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.)

Prepared By: The Professional Staff of the Committee on Environmental Preservation and Conservation

BILL:	SB 918
INTRODUCER:	Senator Dean
SUBJECT:	Environmental Resources
DATE:	March 11, 2015
REVISED:	03/22/15

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Hinton	Uchino	EP	**Pre-meeting**
2.			AGG	
3.			AP	

I. Summary:

SB 918 directs the Department of Environmental Protection (DEP) to promote access to conservation lands using an online database and mobile application. The bill requires the DEP to submit a yearly report to the Governor, the President of the Senate, and the Speaker of the House of Representatives describing the percentage of public lands open to the public that were acquired under s. 259.032, F.S., and efforts taken by the DEP to increase public access to such lands.

The bill creates the Shared-Use Nonmotorized Trail (SunTrail) network and directs the Florida Department of Transportation (FDOT) to create a SunTrail plan and include the SunTrail in the FDOT work program. The bill also provides for sponsorship of the SunTrail network.

The bill provides for the protection of springs and other water resources in Florida, creates a council to provide recommendations for funding water projects throughout the state, provides transparency for the process by which projects are submitted and selected, and provides for statewide consistency in data collection and analysis. Specifically, the bill:

- Specifies additional information to be included in the Consolidated Water Management District Annual Report;
- Changes the standard for minimum flows and levels (MFLs) in Outstanding Florida Springs (OFSs);
- Provides requirements for setting interim MFLs;
- Provides for the application of MFLs in other water management districts when withdrawals in those other districts affect an MFL outside of those districts;
- Creates the Florida Springs and Aquifer Protection Act;
- Provides findings, intent, and definitions;

- Directs the DEP, in coordination with the water management districts (WMDs), to delineate spring protection and management zones (SPMZs) and provides deadlines and considerations;
- Provides requirements for the DEP or a WMD to establish interim MFLs or adopt MFLs and recovery or prevention strategies, as necessary, and provides deadlines;
- Provides requirements for revising MFLs under certain circumstances and provides deadlines;
- Provides minimum requirements for recovery or prevention strategies for OFSs;
- Provides for extensions for local government projects included in a recovery or prevention strategy;
- Directs the DEP to assess OFSs for impairment and provides requirements and deadlines;
- Provides for the adoption of basin management action plans (BMAPs), includes requirements for BMAPs for OFSs, and provides deadlines;
- Requires the adoption of fertilizer use ordinances by local governments under certain circumstances;
- Provides for the identification and assessment of onsite sewage treatment and disposal systems (OSTDSs) in OFSs and directs the development of OSTDS remediation plans as necessary;
- Directs the DEP to develop rules to fund pilot projects that address nutrient pollution or flows in Florida springs and provides deadlines;
- Directs the DEP to develop rules to evaluate, select, and rank projects for environmental improvement, and provides considerations and deadlines;
- Prohibits certain activities within SPMZs;
- Directs the DEP to develop rules to create a program to improve water quantity and quality and provides the Total Maximum Daily Load (TMDL) Water Quality Restoration Grants rule as guidance;
- Provides for the study and possible revision or creation of best management practices (BMPs) that reduce pollution;
- Requires a report by the DEP on the status of TMDLs, BMAPs, MFLs, and recovery and prevention strategies under Part VIII of ch. 373, F.S., and provides for milestones, deadlines, and corrective actions, as necessary;
- Requires the DEP to create a consolidated water resources work plan that covers all water resource projects in the state and provides requirements for the information provided;
- Directs the DEP to create a web-based, interactive map that provides information to the public on water projects being performed throughout the state, and provides requirements on the information to be provided;
- Creates the Florida Water Resources Advisory Council within the DEP to evaluate and rank water resource projects and provide recommendations to the Legislature for funding projects. The bill provides considerations for ranking projects and rulemaking authority to the DEP to implement the program; and
- Requires the DEP to establish statewide standards for the collection of water quantity, water quality, and related data to ensure quality, reliability, and validity of the data and testing results.

II. Present Situation:

State Lands Database

Section 253.0325, F.S., was created in 1990 to require the DEP to establish a computerized system for state lands records. The DEP contracted with a company to create the mainframe-based land record system for documents related to lands where title is vested in the Board of Trustees of the Internal Improvement Trust Fund. In 1999, the system was updated to include new technologies and integration components and referred to as the Board of Trustees Land Document System (BTLDS). The law requires the program to include, at a minimum, a document management component, a lands and records management component, an evaluation component, and a mapping component. The DEP is responsible for ensuring the information system is compatible within the DEP and other state, local, and regional government agencies.

In 2008, s. 253.0325, F.S., was amended to require the DEP to include all lands purchased with Preservation 2000 funds and Florida Forever funds. To comply with the requirement, the DEP contracted with an outside vendor to conduct a BTLDS Feasibility Study. The study determined the DEP Division of State Lands would be the clearinghouse for all of the state lands data and solely responsible for maintaining the database.

In 2010, s. 216.0153, F.S., directed the DEP to create, administer, operate, and maintain a comprehensive system and automated inventory of all state lands and real property leased, owned, rented, occupied, or maintained by a state agency, judicial branch, or WMD. In order to meet the requirement, the DEP created the Florida State Owned Lands and Records Information System (FL-SOLARIS). The database includes all state owned lands in which the state has a fee interest, including a conservation easement acquired through a formal acquisition process for conservation.

The FL-SOLARIS system has been implemented by the DEP and the Department of Management Services (DMS) to include two main components. The Facility Information Tracking System includes 332 users and 65 different agencies, and the Lands Information Tracking System includes 140 users and 50 different agencies.[1]

Trail Development

The development of Florida's bicycle and pedestrian infrastructure did not begin in earnest until the late 20th century. The American railroad industry was deregulated by the Staggers Rail Act of 1980, providing Florida with an immediate abundance of abandoned rail corridors.[2] Organizations such as The Rails-to-Trails Conservancy and The Trust for Public Land, the FDOT, and the DEP coordinated to develop numerous abandoned rail corridors as shared-use "rail-trails" for nonmotorized transportation and recreation. Many of Florida's premier nonmotorized trails, including the Pinellas Trail, the Tallahassee-St. Marks Trail, and the West Orange Trail, are a result of rail-trail conversions.

[1] State of Florida Lands and Facilities Inventory Search, http://webapps.dep.state.fl.us/DslPi/splash?Create=new (last visited Mar. 6, 2015).
[2] Pub. Law No. 96-448, H.R. 72365, 96th Cong. (Oct. 14, 1980).

The second major thrust in trail development came in 1991 when Congress shifted surface transportation policy through passage of the Intermodal Surface Transportation Efficiency Act.[3] For the first time, pedestrian and bicycle facilities were identified as components of the nation's transportation infrastructure, and a dedicated funding source was created for multiuse trails and paths with local governments serving as project sponsors.[4] Many of the resulting projects are community-centric, short-distance trails, initiated by local governments and other governmental entities not traditionally associated with transportation development, such as water management districts and school districts.

Trail Connectivity

While many locales have benefited from federal trail funding, an unintended consequence of trail development being initiated by numerous state entities and local governments is a collection of random trails rather than a statewide system. As a result, many trails lack connectivity with other trails and often serve no meaningful origins and destinations. Trail users are often required to use roads, sidewalks, and highways to connect trails or to complete a trip. Many trail trips are "out-and-back" trips in which the origin and destination are the same location. Such trips serve little to no transportation function and do not realize the full economic potential of a trail network.

In 1995, the Legislature recognized the benefits of an expanded greenways and trails network and created the Florida Greenways Coordinating Council (FGCC).[5] The Legislature tasked the FGCC with promoting the creation of a statewide greenways and trails system and designated the DEP as the lead agency of the system.[6] The FGCC published the Connecting Florida Communities with Greenways and Trails Plan in 1998. The plan contains a multiuse recreational Opportunity Trail Map and is considered the first visioning document for connecting Florida's greenways and trails. The plan provides a comprehensive approach to the Florida Greenways and Trails System (FGTS) by providing a review of existing greenways and trails and recommendations to complete the system. The plan recommends:

- The DEP establish a process to prioritize greenways and trails for ecological, recreational, and cultural significance;
- The DEP identify the critical linkages in the statewide greenways and trails system;
- The FGCC evaluate and prioritize greenways and trails proposed by the DEP based on:
  - Willingness of the landowner;
  - Ecological, recreational, and cultural significance;
  - Acquisition considerations;
  - Management considerations;
  - Community support; and
  - Identification of critical linkages.
- The DEP develop a process for designating lands for the statewide greenways and trails system;
- The FGCC promote awareness and generate support of the greenways and trails system;

[3] Pub. Law No. 102–240, H.R. 2950, 102nd Cong. (Dec. 18, 1991).
[4] Joe Maher, *Federal Funding for Conservation and Recreation Trails*, 1 (Feb. 2009), *available at* http://www.rff.org/RFF/Documents/RFF-BCK-ORRG_DOT.pdf (last visited Mar. 11, 2015).
[5] Chapter 95-260, Laws of Fla.
[6] *Id*.

- Encouraging landowners to voluntarily sell or donate conservation easements or fee simple title to land;
- Coordinating with owners to acquire linear facilities;
- Encouraging developers to include trails in residential areas and to link residential trails with the statewide system;
- Identifying a funding mechanism for the creation and maintenance of trail systems;
- Directing the Legislature to create the Florida Greenways and Trails Council; and
- Measuring the success of the statewide trails system by:
  - Tracking the current trail system and new land designations in a database;
  - Maintaining natural areas so they may be considered for designation or remain designated;
  - Creating a system that provides public access to a trail within 15 minutes of every Floridian; and
  - Ensuring a 95 percent satisfaction rate for visitors to greenways and trails facilities.[7]

In 1999, the Legislature created the Florida Greenways and Trails Council as recommended by the 1998 Connecting Communities with Greenways and Trails Plan. Section 260.0142(4), F.S., directs the council to:

- Facilitate a statewide system of interconnected landscape linkages, conservation corridors, greenbelts, recreational corridors and trails, scenic corridors, utilitarian corridors, reserves, regional parks and preserves, ecological sites, and cultural/historic/recreational sites using land-based trails that connect, urban, suburban, and rural areas of the state;
- Recommend priorities for critical links in the FGTS;
- Review recommendations for acquisition funding;
- Review designation proposals to be include in the FGTS;
- Encourage public-private partnerships;
- Review the established benchmarks and make recommendations for appropriate action;
- Recommend updates to the implementation plan for the FGTS;
- Promote greenways and trails support organizations; and
- Support the FGTS through intergovernmental coordination, budget recommendations, and any other appropriate way.

In 2008, Florida was recognized as a leader in greenways and trails and awarded the Best Trails State Award by American Trail. Although the statewide system of trails had expanded to include thousands of miles of paved, unpaved, and paddling trails to accommodate hikers, bikers, equestrians, and paddlers, many gaps to the trail system remain.[8]

In 2013, the DEP published the 2013-2017 Florida Greenways and Trails System Plan. The 2013-2017 plan was the first update to the FGTS since the Connecting Florida Communities with Greenways and Trails Plan was published in 1998. The updated plan provides goals for the

[7] DEP, Florida Greenways Coordinating Council, *Connecting Florida's Communities with Greenways and Trails*, 11-35 (1998), *available at* http://www.dep.state.fl.us/gwt/FGTS_Plan/PDF/1998FGTSPlanConnectingFlorida'sCommunities.pdf (last visited Mar. 5, 2015).
[8] DEP, *Coast to Coast Connector, Status Report: July 1, 2014 to December 31, 2014*, 3 (2014), *available at* http://www.dep.state.fl.us/gwt/FGTS_Plan/Long%20Distance%20Corridors/1st%20Edition%20Jan%202015.pdf (last visited Mar. 5, 2015).

FGTS to advance Florida's economy, tourism, health, transportation, recreation, conservation, and quality of life. Specifically, the plan:

- Establishes priorities for coordinating, directing, and focusing resources;
- Provides a new framework for systematically closing the gaps in trails and connecting priority corridors within the FGTS to establish a fully connected and integrated statewide trail network; and
- Provides linkages between additional state planning efforts and the FGTS. The additional state planning efforts include:
  - The Florida Five-year Strategic Plan for Economic Development;
  - The VISIT FLORIDA Marketing Plan;
  - The Florida State Health Improvement Plan;
  - The Florida Transportation Plan 2060;
  - The Florida Statewide Comprehensive Outdoor Recreation Plan; and
  - The Cooperative Conservation Blueprint and Wildlife Action Plan.[9]

The Coast-to-Coast Connector (C2C) is an essential component of the 2013-2017 FGTS plan and the Florida Greenways and Trails Foundation "Close the Gaps" campaign.[10] The C2C is an approximately 275-mile system of local, regional, state, and federal trails crossing nine counties from Titusville to St. Petersburg. Approximately 200 miles of the corridor are developed or funded for completion. The remaining portion of the C2C will cost an estimated $42 million to complete.[11]

Once complete, the C2C will link communities and provide a year-round ecotourism engine throughout the region. The C2C includes two of the state's most popular trails, the Pinellas Trail and the West Orange Trail, each of which have served approximately 1 million users per year and fueled the economic transformation of trail communities, particularly Dunedin and Winter Garden.[12] Components of the C2C will also serve other planned trails including multi-day loop trails such as the 250-mile Heart of Florida Greenway[13] and the 300-mile St. Johns River-to-Sea Loop.[14]

Interagency Coordination

The FDOT created the Florida Bicycle and Pedestrian Partnership Council in 2010, which includes representatives from the FDOT, state agencies, local governments, and non-profit organizations. The council provides policy recommendations for the state's walking, biking, and

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[9] DEP, *Florida Greenways & Trails System Plan, 2013-2017*, 1 (2013), *available at* *http://www.dep.state.fl.us/gwt/FGTS_Plan/PDF/FGTS_Plan_2013-17_publication.pdf* (last visited Mar. 19, 2015).
[10] The Florida Greenways and Trails Foundation is a non-profit organization that supports the mission and programs of the DEP Office of Greenways and Trails.
[11] DEP, *The Coast to Coast Connector*, http://www.dep.state.fl.us/gwt/FGTS_Plan/Long%20Distance%20Corridors/Coast_to_Coast_Connector.htm (last visited Mar. 19, 2015).
[12] *Id.*
[13] The Florida Greenways and Trails Foundation, *Close the Gaps: Heart of Florida Greenway Map* (May 29, 2012), *available at* http://fgtf.org/maps/hof/overview.pdf) (last visited Mar. 11, 2015).
[14] *See* ETM, *St. Johns River-to-Sea Loop Trail Status Update* (Sept. 2011), *available at* http://www.etminc.com/SJR2C/sg_userfiles/SJR2C_Summary_Report_09-19-11.pdf (last visited Mar. 11, 2015).

trail facilities to the FDOT and its partners. The primary focus of the council is to implement bicycle and pedestrian connections, promote bicycle and pedestrian safety, promote the use of design discretion to accommodate bicycle and pedestrian needs, and to promote the State Health Improvement Plan.[15]

The council has directed the FDOT to partner with the DEP to pursue opportunities that contribute to the full implementation of the FGTS Priority Network including:

- Considering additional right of ways for separate shared-use paths during all transportation corridor planning;
- Expanding the limited access pilot-projects;
- Developing an interagency Memoranda of Agreements to promote cooperation; and
- Working with metropolitan planning organizations and other regional entities.[16]

Although both the DEP and the FDOT are tasked with creating a network of connected trails and to coordinate efforts to accomplish each agency's goals, there is no legislation requiring interagency coordination to create a statewide system of shared-use transportation trails.

Trail Benefits

In addition to the intrinsic value nonmotorized travel brings to community mobility, sustainable transportation, and personal health, trails provide access to conservation lands and create wildlife corridors. Trails also produce numerous quantifiable economic benefits, including increasing the value of nearby properties, increasing spending at local businesses, influencing business location and relocation decisions, revitalizing depressed areas, providing sustainable tourism opportunities, and creating jobs.

Property Values

Based on an analysis of comparable trails from across the country, the construction of Miami-Dade County's Ludlam Trail will increase property values within a half mile of the trail 0.32 to 0.73 percent faster than other properties throughout the county. This translates into a total property value increase over a 25-year period of $121 million to $282 million.[17] A study of property values near trails in Delaware found that properties within 50 meters of the bike paths sell for $8,800 more than similar homes.[18] A survey co-sponsored by the National Association of Home Builders and the National Association of Realtors found that proximity to nonmotorized

[15] DOT, *The Florida Bicycle and Pedestrian Partnership Council: 2012/2013 Annual Progress Report*, iii (Oct. 2013), *available at* http://www.dot.state.fl.us/planning/policy/bikeped/Annualrpt2012-13.pdf (last visited Mar. 11, 2015).
[16] *Id.* at 7
[17] Miami-Dade County, Park and Recreation Department, *Miami-Dade County Trail Benefits Study: Ludlam Trail Case Study*, 57 (Jan. 2011), *available at* http://atfiles.org/files/pdf/Miami-Dade-Ludlam-Trail-Benefits.pdf (last visited Mar. 11, 2015).
[18] David P. Racca and Amardeep Dhanju, *Project Report for Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas*, 30 (Nov. 2006), *available at http://128.175.63.72/projects/DOCUMENTS/bikepathfinal.pdf* (last visited Mar. 19, 2015).

trails came in second only to highway access when recent home buyers were asked about the "importance of community amenities."[19]

Local Businesses and Economic Development

An economic impact analysis of trails in Orange County, Florida, found in 2010 average spending per trail user was $20 per visit, representing food and beverages, transportation, books and maps, bike maintenance, rentals, and more. The West Orange Trail supports 61 jobs and represents an estimated economic impact of $5 million for downtown Winter Garden. Longer destination trails increase spending and benefit hotels, bed and breakfasts, and outdoor outfitters.[20] A study of the Great Allegheny Passage, a 132-mile corridor in Pennsylvania, found that users reporting longer average travel distances to the trail were more likely to spend successive days on or near the trail. Those who reported an overnight stay in conjunction with their trips averaged spending $203 per person.[21] A survey on the Greenbrier River Trail, an 81-mile corridor in West Virginia, found an overwhelming majority of trail users were highly educated professionals with high income levels, two-thirds were from outside of West Virginia, 93 percent were staying in the area from one to four days, 58 percent spent between $100 and $500 in the area, and 93 percent indicated that they were highly likely to plan a return trip.[22]

Revitalization of Depressed Areas.

Companies often choose locations in communities that offer a high level of amenities to employees as a means of attracting and retaining top-level workers. Trails can make communities attractive to businesses looking to expand or relocate both because of the amenities they offer to employees and the opportunities they offer to trail visitors.[23]

In Dunedin, Florida, after the abandoned CSX railroad was transformed into the Pinellas Trail, the downtown went from 70 percent storefront occupancy to 95 percent occupancy.[24]

Tourism Opportunities.

The Outer Banks of North Carolina generates $60 million in economic activity through bicycle tourism. The one-time investment of $6.7 million on bicycle infrastructure has resulted in an

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[19] National Trails Training Partnership, *Benefits of Trails and Greenways*, http://www.americantrails.org/resources/benefits/homebuyers02.html (last visited Mar. 11, 2015).
[20] East Central Florida Regional Planning Council, *Economic Impact Analysis of Orange County Trails*, ii (2011), *available at* http://www.dep.state.fl.us/gwt/economic/PDF/Orange_County_Trail_Report_final_May2011.pdf (last visited Mar. 11, 2015).
[21] Compos, Inc., *The Great Allegheny Passage Economic Impact Study (2007-2008)*, 91 (2009), *available at* http://www.atatrail.org/docs/GAPeconomicImpactStudy200809.pdf (last visited Mar. 11, 2015).
[22] ATI, *Maximizing Economic Benefits from a Rails-to-Trails Project in Southern West Virginia – A Case Study of the Greenbrier River Trail*, 11 (May 2001), *available at* http://atfiles.org/files/pdf/greenbrierecon.pdf (last visited Mar. 11, 2015).
[23] *See* NPS, *Economic Impacts of Protecting Rivers, Trails, and Greenway Corridors: Corporate Relocation and Retention. Rivers, Trails and Conservation Assistance Program* (1995), *available at* http://www.nps.gov/pwro/rtca/econ_all.pdf (last visited Mar. 11, 2015).
[24] DEP, *The Impact of Trails on Communities*, 34 (2010), *available at* http://www.opportunityflorida.com/pdf/Jim%20Wood%20-%20Trails%20and%20Economic%20Impact%20-%20Rural%20Summit.pdf (last visited Mar. 11, 2015).

annual nine-to-one return. Analysis of Outer Banks trail amenities shows bicycle tourists tend to be affluent and educated. More than half of survey respondents said bicycling had a strong influence on their decision to return to the area. Two-thirds of respondents said that riding on bike facilities made them feel safer and three-quarters said that more paths, shoulders, and lanes should be built.[25]

A widely accepted tenet in trail development holds that the longer a given trail is, the greater its propensity for becoming a "destination trail," and the greater distance users will travel to use the trail. Users traveling farther stay in the area longer and, consequently, increase spending in the area. Users of the Great Allegheny Passage/C&O Canal Towpath, a 335-mile system of biking and hiking trails that connects Pittsburgh to Washington, DC, travel an average of 131 miles to the trailhead. Those that traveled 50 miles or more had daily expenditures approximately two times that of users that traveled less.[26]

Trail development creates more jobs than road development.

A national comparison of the number of jobs created per $1 million spent on various types of transportation projects found that for every $1 million spent on the development of multiuse trails, 9.57 jobs were created while road-only development yields 7.75 jobs.[27]

Sponsorship of Trails and Related Facilities

Section 335.065(3), F.S., authorizes the FDOT to enter into a concession agreement for commercial sponsorship displays, subject to the Highway Beautification Act of 1965 and all federal laws and agreements, on multiuse trails and related facilities with a not-for-profit entity or private sector business or entity. The revenues from the concession agreements may be used for trail maintenance.

In 2012, the Legislature created s. 260.0144, F.S., to authorize the DEP to enter into concession agreements for naming rights for the display of commercial sponsorship on certain state-owned greenway and trail facilities or properties. The DEP may establish the cost for entering into a concession agreement. The law specifies the commercial display contemplated by the concession agreement is for public relations or advertising purposes for the concessionaires and is not to be construed as having a relationship with the DEP other than what is set forth in the terms of the concession agreement. The law also does not grant a proprietary or compensable interest in any sign, or display site or location.

Section 260.0144, F.S., requires 85 percent of the proceeds from the concession agreement with the DEP to be distributed to the appropriate trust fund within the DEP to be used for management and operation of state greenway or trail facilities and properties. The remaining 15 percent goes to the State Transportation Trust Fund.

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[25] NCDOT, *Pathways to Prosperity: The Economic Impact of Investments in Bicycling Facilities*, vi-viii (July 2004), *available at* http://www.ncdot.gov/bikeped/download/bikeped_research_eiafulltechreport.pdf (last visited Mar. 5, 2015).
[26] *Supra* note 21, at 70.
[27] PERI, *Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts*, 11 (June 2011), *available at* http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.362.5819&rep=rep1&type=pdf (last visited Mar. 11, 2015).

The signage and display requirements for ss. 335.065(3) and 260.0144, F.S., are as follows:

- The placement of signage or displays is limited to the provisions of s. 337.407, F.S., and ch. 479, F.S., and limited to trailheads, parking areas, or public access points;
- The size of the signage or display is limited to 16 square feet at trailheads and parking areas and four square feet at public access points;
- The FDOT or the DEP must approve the name or display before installation;
- The FDOT or the DEP must ensure:
  - The size, color, materials, construction, and location of the signs are consistent with the management plan of the property and the standards of the FDOT or the DEP;
  - The signs do not intrude on natural and historic settings; and
  - The signs only contain the logo selected by the sponsor and the wording: "(Name of the sponsor)…proudly sponsors the costs of maintaining the…(Name of the greenway or trail)";
- All costs associated with the signage must be the responsibility of the concessionaire;
- The concession agreement is limited to one year unless extended by a multiyear agreement; and
- The FDOT or the DEP may terminate the agreement for just cause with 60 days advance notice to the concessionaire.

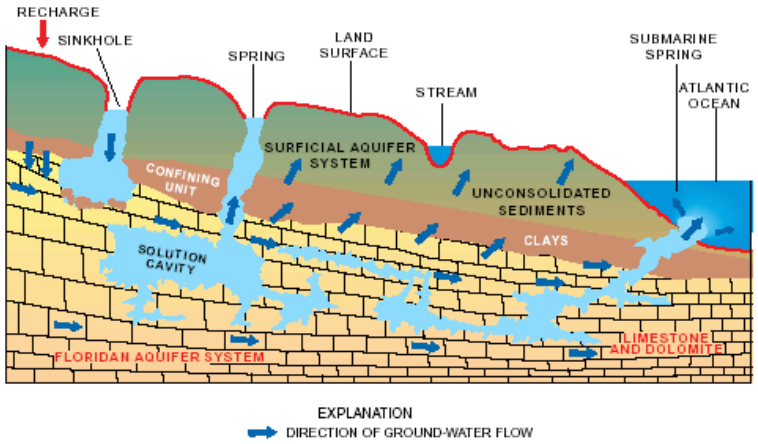
Florida's Springs

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. Springs are major sources of stream flow in a number of rivers such as the Rainbow, Chassahowitzka, Homosassa, and Ichetucknee.[28] 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.[29]

The Water Cycle – Springs[30]

[28] 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. 5, 2015).
[29] *Id*. at 3-1 to 3-2.
[30] U.S. Environmental Protection Agency, *The Water Cycle: Springs*, http://water.usgs.gov/edu/watercyclesprings.html (last visited Mar. 5, 2015).



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.[31]

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 BMPs;
- Educating the public concerning environmental sensitivity; and
- Regulatory action, if necessary.[32]

Nutrients

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

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[31] 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. 5, 2015).
[32] 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 (last visited Mar. 5, 2015).

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.[33]

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 DEP has provided guidelines to minimize the impact of urban fertilizer use and adopted the Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes. The model ordinance provides counties and municipalities with a range of options 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 by, for example, restricting fertilizer application on impervious surfaces and requiring prompt cleanup of any fertilizer that is spilled on impervious surfaces; and
- 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.[34]

[33] *Supra* note 28, at 3-4.
[34] 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. 5, 2015).

Water Pollution Control Programs

Total Maximum Daily Loads and Water Quality Standards

Under s. 303 of the federal Clean Water Act (CWA), states are incentivized to adopt water quality standards (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.[35]

In 1999, the Legislature passed the Florida Watershed Restoration Act,[36] which codified the establishment of TMDLs for pollutants of waterbodies as required by the CWA.[37] 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.[38] 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. [39]

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

[35] 33 U.S.C. s. 1313(c)(2)(A) (2014); 40 C.F.R. ss. 131.6 and 131.10-131.12.
[36] Chapter 99-223, Laws of Fla.
[37] Section 403.067, F.S.
[38] *Id*.
[39] Fla. Admin. Code R. 62-620.200(37) (2006). 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.

Basin Management Action Plans

The DEP is the lead agency in coordinating the implementation of TMDLs and 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;[40]
- Public works, including capital facilities; and
- Land acquisition.[41]

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.[42] 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.[43]

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.[44]

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.[45] A nonpoint source discharger may be subject to enforcement action by the DEP or a WMD based upon a failure to implement these requirements.[46]

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 an NPDES permit until

[40] 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.
[41] Section 403.067(7)(b), F.S.
[42] Section 403.067(7), F.S.
[43] DEP, *Basin Management Action Plans (BMAPs)*, http://www.dep.state.fl.us/central/Home/Watershed/BMAP.htm (last visited Mar. 5, 2015).
[44] Section 403.067(7)(a)5., F.S.
[45] BMPs for agriculture, for example, include activities such as managing irrigation water to minimize losses, limiting the use of fertilizers, and waste management.
[46] Section 403.067(7)(b)1.h., F.S.

the permit expires, the discharge is modified, or the permit is reopened pursuant to an adopted BMAP.[47]

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.[48]

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.[49]

Agricultural Operations

Only lands that are used primarily for bona fide agricultural purposes are classified as agricultural in Florida.[50] 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, reforesting, 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.[51]

Industrial Wastewater Program

In Florida, all wastewater that is not defined as domestic wastewater is considered industrial wastewater. The DEP's Industrial Wastewater Program issues permits to facilities for activities that discharge to surface waters and ground waters of the state.[52] Industrial wastewater that

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[47] 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. 5, 2015).
[48] *Id*.
[49] *Id*.
[50] Section 193.461(3)(b), F.S.
[51] *Id*.
[52] DEP, *Wastewater Program: Industrial Wastewater*, http://www.dep.state.fl.us/Water/wastewater/iw/index.htm (last visited Mar. 5, 2015). Other operations that are considered sources of industrial wastewater include manufacturing, commercial businesses, mining, agricultural production and processing, and wastewater from cleanup of petroleum and chemical contaminated sites.

discharges to domestic wastewater treatment facilities, however, is regulated under a different program. The DEP is authorized by the EPA to issue permits for discharge to surface waters under the NPDES. Permits for discharge to ground waters are issued by the DEP under state statutes and rules. Industrial wastewater permits are issued by the district offices.

Two exceptions to the permits issued by the district offices are:

- NPDES permits for steam electric power plants, which are issued by the Industrial Wastewater Section in the Tallahassee office; and
- Industrial wastewater permitting for the phosphate industry, which is handled by the Phosphogypsum Management Section located in Tampa.[53]

Best Management Practices (BMPs) 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; 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.[54]

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.[55]

The Office of Agricultural Water Policy, a division of DACS, is actively involved in developing BMPs. DACS works cooperatively with agricultural producers, industry groups, the DEP, the university system, the WMDs, and other interested parties to develop and implement BMP programs that are economically and technically feasible.[56]

Onsite Sewage Treatment and Disposal Systems

In Florida, septic systems are referred to as onsite sewage treatment and disposal systems. 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.[57] 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

[53] ID DEP WASTEWATER PROGRAM: INDUSTRIAL WASTEWATER.
[54] University of Florida Institute of Food and Agricultural Sciences, *Best Management Practices*, http://solutionsforyourlife.ufl.edu/hot_topics/agriculture/bmps.shtml (last visited Mar. 5, 2015).
[55] *Id*.
[56] DACS, Office of Agricultural Water Policy, *Home Page* (Jan. 8, 2014), http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Water-Policy (last visited Mar. 5, 2015).
[57] DEP, *Wastewater: Septic Systems*, http://www.dep.state.fl.us/water/wastewater/dom/septic.htm (last visited Mar. 5, 2015).

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.[58] 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.[59]

The Department of Health (DOH) administers onsite sewage programs, 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.[60] The Bureau also licenses over 700 septic tank contractors and oversees 2.6 million onsite wastewater systems in Florida. [61]

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 are generally serviced only when they fail, often leading to costly repairs that could have been avoided with routine maintenance.[62]

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.[63] Approximately 100,000 septic tanks are pumped each year, generating 100 million gallons of septage requiring treatment and disposal.[64] 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.[65] The treated septage is then spread over the land at DOH-regulated land application sites.[66] In addition to septage, onsite systems serving restaurants

[58] EPA, *Primer for Municipal Wastewater Treatment Systems*, 22 (2004), *available at* http://water.epa.gov/aboutow/owm/upload/2005_08_19_primer.pdf (last visited Mar. 5, 2015).
[59] *See* Fla. Admin. Code R. 64E-6.003 (2013) and R. 64E-6.004 (2010).
[60] 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.
[61] 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. 5, 2015).
[62] DOH, *Report on Range of Costs to Implement a Mandatory Statewide 5-Year Septic Tank Inspection Program*, 1 (Oct. 2008) (on file with the Senate Committee on Environmental Preservation and Conservation).
[63] Section 381.0065(2)(n), F.S.
[64] DOH, *Report on Alternative Methods for the Treatment and Disposal of Septage*, 1 (Feb. 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 (last visited Mar. 5, 2015).
[65] Fla. Admin. Code R. 64E-6.010(7)(a) (2013).
[66] See Fla. Admin. Code R. 64E-6.010 (2013).

include tanks that separate grease from the sewage stream. The grease is collected, hauled, treated, and land applied similarly to septage. In 2011, there were 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.[67]

In 2010, the Legislature enacted ch. 2010-205, Laws of Fla., which prohibited the land application of septage from septic tanks effective January 1, 2016. In addition, the law 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.[68]

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.[69]

Disposal of septage at landfills

Acceptance of septage at Class I landfills has positive impacts to the landfills because it increases microbial activity within the landfills and 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.[70]

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.[71]

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[67] *Supra* note 64, at 2.
[68] *Supra* note 64, at 2.
[69] *Supra* note 64, at 2.
[70] *Supra* note 64, at 3.
[71] 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. 5, 2015).

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.[72] Advanced systems are significantly more expensive to purchase, install, and operate.

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 ATU. 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, sinks, and laundry. There are as many as three stages that ATUs take wastewater through before the effluent is dispersed into the drainfield.[73]

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.[74]

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.[75]

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

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[72] 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. 5, 2015).
[73] Florida Health, Lee County, *Aerobic Treatment Unit Homeowner Education*, http://lee.floridahealth.gov/programs-and-services/environmental-health/onsite-sewage-disposal/permits/aerobic-treatment-units.html (last visited Mar. 5, 2015).
[74] DEP, *State Stormwater Treatment Rule Development Background*, http://www.dep.state.fl.us/water/wetlands/erp/rules/stormwater/background.htm (last visited Mar. 5, 2015).
[75] *Id*.

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 would meet WQSs when designed in accordance with the BMP design criteria.[76] The performance standard was to reduce post-development stormwater pollutant loading of total suspended solids[77] by 80 percent, or by 95 percent for Outstanding Florida Waters.[78]

In 1990, the DEP developed and implemented the State Water Resource Implementation Rule (originally known as the State Water Policy rule).[79] 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 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."[80]

The DEP and the WMDs jointly administer the Environmental Resource Permitting (ERP) program for activities that alter surface water flows.[81] 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 Part IV of ch. 373, 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.[82]

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.[83]

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[76] *Id*.
[77] 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.
[78] Fla. Admin. Code R. 62-302.700 (2006), 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.
[79] *Supra* note 74. *See generally* Fla. Admin. Code R. 62-40.
[80] *Supra* note 74.
[81] 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. 5, 2015).
[82] 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. 5, 2015).
[83] *Id*.

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)[84] and 20 mg/L total suspended solids (TSS)[85], or 90 percent removal of each from the wastewater influent, whichever is more stringent.[86] 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 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:

- CBOD5 – 5 mg/L;
- Suspended solids – 5 mg/L;
- Total nitrogen – 3 mg/L;
- Total phosphorus – 1 mg/L; and
- High levels of disinfection.[87]

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.[88] They may be used beneficially or disposed of in landfills.[89]

Biosolids are classified as AA, A, or B. 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.[90] 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.[91] Class B biosolids must be treated to significantly reduce pathogens and must meet certain concentration limits for heavy metals.

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[84] For more information on CBOD5, see Fla. Admin. Code R. 62-601.200(5) (1996).
[85] For more information on TSS, see Fla. Admin. Code R. 62-601.200(54) (1996).
[86] Fla. Admin. Code R. 62-600.420 (1993).
[87] Section 403.086(4), F.S.
[88] 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. 5, 2015).
[89] *Id*.
[90] *Id*.
[91] Fla. Admin. Code R. 62-640.200(9) (2010).

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.[92]

Total Maximum Daily Load Water Quality Restoration Grants Program

The TMDL was developed to provide grants to fund the implementation of BMPs to reduce pollutant loads to impaired waters from urban stormwater discharges.[93] 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;
- 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.[94]

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.[95]

[92] *Supra* note 88.
[93] Fla. Admin. Code R. 62-305.100(1) (2008).
[94] DEP, *TMDL Water Quality Restoration Grants*, http://www.dep.state.fl.us/water/watersheds/tmdl_grant.htm (last visited Mar. 5, 2015).
[95] *Id*. *See also* Fla. Admin. Code R. 62-305.400 (2008) for project selection criteria.

Grant applications may be submitted throughout the year. The DEP reviews and ranks projects in March, July, and November.[96] Projects are selected for grant funding 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.[97]

Minimum Flows and Levels

MFLs are established for water bodies in order to prevent significant harm to the water resources or ecology of an area as a result of water 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 shift the hydrologic conditions below levels defined by MFLs, significant ecological harm can occur.[98] 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.[99] Consumptive uses of water draw down water levels and reduce pressure in the aquifer.[100] 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.[101]

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.[102]

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.[103]

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[96] Fla. Admin. Code R. 62-305.300(2) (2008).
[97] *Supra* note 94.
[98] St. Johns River Water Management District, *Water Supply: An Overview of Minimum Flows and Levels*, http://www.sjrwmd.com/minimumflowsandlevels/ (last visited Mar. 5, 2015).
[99] DEP, *Minimum Flows and Levels*, http://www.dep.state.fl.us/water/waterpolicy/mfl.htm (last visited Mar. 5, 2015).
[100] *Supra* note 28, at 3-5.
[101] 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. 5, 2015).
[102] *Id*.
[103] *Supra* note 98.

Prior to the passage of the Water Resources Act in 1972,[104] MFLs were defined in statute:

- Average minimum flow - the average of the five lowest monthly mean discharge for each month, January through December, occurring during the past twenty years of natural flow. The determination was based on available flow data or in the absence of such data, it was established by reasonable calculations; and
- Average minimum level - the average of the minimum thirty days lake water level occurring during each of the five years of lowest levels in the period of the preceding twenty consecutive years. The determination was based upon available lake level data, supplemented when available by reasonable calculations.[105]

The Water Resources Act of 1972 changed the way minimum flows and minimum levels were defined:

- The minimum flow for a given watercourse is the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area; and
- The minimum water level is the level of ground water in an aquifer and the level of surface water at which further withdrawals would be significantly harmful to the water resources of the area.[106]

The ecology of groundwater resources was thought to be non-existent at the time of the 1972 act.

Consumptive Use Permits

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.

Consolidated Water Management District Annual Reports

Each WMD must prepare and submit to the DEP, the Governor, the President of the Senate, and the Speaker of the House of Representatives a consolidated water management district annual report on the management of water resources. Copies of the report are available to the public.[107]

The report must contain:

[104] Chapter 72-299, Laws of Fla.
[105] Section 373.081, F.S. (1971).
[106] *Supra* note 104.
[107] Section 373.036(7)(a), F.S.

- A district water management plan annual report. Alternatively, it may contain the annual work plan report,[108] which details the implementation of the strategic plan for the previous fiscal year, addressing success indicators, deliverables, and milestones;[109]
- The DEP approved MFLs annual priority list and schedule;
- The annual five-year capital improvements plan;
- The alternative water supplies annual report;
- The final annual five-year water resource development work program;
- The Florida Forever Water Management District Work Plan annual report;
- The mitigation donation annual report; and
- Any additional information the WMD deems appropriate.

Additionally, the South Florida WMD must include the:
- Lake Okeechobee Protection Program annual progress report;
- Everglades annual progress reports;
- Everglades restoration annual report; and
- Everglades Trust Fund annual expenditure report.[110]

Rural Areas of Opportunity

Rural areas of opportunity are rural communities and 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.[111]

Rural communities are defined as:
- 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 meet the thresholds of the two previous criteria; or
- 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:[112]
    - 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;

[108] Section 373.036(7)(b)1., F.S.
[109] Section 373.036(2)(e)4., F.S.
[110] Section 373.036(7), F.S.
[111] Section 288.0656(2)(d), F.S.
[112] Section 288.0656(2)(e), F.S.

- High percentages of the population receiving public assistance;
- High poverty levels compared to the state average; and
- A lack of year-round stable employment opportunities.[113]

III. Effect of Proposed Changes:

Section 1 amends s. 259.032, F.S., to require the DEP to develop, publish, update, and maintain a database of state conservation and recreation lands that include public access. The bill requires the database to be available online by January 1, 2016. The database must include, at a minimum:

- The location of the lands;
- The types of allowable recreational opportunities;
- The points of public access;
- Facilities or other amenities; and
- Land use restrictions.

The DEP is to include any additional information that is appropriate to increase the public awareness of recreational opportunities on conservation lands. The database must be electronically accessible, searchable, and downloadable in a generally acceptable format.

The bill directs the DEP, through their own efforts or in partnership with a third party, to facilitate the creation of a downloadable mobile application to locate state lands available for public access using the users current location or activity of interest. The database and application must include information for all publicly accessible state conservation lands that serve a recreational purpose.

The bill requires that by January 1, 2018, to the greatest extent practicable, the database must include similar information for recreational lands with public access that are owned by the federal and local governments.

The bill requires the DEP to submit a report by January 1 of each year to the Governor, the President of the Senate, and the Speaker of the House of Representatives, describing the percentage of public lands with public access acquired under s. 259.032, F.S., and efforts taken by the DEP to increase public access to such lands.

Section 2 amends s. 260.0144 F.S., to specify the Shared-Use Nonmotorized Trail Network (SunTrail) is not included in the sponsorship provisions of state greenways and trails under s. 260.0144, F.S.

The bill removes the Florida Keys Overseas Heritage Tail, the Blackwater Heritage Trail, the Tallahassee-St. Marks Historic Railroad State Trail, the Nature Coast State Trail, the Withlacoochee State Trail, the General James A. Van Fleet State Trail, and the Palatka-Lake Butler State Trail trails from the sponsorship provisions under s. 260.0144, F. S. They are addressed in section 6 of the bill.

[113] Section 288.0656(2)(c), F.S.

Section 3 amends s. 335.065, F.S., to remove the FDOT's authority to enter contracts for commercial sponsorship of multiuse trails. The authority to enter into contracts for commercial sponsorship of multiuse trails is addressed in section 6 of the bill.

Section 4 creates s. 339.81, F.S., to establish the SunTrail as a component of the FGTS established in ch. 260, F.S. The network consists of multiuse trails or shared use paths that are independent of motor vehicle traffic.

The bill specifies that SunTrails are constructed with asphalt, concrete, or another hard surface, and by the virtue of the design, location, extent of connectivity or potential connectivity, and allowable uses, provide nonmotorized transportation opportunities for bicyclists and pedestrians between and within many points of origin and destinations including, but not limited to, communities, conservation areas, state parks, beaches, and other natural or cultural attractions for a variety of trip purposes including work, school, shopping, social, recreational, and personal fitness purposes.

The SunTrail components do not include sidewalks, nature trails, or loop trails in a single park or natural area, or on-road facilities, other than:

- On-road facilities that are no greater than one-half mile in length connecting two or more nonmotorized trails, if the provision of the non-road facility is unfeasible and if the on-road facility is signed and marked for nonmotorized use; and
- On-road components of the Florida Keys Overseas Heritage Trail.

The bill requires the FDOT to include SunTrail projects within the five-year work program. The FDOT and other agencies and units of government are authorized to expend funds and accept gifts and grants of funds, property, and property rights for the development of the SunTrail network. The FDOT is authorized to enter into memoranda of agreement with other governmental entities and contract with private entities to provide maintenance services on individual components of the network and may adopt rules to assist in developing and maintaining the network.

Section 5 creates s. 339.82, F.S., to direct the FDOT to develop the SunTrail Network Plan in coordination with the DEP, metropolitan planning organizations, local governments, other public agencies, and the Florida Greenways and Trails Council. The plan must be consistent with the FGTS plan developed under s. 260.014, F.S., and be updated at least once every five years. The SunTrail plan must include:

- A needs assessment, including a comprehensive inventory of existing facilities;
- A process that prioritizes projects that:
  - Are identified by the Florida Greenways and Trails Council as priority projects under ch. 260, F.S.;
  - Connect components by closing gaps in the network; and
  - Maximize use of federal, local, and private funds.
- A map showing existing and planned facilities;
- A finance plan in five and 10-year cost-feasible increments;
- Performance measures focusing on trail access and connectivity;
- A timeline for completion of the base network; and

- A marketing plan prepared in conjunction with the Florida Tourism Industry Marketing Corporation.

Section 6 creates s. 339.83, F.S., to provide for sponsorship of SunTrail components by not-for-profit or private sector entities. The bill provides guidance on sponsor signs, pavement markings, and exhibits on nonmotorized trails and related facilities constructed as part of the SunTrail network.

The bill authorizes concession agreements to provide for recognition of trail sponsors in any brochure, map, or website providing trail information. The bill also allows trail websites to provide links to sponsors. Revenue from the agreements may be used for the maintenance of the nonmotorized trails and the related facilities.

The bill requires the concession agreements to be administered the FDOT. The signage, pavement markings, or exhibits must comply with s. 337.407, F.S., and ch. 479, F.S., and are limited as follows:

- A large sign, pavement marking, or exhibit may not be greater than 16 square feet in area and may be located at the trailhead or parking area;
- A small sign, pavement marking, or exhibit may not be greater than four square feet in area and may be located at the designated trail access point where parking is not provided;
- The pavement markings denoting specified distances must be located at least one mile apart;
- Prior to installation, the sign, pavement marking, or exhibit must be approved by the FDOT;
- The FDOT must ensure:
  - The size, color, materials, construction, and location of the signs are consistent with the management plan of the property and the standards of the DEP or the FDOT.
  - The signs do not intrude on natural and historic settings; and
  - The signs only contain the logo selected by the sponsor and the wording: "(Name of the sponsor)…proudly sponsors the costs of maintaining the …(Name of the greenway or trail)";
- Exhibits may provide additional information and materials including, but not limited to, maps and brochures for trail user services related to or in the vicinity of the trail;
- Pavement markings may display mile marker information; and
- All costs associated with a sign, pavement marking, or exhibit must be the responsibility of the concessionaire.

The bill limits the concession agreement to one year unless extended by a multiyear agreement and the FDOT may terminate the agreement for just cause with 60 days advance notice to the concessionaire.

The bill authorizes the FDOT to contract for the provision of services related to the trail sponsorship program including recruitment and qualifications of businesses, review of applications, permit issuance, and fabrication, instillation, and maintenance of sign, pavement markings, and exhibits. The FDOT is authorized to reject proposals and to seek other requests for proposals or otherwise perform the work. The contract may allow the contractor to retain a portion of the annual fees as compensation for services.

The bill does not create a proprietary or compensable interest in any sponsorship site and the FDOT may terminate permits or change locations of sponsorship sites as it deems necessary.

The FDOT is authorized to adopt rules to establish the requirements for qualification of businesses, qualification and location of sponsorship sites, permit application and processing, and any rules necessary to implement the criteria of the section.

The bill allows the FDOT to provide variances when necessary to serve the interest of the public or when required to ensure equitable treatment of program participants.

Section 7 amends s. 373.036, F.S., to provide additional information to be included in the Consolidated Water Management District Annual Report. The information required is related to all water quality or water quantity projects as part of a five-year work program. The following must be included:

- All projects identified to implement a BMAP or recovery or prevention strategy;
- Priority grading scale representing the level of impairment and violations of the adopted or interim MFL for each watershed, water body, or water segment in which a project is located;
- Priority ranking of each listed project, which must be available for public comment at least 30 days before submission of the consolidated annual report;
- Estimated cost of each project;
- Estimated completion date for each project;
- Source and amount of financial assistance that will be made available by the DEP, a WMD, or some other entity for each project; and
- A quantitative estimate of each project's benefit to the watershed, water body, or water segment in which it is located.

Section 8 amends s. 373.042, F.S., to define MFLs for OFSs to be the limit and level at which further withdrawals would be harmful to the water resources or ecology of the area. The current standard is "significantly harmful."

The bill directs the DEP and WMDs to establish interim MFLs until MFLs are adopted for an OFS pursuant to s. 373.042, F.S. If an MFL has been established but not adopted, the established MFL is the interim MFL.

If an MFL has not been established or adopted, the interim values must be determined using the best existing available information. Upon analysis of estimated long term conditions, the bill defines the interim MFL as the flow or water level exceeded 67 percent of the time. The bill provides guidance for the analysis and a deadline of January 1, 2016, for determining interim MFLs for OFSs.

For OFSs that are on a WMD's priority list for establishing MFLs that have the potential to be affected by withdrawals in any adjacent WMD, the interim MFL will also be applied to the other district or districts. The bill sets a deadline of July 1, 2017, for the DEP and WMDs to develop and implement a recovery or prevention strategy for an OFS not meeting its adopted or interim MFL.

Section 9 amends s. 373.0421, F.S., concerning the establishment of MFLs, by adding a cross-reference to incorporate the "harm" standard, as opposed to the "significant harm" standard when addressing MFLs for OFSs.

Section 10 creates Part VIII of ch. 373, F.S., to consist of ss. 373.801, 373.802, 373.803, 373.805, 373.807, 373.809, 373.811, 373.813, and 373.815, F.S., and provides the title, "Florida Springs and Aquifer Protection Act."

Section 11 creates s. 373.801, F.S., to provide 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 and economically benefit local and state economies;
- Stating that water quantity and water quality in springs are related. It also specifies the primary responsibilities of the DEP, WMDs, DACS, and local governments;
- Recognizing that springs are only as healthy as their springsheds and identifying several of the problems affecting springs, including pollution runoff from urban and agricultural lands, 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 WMD 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 12 creates s. 373.802, F.S., to provide definitions for "department," "local government," "onsite sewage and treatment disposal system," "spring run," "springshed," and "spring vent."

The bill also defines:

- "Outstanding Florida Springs," 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," meaning the area 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 13 creates s. 373.803, F.S., to direct 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, 2016. 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, 2017.

Section 14 creates s. 373.805, F.S., to direct either a WMD or the DEP to adopt a recovery or prevention strategy simultaneously with the adoption of an MFL for an OFS, if it is below, or projected within 20 years to fall below, the MFL.

If an interim MFL is established for an OFS under section 8 of the bill, the WMD or DEP must adopt a recovery or prevention strategy by July 1, 2017, if the OFS is below or projected within 20 years to fall below the interim MFL.

For an OFS with an MFL adopted before July 1, 2015, the MFL must be revised by July 1, 2018, under the "harm" standard. When an MFL is revised, if the OFS is below or projected within 20 years to fall below the revised MFL, a WMD or the DEP must simultaneously adopt or modify a recovery or prevention strategy. The bill provides that a WMD or the DEP may adopt the revised MFL before the adoption of a recovery or prevention strategy if the revised MFL is less constraining on existing or projected future consumptive uses.

For any OFS without an adopted recovery or prevention strategy, a WMD or the DEP must expeditiously adopt a recovery or prevention strategy if the WMD or the DEP determines that the OFS has fallen below or is projected within 20 years to fall below the adopted or interim MFL.

The bill provides the following minimum requirements for a recovery or prevention strategy for OFSs:

- A list of all specific projects identified for implementation of the plan;
- A priority listing of each project;
- For each project, the estimated cost and date of completion;
- The source and amount of financial assistance from the WMD for each project. Except for the Northwest and Suwanee River WMDs, it may not be less than 25 percent of the total cost unless there are funding sources that provide more than 75 percent of the total cost of the project;
- An estimate of each project's benefit to an OFS;
- A map and legal descriptions of the SPMZs pursuant to s. 373.803, F.S., created in section 13 of the bill; and
- An implementation plan to achieve the adopted or interim MFL within 20 years after the adoption of a recovery or prevention strategy, with measurable interim milestones to be achieved within 5, 10, and 15 years to reach the adopted or interim MFL.

The bill also provides for extensions of up to five years for local governments for any project in an adopted recovery or prevention strategy, which may be granted if the local government provides sufficient evidence that an extension is in the best interest of the public. If the local government is in a rural area of opportunity, the DEP may grant an extension of up to 10 years.

Section 15 creates s. 373.807, F.S., to provide a deadline of July 1, 2015, 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, 2018. The bill requires that:

- When a TMDL is adopted, the DEP, or the DEP in coordination with a WMD, will simultaneously initiate development of a BMAP;
- For an OFS that has an adopted nutrient TMDL before July 1, 2015, the DEP, or the DEP in coordination with a WMD, will initiate development of a BMAP by July 1, 2015; and
- As the BMAP is developed, if OSTDSs are identified as a significant source of pollution that needs to be addressed within a local government jurisdiction, the DEP must notify the local government within 30 days. The local government must develop an OSTDS remediation plan for those systems identified as significant nonpoint sources of nutrient pollution for inclusion in the BMAP.

BMAPs for OFSs must be adopted 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 and completion date 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 or category of nonpoint sources with an estimated allocation of the pollutant load for each point source and category of nonpoint sources; and
- An implementation plan detailing how the TMDL will be achieved within 20 years after the adoption of a BMAP along with interim milestones at 5, 10, and 15 years.

The bill requires BMAPs adopted by July 1, 2015, that affect an OFS to be revised by the DEP, or the DEP in conjunction with a WMD, by July 1, 2018. Any OSTDS remediation plans approved by the DEP 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 opportunity, 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, 2017, the DEP, in conjunction with the DOH 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 significant source of pollution that needs to be addressed during the BMAP development process, it will notify the

local government that it needs to develop an OSTDS remediation plan within 12 months of notification by the DEP. For each system or group of systems, the plan must include whether the systems require repair, 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 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. Approval of the plan by the DEP constitutes a final agency action.

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, 2015, that conflict with these provisions. Local governments that do not substantially comply with the bill's requirement for OSTDS remediation plans may be ineligible for funding pursuant to s. 373.809, F.S., detailed in the next section of the bill.

Section 16 creates s. 373.809, F.S., to provide for funding for the restoration of OFSs.

It directs the DEP to adopt rules by December 31, 2015, to fund pilot projects each project selection cycle that test the effectiveness of technologies or practices designed to minimize nutrient pollution or restore flows in Florida springs. 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, 2015, to evaluate, select, and rank projects for funding under Part VIII of ch. 373, F.S., or land acquisitions under s. 375.041, F.S., which concerns the Land Acquisition Trust Fund. 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 with an adopted TMDL;
- The flow necessary for the OFS to meet its adopted or interim 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 opportunity, 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 entity responsible for implementing the project 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, 2010, with preference given to such entities.

Section 17 creates s. 373.811, F.S., concerning prohibited activities in an SPMZ.

Activities prohibited within an SPMZ 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 those with 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 the 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 18 creates s. 373.813, F.S., to direct the DEP to adopt rules to create a program to improve water quantity and 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 the Institute of Food and Agriculture Sciences 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 19 creates s. 373.815, F.S., to require a yearly progress report by the DEP, in conjunction with the WMDs, beginning July 1, 2016, to be submitted to the Governor, the President of the Senate, 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 an adopted TMDL and adopted or interim MFL, as applicable.

If the report states that any interim 5, 10, or 15 year milestone, or the 20 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 20 amends s. 403.061, F.S., to require the DEP to create a consolidated water resources work plan, similar to the FDOT five-year work plan, that provides a catalog of all water resource projects under construction, completed in the previous five years, or planned to begin construction in the next five years. The plan must be developed in consultation with state agencies, the WMDs, and local governments.

For each project in the plan, there must be:
- A description of the project;
- The total cost of the project; and
- The governmental entity financing the project.

The DEP must also create and maintain a web-based, interactive map that includes:
- All watersheds and each water body within them;
- The county or counties in which the watershed or water body is located;
- The WMD or districts in which the watershed or water body is located;
- Whether an MFL has been adopted for the water body and, if it has not been adopted, when it is anticipated to be adopted;
- Whether a recovery or prevention strategy has been adopted for the watershed or water body and, if it has not been adopted, when it is anticipated to be adopted;
- The impairment status of each watershed or water body;
- Whether a TMDL has been adopted, if necessary, and, if it has not been adopted, when it is anticipated to be adopted;
- Whether a BMAP has been adopted and, if it has not been adopted, when it is anticipated to be adopted;
- Each project listed on the five-year water resources work program pursuant to 373.036(7), F.S. (section 7 of the bill).
- The agency or agencies and local sponsor, if any, responsible for overseeing the project;
- The estimated cost and completion date of each project and the financial contribution of each entity;
- The quantitative estimated benefit to the watershed or water body; and
- The water projects completed within the last five years within the watershed or water body.

The bill requires the DEP and the WMDs to prominently display a link on their websites to the interactive map required by the bill.

The information provided in the plan and the information used to develop the web-based interactive map is intended to help facilitate the ability of the Florida Water Resources Advisory Council (described in section 21 of the bill), the Legislature, and the public to consider the projects contained in the tentative water resources work program (also described in section 21 of

the bill) in relation to all projects undertaken within a 10-year period and the existing condition of water resources in the project area and in the state as a whole. The bill provides rulemaking authority to the DEP to accomplish this purpose.

Section 21 creates s. 403.0616, F.S., to create the Florida Water Resources Advisory Council within the DEP.

The advisory council's purpose is to evaluate water resource projects prioritized and submitted by state agencies, WMDs, or local governments. The council must evaluate and recommend projects eligible for state funding as priority projects of statewide, regional, or critical local importance under chs. 373 or 403, F.S.

The council must review and evaluate all water resource projects that are prioritized and reported by state agencies, local governments, or by the WMDs in the consolidated annual report (described in section 7 of the bill) for the purpose of providing the Legislature with recommendations for projects that improve or restore the water resources of the state.

The council is made up of five voting and five ex officio, nonvoting members. Those members are:

- The Secretary of Environmental Protection, who shall serve as chair of the council;
- The Commissioner of Agriculture;
- The executive director of the Fish and Wildlife Conservation Commission (FWC);
- Two members with expertise in a scientific discipline related to water resources, appointed by the President of the Senate and the Speaker of the House of Representatives, respectively; and
- The executive directors of the five WMDs, all of whom are non-voting members.

The appointed members serve two-year terms and may not serve more than a total of six years. The appointed members will receive reimbursement for expenses and per diem for travel. The President of the Senate and the Speaker of the House of Representatives may fill a vacancy at any time of an unexpired term of an appointed member.

If a member of the council no longer holds the position required to serve on the council, the interim agency head will represent the agency on the council.

The council is required to hold at least eight public meetings per year, with notice provided at least five days, but no more than 15 days before each meeting. The DEP will provide staff support.

By July 15 of each year, the council must release a tentative water resources work program with legislative recommendations for water resource projects. The bill provides for a 30-day period for the public to submit comments on the program.

By August 31 of each year, the council must adopt, by an affirmative vote of three of the council members, the tentative work program and submit it to the Governor, the President of the Senate, and the Speaker of the House of Representatives.

The bill requires the council to recommend rules for adoption by the DEP to competitively evaluate, select, and rank projects for the tentative water resources work program. The council must develop specific criteria for the evaluation, selection, and ranking of projects. In ranking the projects, preference is given for projects:

- That will have a significant, measurable impact on improving water quantity or water quality;
- In areas of greatest impairment;
- Of state or regional significance;
- Recommended by multiple districts or multiple local governments cooperatively;
- With a significant monetary commitment by the local project sponsor or sponsors;
- In rural areas of opportunity;
- That may be funded through appropriate loan programs; and
- That have significant private contributions of time or money.

The section provides the DEP with rulemaking authority to implement this section of the bill in consultation with DACS, the FWC, and the WMDs.

Section 22 amends s. 403.0623, F.S., to direct the DEP, in coordination with the WMDs, to establish statewide standards for the collection of water quantity, water quality, and related data to ensure quality, reliability, and validity of the data and testing results.

The bill requires the WMDs to submit data collected after June 30, 2015, to the DEP for analysis to ensure statewide consistency. The DEP is required to maintain a centralized database for all testing results and analyses, which must be accessible by the WMDs.

The bill directs the DEP to coordinate with federal agencies, to the extent practicable, to ensure its collection and analysis of data is consistent with this section.

The bill requires state agencies and WMDs to use the DEP's testing results and analysis, if available, in order to receive state funds for the acquisition of lands or the financing of a water resource project.

The bill provides rulemaking authority to the DEP and the WMDs to implement this section of the bill.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

Existing regulatory programs require local governments to expend funds to comply with MFLs, WQSs, and BMAPs. This bill requires additional expenditures for 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 the bill on the private sector and individuals cannot be calculated because many of the costs are dependent on activities, such as delineation of SPMZs that have not occurred. Some examples of potential private sector impacts are:

- Provisions that will require some property owners in spring protection zones to upgrade their 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. ATUs are also more costly to operate than conventional OSTDSs.
- Rate payers may pay for ongoing operation and maintenance for 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 more for passive nitrogen removing systems installed in 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.
- An indeterminate positive fiscal impact to local business and real estate prices with the creation of the SunTrail.

C. Government Sector Impact:

The bill requires a number of activities that will result in increased costs for several governmental entities.

There may be a positive fiscal impact to the FDOT with an increase in concession agreements for displays at shared-use nonmotorized trail facilities.

Due to the increased workload related to this bill, the DEP would need additional positions and funding, though the exact need is indeterminate at this time.

The bill would require the WMDs and the DEP to establish MFLs, which are 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. Revision of existing MFLs and modification of MFLs in rulemaking to comply with the "harm" standard will add additional costs that are indeterminate. Calculation of interim MFLs will be accomplished using existing staff and resources.

The bill requires the DEP to develop 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 creation of the Water Resources Advisory Council within, and staffed by, the DEP. This will result in indeterminate costs for the DEP.

Creation of the web-based, interactive map showing resource projects will incur costs associated with gathering information already collected as well as information that has not been compiled yet. This could result in indeterminate costs for the DEP.

Similarly, creating a database of lands where public access is available could incur significant costs through information gathering and website and mobile application development. This could result in indeterminate costs for the DEP.

VI. Technical Deficiencies:

None.

VII. Related Issues:

Requiring the members of the Florida Water Resources Advisory Council to meet eight times a year could prove overly onerous to the members of the council, given the current responsibilities of the agency members.

The bill does not define "harm" with respect to MFLs for OFSs. Confusion over what constitutes "harm" could result in a standard that does not capture the intent of the bill sponsor.

The bill does not define what constitutes "significant nonpoint sources of nutrient pollution" from OSTDSs.

The Florida Water Resources Advisory Council is required to release a tentative water resources work program by July 15 of each year. The bill should indicate what year the first work program must be released.

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.

It is unclear what happens if the DEP determines that data submitted by a WMD is inconsistent with statewide standards established by the DEP in coordination with the WMDs.

VIII. Statutes Affected:

This bill substantially amends the following sections of the Florida Statutes: 259.032, 260.0144, 335.065, 373.036, 373.042, 373.0421, 403.061, and 403.0623.

This bill creates the following sections of the Florida Statutes: 339.81, 339.82, 339.83, 373.801, 373.802, 373.803, 373.805, 373.807, 373.809, 373.811, 373.813, 373.815, and 403.0616.

IX. Additional Information:

A. Committee Substitute – Statement of Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.