater/dom/docs/BiosolidsFlorida-2012-Summary.pdf> (last accessed Mar. 27, 2014).

<sup>62</sup> *Id.*

<sup>63</sup> *Id.*

<sup>64</sup> Rule 62-640.200(9), F.A.C.

<sup>65</sup> *Supra* note 61.

<sup>66</sup> Rule 62-305.100(1), F.A.C.

- The project is permitted or the permit has been scheduled for approval at the next meeting of the WMD governing board or the DEP;
- The project includes storm event monitoring to determine the actual load reduction;
- The construction will be completed within three years of appropriation of the funds by the Legislature in order to ensure funds remain available;
- The applicant provides a minimum of 50 percent of the total project cost in matching funds, of which at least 25 percent are provided by the local government; and
- The grant funds are used for construction of BMPs, monitoring to determine pollutant load reductions, or public education activities specifically associated with the project and may only occur after the date of contract. Funds spent in advance of contract may be used for match, such as design, land acquisition, and other costs incurred by the applicant.<sup>67</sup>

The submitted projects are then evaluated and ranked. The criteria include:

- Impairment status of the receiving waterbody;
- Estimated load reduction of the pollutants of concern;
- Percentage of local matching funds;
- Cost effectiveness based on the cost per pound of Total Nitrogen and/or Total Phosphorus removed per acre treated;
- Inclusion of a robust educational component; and
- Whether the local government sponsor has implemented a dedicated funding source for stormwater management, such as a stormwater utility fee.<sup>68</sup>

Grant applications may be submitted throughout the year. The DEP reviews and ranks projects in March, July, and November.<sup>69</sup> Projects selected for grant funding are based on ranking and availability of funds. Projects that are not selected for funding remain in the pool of projects for one year from the date of submittal.<sup>70</sup>

### **Minimum Flows and Levels (MFLs)**

MFLs are established for water bodies in order to prevent significant harm as a result of withdrawals. MFLs are typically determined based on evaluations of topography, soils, and vegetation data collected within plant communities and other pertinent information associated with the water resource. MFLs take into account the ability of wetlands and aquatic communities to adjust to changes in hydrologic conditions and allow for an acceptable level of hydrologic change to occur. When uses of water resources shifts the hydrologic conditions below levels defined by MFLs, significant ecological harm can occur.<sup>71</sup> The goal of establishing an MFL is to ensure there is enough water to satisfy the consumptive use of the water resource without causing significant harm to the resource.<sup>72</sup> Consumptive uses of water draw down water levels

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<sup>67</sup> DEP, *TMDL Water Quality Restoration Grants*, [http://www.dep.state.fl.us/water/watersheds/tmdl\\_grant.htm](http://www.dep.state.fl.us/water/watersheds/tmdl_grant.htm) (last visited Mar. 27, 2014).

<sup>68</sup> *Id.* See also rule 305.400, F.A.C. (Project Selection Criteria).

<sup>69</sup> Rule 62-305.300(2), F.A.C.

<sup>70</sup> *Supra* note 67.

<sup>71</sup> St. Johns River Water Management District, *Water Supply: An Overview of Minimum Flows and Levels*, <http://www.sjrwmd.com/minimumflowsandlevels/> (last visited Mar. 27, 2014).

<sup>72</sup> DEP, *Minimum Flows and Levels*, <http://www.dep.state.fl.us/water/waterpolicy/mfl.htm> (last visited Mar. 27, 2014).

and reduce pressure in the aquifer.<sup>73</sup> By establishing MFLs for non-consumptive uses, the WMDs are able to determine how much water is available for consumptive use. This is useful when evaluating a new consumptive use permit (CUP) application.<sup>74</sup>

Section 373.042, F.S., requires the DEP or WMDs to establish MFLs for priority water bodies to prevent significant harm from water withdrawals. While the DEP has the authority to adopt MFLs under ch. 373, F.S., the WMDs have the primary responsibility for MFL adoption. The WMDs submit annual MFL priority lists and schedules to the DEP for review and approval. MFLs are considered rules by the WMDs and are subject to ch. 120, F.S., challenges. MFLs are established using the best available data and are subject to independent scientific peer review at the election of the WMD, or, if requested, by a third party.<sup>75</sup>

MFLs apply to decisions affecting permit applications, declarations of water shortages and assessments of water supply sources. Computer water budget models for surface waters and groundwater are used to evaluate the effects of existing and/or proposed consumptive uses and the likelihood they might cause significant harm. The WMD Governing Boards are required to develop recovery or prevention strategies in those cases where a water body or watercourse currently does not or is anticipated to not meet an established MFL. Water uses cannot be permitted that cause any MFL to be violated.<sup>76</sup>

### ***Recovery or Prevention Strategies***

At the time of the initial adoption or revision of a water body's MFL, if the water body is below or is projected within 20 years to fall below the MFL, the WMD must simultaneously approve a recovery or prevention strategy or modify an existing recovery or prevention strategy. The WMD may adopt the revised MFL prior to the approval of the recovery or prevention strategy if the revised MFL is less constraining on existing or projected future consumptive uses.<sup>77</sup>

For water bodies without a recovery or prevention strategy, when the WMD determines the water body has fallen below, or is projected within 20 years to fall below the adopted MFL, the WMD shall expeditiously approve a recovery or prevention strategy.<sup>78</sup>

An MFL recovery or prevention strategy must include a phasing or timetable that allows for the provision of sufficient water supplies for all existing and projected reasonable-beneficial uses, including the development of additional water supplies and implementation of conservation and other efficiency measures concurrent with, to the extent practical, and to offset, reductions in permitted withdrawals. In the development of a recovery or prevention strategy, the WMD will consider the need for water resource or water supply development, additional regulatory measures, and implementation of additional water conservations measures.<sup>79</sup>

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<sup>73</sup> *Supra* note 1, at 3-5.

<sup>74</sup> Florida Senate Committee on Environmental Preservation and Conservation, *SB 244 Analysis*, 2 (Feb. 22, 2013), available at <http://flsenate.gov/Session/Bill/2013/0244/Analyses/2013s0244.ep.PDF> (last visited Mar. 27, 2014).

<sup>75</sup> *Id.*

<sup>76</sup> *Supra* note 71.

<sup>77</sup> Rule 62-40.473(5), F.A.C.

<sup>78</sup> *Id.*

<sup>79</sup> Rule 62-40.473(6), F.A.C.

### **Consumptive Use Permits (CUPs)**

A CUP establishes the duration and type of water use as well as the maximum amount of water that may be withdrawn daily. Pursuant to s. 373.219, F.S., each CUP must be consistent with the objectives of the issuing WMD or the DEP and may not be harmful to the water resources of the area. To obtain a CUP, an applicant must establish that the proposed use of water satisfies the statutory test, commonly referred to as “the three-prong test.” Specifically, the proposed water use must:

- Be a “reasonable-beneficial use” as defined in s. 373.019(16), F.S.;
- Not interfere with any presently existing legal use of water; and
- Be consistent with the public interest.

### **Rural Areas of Critical Economic Concern**

Rural areas of critical economic concern are rural communities, or regions composed of rural communities, designated by the Governor, that have been adversely affected by an extraordinary economic event, severe or chronic distress, or a natural disaster, or that presents a unique economic development opportunity of regional impact.<sup>80</sup> The Governor may waive criteria of any economic development incentive for such areas.<sup>81</sup>

Rural communities are:

- Counties with a population of 75,000 or fewer;
- Counties with a population of 125,000 or fewer that are contiguous to a county with a population of 75,000 or fewer;
- Designated municipalities within a county that meets the thresholds of the two previous criteria; and
- An unincorporated federal enterprise community or an incorporated rural city with a population of 25,000 or less and an employment base focused on traditional agricultural or resource-based industries, located in a county not defined as rural, which has at least three or more of the economic distress factors identified below.<sup>82</sup>

Economic distress factors are:

- Low per capita income;
- Low per capita taxable values;
- High unemployment;
- High underemployment;
- Low weekly earned wages compared to the state average;
- Low housing values compared to the state average;
- High percentages of the population receiving public assistance;
- High poverty levels compared to the state average; and

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<sup>80</sup> Section 288.0656(2)(d), F.S.

<sup>81</sup> Florida Department of Economic Opportunity, Rural Areas of Critical Economic Concern, <http://www.floridajobs.org/business-growth-and-partnerships/rural-and-economic-development-initiative/rural-areas-of-critical-economic-concern> (last visited Apr. 23, 2014).

<sup>82</sup> Section 288.0656(2)(e), F.S.

- A lack of year-round stable employment opportunities.<sup>83</sup>

The Governor may waive the criteria of any economic development incentive for such areas. The three areas in Florida designated as rural areas of critical economic concern are the Northwest, South Central, and the North Central.<sup>84</sup>

Northwest Rural Area of Critical Economic Concern is made up of Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Liberty, Wakulla, and Washington Counties, and the City of Freeport in Walton County.<sup>85</sup>

The South Central Rural Areas of Critical Economic Concern is made up of Desoto, Glades, Hendry, Highlands, and Okeechobee Counties. It also includes the cities of Pahokee, Belle Glade, South Bay, and Immokalee.<sup>86</sup>

The North Central Rural Area of Critical Economic Concern is made up of Baker, Bradford, Columbia, Dixie, Gilchrist, Hamilton, Jefferson, Lafayette, Levy, Madison, Putnam, Suwannee, Taylor, and Union Counties.<sup>87</sup>

### III. Effect of Proposed Changes:

**Sections 1 and 2** amend ss. 373.042 and 373.0421, F.S., respectively, requiring the standard of “harm” to be applied when determining the minimum flow level (MFL) of an Outstanding Florida Springs (OFS). They also make conforming changes.

**Section 3** creates Part VIII of ch. 373, F.S., consisting of ss. 373.801, 373.802, 373.803, 373.805, 373.807, 373.809, 373.811, and 373.813, F.S., and provides the title, “Florida Springs and Aquifer Protection Act.” The requirements of this act are discussed in Sections 6-12 of this section of the analysis.

**Section 4** creates s. 373.801, F.S., providing legislative findings and intent:

- Detailing the importance of Florida’s springs, and various benefits they provide to the state including providing critical habitat for plants and animals. They provide immeasurable natural, recreational, economic, and inherent value. They are indicators of the health of the Floridan aquifer. They also provide recreational opportunities for Floridians and visitors to the state;
- Stating that water quantity and water quality in springs are related. It also specifies the primary responsibilities of the Department of Environmental Protection (DEP), water management districts (WMDs), Department of Agriculture and Consumer Services (DACS), and local governments;
- Recognizing that springs are only as healthy as their springsheds and identifies several of the problems affecting springs, including pollution runoff from urban and agricultural lands,

<sup>83</sup> Section 288.0656(2)(c), F.S.

<sup>84</sup> *Supra* note 81.

<sup>85</sup> *Supra* note 81.

<sup>86</sup> *Supra* note 81.

<sup>87</sup> *Supra* note 81.

stormwater runoff, and reduced water levels of the Floridan Aquifer, which may have led to the degradation of many of Florida's springs;

- Recognizing that without significant action, the quality of Florida's springs will continue to degrade;
- Stating that springshed boundaries need to be delineated using the best available data;
- Recognizing that springsheds often cross WMDs and local government jurisdictional boundaries, which requires a coordinated response;
- Recognizing that aquifers and springs are complex systems affected by many variables and influences; and
- Recognizing that sufficient information exists to act, action is urgently needed, and action can be continually modified as additional data is acquired.

**Section 5** creates s. 373.802, F.S., providing definitions for "department," "local government," "onsite sewage and treatment disposal system," "spring run," "springshed," and "spring vent."

The bill also defines:

- "Outstanding Florida Spring," meaning all historic first magnitude springs, as determined by the department using the most recent version of the Florida Geological Survey's springs bulletin. The following springs are also considered (OFSs): Deleon Spring, Peacock Spring, Poe Spring Rock Springs, Wekiwa Spring, and Gemini Spring; and
- Spring protection and management zone (SPMZ)," meaning the areas of a springshed where the Floridan Aquifer is vulnerable to sources of contamination or reduced levels, as determined by the DEP in consultation with the appropriate WMD.

**Section 6** creates s. 373.803, F.S., directing the DEP, in consultation with the WMDs, to delineate SPMZs for each OFS, using the best available data. The bill requires the delineation of the zones to be completed by July 1, 2015. It directs the DEP to consider groundwater travel time, hydrogeology, and nutrient load when delineating spring protection zones. Additionally, the bill directs each WMD to adopt, by rule, maps that delineate SPMZs for each OFS within its jurisdiction by July 1, 2016.

**Section 7** creates s. 373.805, F.S., directing each WMD to establish a minimum flow level (MFL) for each OFS located within its jurisdiction by July 1, 2015. The bill provides for yearly extensions until July 1, 2022, if the WMD provides sufficient evidence to the DEP that an extension is in the best interest of the public. It directs the DEP to establish MFLs for OFSs that are affected or have been affected by withdrawals in areas that cross WMD boundaries by July 1, 2017.

The bill requires the simultaneous adoption of a recovery or prevention strategy when an MFL is adopted for an OFS and when the spring is below, or is projected within 20 years to be below the MFL. MFLs adopted before July 1, 2014, must be revised by July 1, 2017, and a recovery or prevention strategy must be adopted or revised if the OFS is below, or is projected within 20 years to be below the MFL. Finally, it requires the adoption of a recovery or prevention strategy by the DEP or WMD when there is no recovery or prevention strategy and the OFS is below, or is projected to be below the adopted MFL.

The bill provides minimum requirements for a recovery or prevention strategy for an OFS. The strategy, at a minimum, must include:

- A listing of all specific projects identified for implementation to achieve the recovery or prevention strategy;
- A priority listing of each project;
- The estimated cost for each listed project;
- The source and amount of financial assistance from the WMD for each project, which may not be less than 25 percent of the total cost of the project, unless another funding source or sources are identified which will provide more than 75 percent of the total project cost. The bill exempts the Northwest Florida and Suwannee River WMDs from the requirement to provide 25 percent of the total project cost;
- An estimate of each project's anticipated benefit;
- A map and legal descriptions of the SPMZ; and
- An implementation plan detailing how MFLs will be restored within 15 years of the adoption of a recovery or prevention strategy with interim milestones at five and 10 years.
- Local governments may apply for an extension of up to five years from the DEP, or 10 years for local governments in rural areas of critical economic concern, for any project in an adopted recovery or prevention strategy if the local government provides sufficient evidence to the DEP that an extension is in the best interest of the public.

**Section 8** creates s. 373.807, F.S., providing a deadline of July 1, 2014, for the DEP to initiate assessment of any OFS for which a determination of impairment has not been made and complete the assessment of them under the numeric nutrient standards for spring vents by July 1, 2017. The bill requires that:

- When a total maximum daily load (TMDL) is adopted, the DEP, or the DEP in coordination with a WMD, will simultaneously initiate development of a BMAP;
- For OFSs that have an adopted nutrient TMDL by July 1, 2014, the DEP, or the DEP in coordination with a WMD, will initiate development of a BMAP by July 1, 2014; and
- As the BMAP is developed, if OSTDSs are identified as a source of pollution that needs to be addressed, the local government must develop an OSTDS remediation plan.

BMAPs must be completed within three years of their initiation and must include:

- A list of all projects for implementing a TMDL;
- A list of all projects in an OSTDS remediation plan, if applicable;
- A priority ranking of all projects;
- The estimated cost of each project;
- The estimated date of completion of each project;
- The source and amount of any financial assistance from the DEP, WMD, or other entity;
- The estimate of each project's nutrient load reduction;
- A map and legal descriptions of the SPMZ;
- The identification of each point source of category of nonpoint sources; and
- An implementation plan detailing how the TMDL will be achieved within 15 years of the adoption of a BMAP along with interim milestones at five and 10 years.

The bill requires BMAPs adopted by July 1, 2014, that affect an OFS to be revised by the DEP, or the DEP in conjunction with a WMD, by July 1, 2017. Any completed OSTDS remediation

plans will be considered incorporated in an existing BMAP until the BMAP is revised. Additionally, a local government may apply for an extension of up to five years, or 10 years in the case of a local government within a rural area of critical economic concern, for any project in an adopted BMAP upon showing that an extension is in the best interest of the public.

Within six months of delineating an SPMZ of an OFS located fully or partially within a local government's jurisdictional boundaries, the local government must adopt an ordinance that meets or exceeds the requirements of the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes. The ordinance must require that, within an SPMZ of an OFS with an adopted nutrient TMDL, the nitrogen application rate of fertilizer may not exceed the lowest, basic maintenance rate of the most recent recommendations by the University of Florida's Institute of Food and Agricultural Sciences (IFAS). The DEP must adopt rules to implement this provision that establish reasonable minimum standards and reflect advancements of improvements regarding nutrient load reduction.

By July 1, 2016, the DEP, in conjunction with the Department of Health and local governments, must identify OSTDSs within each SPMZ and provide that information to the local governments where they are located within 60 days. If the DEP determines that OSTDSs are a source of pollution that needs to be addressed during the basin management action plan (BMAP) development process, it will notify the local government that it needs to develop an OSTDS remediation plan within one year of notification by the DEP. For each system or group of systems, the plan must include whether the systems require upgrading, connection to a central sewerage system, or no action. The plan must also include a priority ranking of each system or group of systems that require remediation and each plan must be submitted to the DEP for approval. In reviewing and approving remediation plans, the DEP must consider, at a minimum:

- The density of onsite sewage treatment and disposal systems (OSTDSs);
- The number of OSTDSs;
- The proximity of the OSTDSs to an OFS;
- The estimated nutrient loading of the OSTDSs; and
- The cost of the proposed action.

In developing the OSTDS remediation plan, the local government must hold at least one public meeting in order to receive public comment on the plan.

Regarding implementation of the OSTDS remediation plan, a property owner with an OSTDS identified by the plan is not required to pay any of the costs of an inspection or upgrade of the system, or connection fees for connection to a sanitary sewer system. This does not apply to local government programs in existence before July 1, 2014, that do not comply with these cost provisions.

**Section 9** creates s. 373.808 F.S., providing for funding for the restoration of OFSs.

It directs the DEP to adopt rules to fund pilot projects each project selection cycle that test the effectiveness of technologies or practices designed to minimize nutrient pollution or conserve water in Florida springs by December 31, 2014. Funding for pilot projects may only be provided if the DEP determines that the pilot project will not be harmful to the ecological resources in the study area. It also directs the DEP to develop rules by December 31, 2014, to evaluate, select,

and rank projects or land acquisitions eligible for funding . The rules must give preference to projects that will result in the greatest improvement to water quality and water quantity for the funds expended. The bill specifies that the DEP must consider, at a minimum:

- The level of nutrient impairment of the OFS in which the project is located;
- The quantity of pollutants the project is estimated to remove from an SPMZ;
- The flow necessary for the OFS to meet its adopted MFL;
- The anticipated impact the project will have on restoring or increasing water flow or water level;
- The amount of matching funds for the project that will be provided by the entities responsible for implementing the project;
- Whether the project is located in a rural area of critical economic concern, with preference given to the local government responsible for implementing the project;
- For multi-year projects, whether the project has funding sources that are identified and assured through the expected completion date of the project;
- The cost of the project and the length of time it will take to complete relative to its expected benefits; and
- Whether the applicant has used its own funds for projects to improve water quality or conserve water use within a springshed or SPMZ of an OFS since July 1, 2009.

**Section 10** creates s. 373.811, F.S., detailing prohibited activities within an SPMZ of an OFS. Prohibited activities are:

- Construction of municipal or industrial wastewater disposal system with permitted capacities of 100,000 gallons per day or greater unless the system meets a treatment standard of 3 mg/L Total Nitrogen on an annual permitted basis, unless the DEP determines a higher standard is necessary;
- Construction of OSTDSs on lots less than one acre, except for passive nitrogen removing systems approved by the DOH. This prohibition will not take effect until six months after the DOH has approved such a system for use;
- Construction of facilities for disposal of hazardous waste;
- Land application of class A or B domestic wastewater biosolids or septage; and
- New agriculture operations that do not implement BMPs, measures necessary to achieve pollution reduction levels established by the DEP, or a groundwater monitoring plan approved by a WMD or the DEP.

**Section 11** creates s. 373.813, F.S., directing the DEP to adopt rules to create a program to improve water quantity and water quality based on the TMDL Water Quality Restoration Grants rule. It allows the DOH, DACS, and the WMDs to adopt rules to administer Part VIII of ch. 373, F.S.

The bill specifies DACS is the lead agency for coordinating the reduction of agricultural nonpoint sources of pollution for the protection of OFSs. DACS and the DEP will study and, if necessary, initiate rulemaking to implement new or revised BMPs, in cooperation with applicable local governments, and stakeholders. The purpose of the rules is to implement new or revised BMPs for improving and protecting OFSs and to require the implementation of such practices within a reasonable time.

The bill directs the DEP, DACS, and Institute of Food and Agriculture Sciences (IFAS) to conduct research into improved or additional nutrient management tools, with a sensitivity to the necessary balance between water quality improvements and agricultural productivity. If necessary, the tools must be incorporated into revised BMPs adopted by rule by DACS.

**Section 12** creates s. 373.815, F.S., requiring a progress report by the DEP, in conjunction with the WMDs, by July 1, 2015, and annually thereafter, be submitted to the Governor, the Senate President, and the Speaker of the House of Representatives. The report must detail the status of each TMDL, BMAP, MFL, and recovery or prevention strategies adopted pursuant to Part VIII of ch. 373, F.S. It must also include the status of each project identified to achieve a TMDL and MFL, as applicable.

If the report states that any interim five or 10 year milestone, or the 15 year deadline, will not be met, the report must include specific corrective actions that will be taken to achieve these milestones and deadlines, and, if necessary, executive and legislative recommendations.

**Section 13** creates an unnumbered section of Florida law that provides for funding for the Florida Springs and Aquifer Protection Act for the 2014-2015 fiscal year. It states that funding for future years will be at the discretion of the Legislature and provided in the General Appropriations Act.

**Section 14** provides an effective date of July 1, 2014.

#### **IV. Constitutional Issues:**

##### **A. Municipality/County Mandates Restrictions:**

Existing regulatory programs require local governments to expend funds to comply with minimum flows and levels (MFLs), water quality standards (WQSs), and basin management action plans (BMAPs). This bill requires additional expenditures for onsite sewage and disposal systems (OSTDS) remediation plans and implementation of those plans. A comprehensive fiscal analysis of the bill is required to determine the total impact and whether this bill is a mandate.

##### **B. Public Records/Open Meetings Issues:**

None.

##### **C. Trust Funds Restrictions:**

None.

#### **V. Fiscal Impact Statement:**

##### **A. Tax/Fee Issues:**

None.

**B. Private Sector Impact:**

The exact impact of CS/CS/CS/SB 1576 on the private sector and individuals cannot be calculated because many of the costs are dependent on activities, such as delineation of spring protection and management zone (SPMZs) that have not occurred. Listed below are examples of potential private sector impacts.

- Provisions that will require some property owners in spring protection zones to upgrade their onsite sewage treatment and disposal systems (OSTDSs) or connect to a central sewerage system. This could result in higher rates for sewage disposal compared to the costs of using an OSTDS. Aerobic treatment units (ATUs) are also more costly to operate than conventional OSTDSs.
- Rate payers may pay for ongoing operation and maintenance for advanced wastewater treatment (AWT) plants, through rate increases, in addition to costs associated with disposal of Class A and B biosolids in landfills.
- Property owners may have to pay for more expensive passive OSTDSs to install in new developments with lots of less than one acre. They may also face more expensive pump out costs as a result of more expensive disposal options.
- Urban fertilizer use may decrease because of ordinances causing a reduction in revenue for fertilizer companies.
- Septic tank contractors may benefit due to increased scrutiny and required upgrades to OSTDSs.

**C. Government Sector Impact:**

The Department of Agriculture and Consumer Services (DACS) has indicated that while the bill does not significantly change the role of DACS in water resources protection through best management practices development and implementation, it does direct the department to participate in new studies and rule development efforts. The cost for staff time and travel to implement these duties is unknown. Also, DACS would need funding to contract with a third party entity, estimated at \$50,000, to complete the required report related to public health, engineering, public perception, fiscal, and rate structure issues.

Due to the increased workload related to this bill, the Department of Environmental Protection (DEP) would need additional positions and funding. While the exact need is indeterminate at this time, the DEP estimates up to 35 additional positions based on its existing water program. However, because the grant program anticipated by this bill will be based on the DEP's existing program, the exact number of additional positions and costs are indeterminate.

The bill would require the water management districts (WMDs) and the DEP to establish Minimum Flows and Levels (MFLs) which is expected to cost between \$280,000 and \$2.25 million per MFL, including agency costs for extensive data collection, analysis and modeling, stakeholder coordination, and rulemaking. Costs can vary widely depending on the complexity of the system and the amount and type of scientific and technical data that exists or must be collected. Future reevaluation of the 17 MFLs already established or in

rulemaking due to the change of the standard from “significant harm” to “harm” would add additional costs that are indeterminate.

The bill requires the DEP to develop Basin Management Action Plans (BMAPs). The DEP estimates the need for one additional position for each spring and that six springs would need BMAPs. The estimated total cost for each BMAP is \$250,000 to \$340,000 per year which includes one position’s salary and benefits costs along with contracted service costs. It is difficult to estimate the level of work needed for each spring; however, the total estimates range from \$1.5 million to \$2 million.

The WMDs (excluding Northwest Florida and Suwannee River WMDs) would be required to fund at least 25 percent of recovery or prevention strategies projects. However, the WMDs may provide less than a 25 percent match if another specific source(s) of funding will provide more than 75 percent of the project cost. Since the number of project applicants and project costs is unknown, the fiscal impact is indeterminate at this time.

The bill requires the DEP to assess outstanding Florida springs for determination of impairment by July 1, 2017. This deadline would be difficult to achieve due to the time needed to gather sufficient data. Until an assessment of data gaps can be completed, the cost of securing the additional data is unknown.

Funding to support the bill is to be provided in the Fiscal Year 2014-2015 General Appropriations Act, or similar legislation. For subsequent fiscal years, funding will be determined annually by the Legislature and provided in the General Appropriations Act.

#### **VI. Technical Deficiencies:**

None.

#### **VII. Related Issues:**

The bill defines outstanding Florida springs as all first magnitude springs in Florida, as defined in the most recent version of the Florida Geological Survey’s springs bulletin. A future bulletin could remove one of the first magnitude springs from its list, creating problems for ongoing projects by removing the regulatory structure established in this bill.

#### **VIII. Statutes Affected:**

This bill substantially amends the following sections of the Florida Statutes: 373.042 and 373.0421.

This bill creates the following sections of the Florida Statutes: 373.801, 373.802, 373.803, 373.805, 373.807, 373.809, 373.811, 373.813, and 373.815.

This bill creates an undesignated section of Florida law.

**IX. Additional Information:****A. Committee Substitute – Statement of Substantial Changes:**  
(Summarizing differences between the Committee Substitute and the prior version of the bill.)**CS/CS/CS by Appropriations on April 22, 2014:**

- Removes provisions providing for funding from documentary stamp revenues;
- Funding to support the bill is to be provided in the Fiscal Year 2014-2015 General Appropriations Act, or similar legislation. For subsequent fiscal years, funding will be determined annually by the Legislature and provided in the General Appropriations Act;
- Removes the definition of “Responsible Management Entities” and all references to responsible management entities in the bill;
- Extends the deadline for establishment of minimum flow levels from July 1, 2020, to July 1, 2022;
- Adds provisions requiring the establishment of recovery or prevention strategies under certain circumstances;
- Adds requirements for recovery and prevention strategies;
- Requires the Department of Environmental Protection (DEP) to begin water quality assessments by July 1, 2014, and requires them to be completed by July 1, 2017;
- Requires the development of a basin management action plan (BMAP) simultaneously with the adoption of a total maximum daily loads (TMDLs);
- Requires BMAPs to be adopted within three years of their initiation;
- Requires the revision of BMAPs adopted before July 1, 2014, by July 1, 2017;
- Requires the initiation of the development of a BMAP by July 1, 2014, for OFSs that have a TMDL adopted before July 1, 2014;
- Requires the development of onsite sewage treatment and disposal systems (OSTDS) remediation plans if OSTDSs are identified as a nonpoint source of pollution that needs to be addressed;
- Removes all references to “Spring Action Plans”;
- Provides additional requirements for items included in a BMAP;
- Changes requirements for local governments to develop OSTDS remediation plans and requires them only when the DEP determines that OSTDSs are a source of nutrient pollution that needs to be addressed;
- Removes a provision stating that remedial actions are not required until adequate funding is made available;
- Removes a provision requiring existing wastewater treatment facilities in an springs protection and management zone (SPMZ) to meet certain treatment levels;
- Removes a provision requiring agricultural producers in SPMZs to implement BMPs or other measures by July 1, 2019;
- Removes a provision requiring local governments to submit funding requests at least every two years;
- Requires public involvement in the development of OSTDS remediation plans;
- Provides that local governments that do not comply with certain provisions may be ineligible for funding;

- Allows local governments to apply for extensions of up to five years from the DEP for any project in an adopted recovery or prevention strategy or an adopted BMAP. Local governments in Rural Areas of Critical Economic Concern may apply for extensions of up to 10 years.
- Requires the DEP to consider whether projects are located in Rural Areas of Critical Economic Concern when developing rules to evaluate, rank and select projects for funding;
- Changes a requirement for the DEP to approve funding for at least two pilot projects per funding cycle by requiring the DEP to fund “pilot projects” each funding cycle;
- Adds criteria the DEP is required to consider when developing rules to fund projects;
- Prohibits new wastewater disposal systems in SPMZs with capacities of 100,000 gallons per day or more that do not meet an effluent standard of 3 mg/L Total Nitrogen, rather than prohibiting all new wastewater disposal systems that do not meet that standard;
- Changes an effective date for a provision requiring new OSTDSs in SPMZs to have passive nitrogen removing components approved by the Department of Health (DOH) from July 1, 2015, to six months after the DOH approves such a system;
- Changes the prohibition of the application of all biosolids in SPMZs to a prohibition of the application of Class A and B biosolids;
- Removes a provision prohibiting concentrated animal feeding operations and intense cattle finishing and slaughter operations in SPMZs;
- Adds a provision prohibiting new agriculture operations that do not meet certain requirements;
- Removes a section related to variances and exceptions; and
- Adds a requirement for a yearly status report by the DEP on TMDLs, BMAPs, MFLs, and recovery or prevention strategies.

**CS/CS by Agriculture on March 31, 2014:**

- Adds Poe Spring to the list of Outstanding Florida Springs;
- Clarifies that the aquifer is vulnerable to multiple sources of contamination, not just not just surface sources;
- Amends the definition of “springshed” to delete “historically contributed” and add those areas of the springshed in favor of an analysis that takes into account “relevant facts, circumstances, and data”;
- Clarifies timelines for the DEP to develop and adopt spring action plans. In the CS, there was no completion date, as it was intended that these plans were to be open ended. This led to confusion;
- Specifies that the spring action plan must be continually updated;
- Clarifies that the projects may be partially or fully within a spring protection management zone;
- Requires an estimated allocation for each point source or category of nonpoint source pollutant loads instead of a “detailed allocation.” A detailed allocation analysis could significantly slow down progress as those determinations would have to be made first;
- Specifies considerations the DEP must account for when reviewing an onsite sewage treatment and disposal system remediation plan, including density of systems, the

total number of systems, the proximity to an OFS, the estimated nutrient load, and an estimated cost of the remedial action;

- Defines “adequate funding” to mean that the DEP provides 100 percent of its portion of the project proposal’s costs;
- Specifies that even though certain remedial actions are dependent on adequate funding, the protection for taking action based on funding is supplemental to other specific requirements or authority provided by other controlling laws;
- Specifies that pilot projects can now consider practices in addition to technologies; and
- Extends the ban on new onsite sewage treatment and disposal systems until July 1, 2015.

**CS by Environmental Preservation and Conservation on March 20, 2014:**

- Removes provisions concerning the Acquisition and Restoration Council;
- Renames the act, calling it the “Florida Springs and Aquifer Protection Act;”
- Removing legislative intent provision stating that a precautionary approach should be taken in addressing spring protection, and that the DEP or the WMDs should take common sense actions to protect springs;
- Adds legislative recognition that aquifers and springs are complex systems affected by many variable and influences;
- Removes the definition of “bedroom”;
- Directs the DEP to consider groundwater travel time, hydrogeology, and nutrient load when delineating SPMZs;
- Removes a one-year extension for the DEP to delineate SPMZs by July 1, 2015;
- Provides a yearly extension until July 1, 2020, for each WMD to establish MFLs for all OFSs within its jurisdiction;
- Provides that an MFL adopted for an OFS prior to July 1, 2014, does not have to be changed until it is revised or amended, rather than directing it to be revised by July 1, 2014;
- Provides that land spreading, dumping, or disposal of all domestic wastewater residuals or septage is not allowed in SPMZs;
- Removes a provision stating that a WMD may not issue new CUPs unless the entity requesting the CUP provides reasonable assurance that the withdrawal will not cause harm to the OFS. It was a restatement of existing law;
- Provides that WMDs may provide less than 25 percent of total project cost if there is another funding source that provides more than 75 percent of the funding costs, and exempts the Northwest Florida and Suwannee River WMDs from the requirement to provide 25 percent of total project costs;
- Shortens a deadline from July 1, 2017, to July 1, 2015, for the DEP to assess any OFS that does not have an impairment determination;
- Clarifies that detailed allocations have to be listed for categories of nonpoint sources rather than each one;
- Creates and describes the concept of a spring action plan;
- Removes a provision requiring that fertilizer ordinances mandate the use of 50 percent slow release nitrogen;
- Removes a provision regarding revision of stormwater management plans;

- Changes a deadline from July 1, 2019, to July 1, 2021, for wastewater treatment facilities to upgrade to a standard of 3mg/L Total Nitrogen;
- Provides a deadline of July 1, 2016, for wastewater treatment facilities to file a plan for complying with requirement of 3 mg/L Total Nitrogen;
- Provides that required remedial actions do not have to be taken if funding is not available unless those actions are required as part of a BMAP;
- Provides a deadline of July 1, 2019, for agricultural producers within an SPMZ to implement BMPs;
- Provides a deadline of July 1, 2016, for local governments to develop an OSTDS remediation plan;
- Directs the DEP to provide rules for funding water conservation pilot projects and provides considerations;
- Directs the DEP to create a program to evaluate and rank submitted projects based on the TMDL Water Quality Restoration Grants program;
- Provides conditions for establishing RMEs; and
- Removes a provision requiring the study of nutrient loading from row crops.

**B. Amendments:**

None.