

SENATE STAFF ANALYSIS AND ECONOMIC IMPACT STATEMENT

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

BILL: CS/SB 1412

SPONSOR: Health, Aging and Long-term Care Committee and Senators Childers and Latvala

SUBJECT: Public Swimming and Bathing Places; Public Beach Water Sampling

DATE: March 7, 2000 REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	<u>Liem</u>	<u>Wilson</u>	<u>HC</u>	<u>Favorable/CS</u>
2.	_____	_____	<u>FP</u>	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____

I. Summary:

Committee Substitute for Senate Bill 1412 pertains to regulation of water quality of public beaches in Florida. The bill adds coastal and intracoastal waters to the statutory definition of public bathing places and permits the Department of Health (DOH) to adopt and enforce rules to protect the health of persons using beach waters of the state, including establishment of health standards, procedures, and time frames for bacteriological sampling of beach waters. The bill permits the department to issue health advisories if the quality of beach water fails to meet standards established by the department, and specifies that the issuance of health advisories related to beach water sampling is preempted to the state. "Beach waters" are defined in the bill as waters along the coastal and intracoastal beaches, including both salt and brackish water. The bill exempts coastal and intracoastal beaches from construction and operating permit requirements applicable to other public swimming and bathing facilities. The bill authorizes, subject to a legislative appropriation, a nonrecurring sum of \$600,000 to the Department of Health to perform a 3 year study to determine the water quality at beaches throughout the state and to determine which indicator organism and the levels of such organism are best suited with respect to bacteriological sampling to determine the safety of beach waters, and to establish a statewide model to help predict when possible water quality problems will occur. The bill requires an interagency technical advisory committee to oversee the performance of the required studies and to advise DOH in rulemaking pertaining to beachwater standards.

The bill amends ss. 514.011, 514.03, and 514.031, F.S., and creates s. 514.023, F.S., and one undesignated section of law.

II. Present Situation:

Polluted runoff and untreated sewage released into the water can expose swimmers to bacteria, viruses, and protozoans. These pathogens (disease causing organisms) can be present at or near the site where polluted discharges enter the water. Children, the elderly, and people with weakened immune systems are most likely to develop illnesses or infections after swimming in

polluted water. Because pathogens in sewage-contaminated waters can cause a wide range of diseases, including gastroenteritis, dysentery, hepatitis, ear, nose and throat problems, and respiratory illness, beach water pollution has the potential to threaten the public's health.

Of the 35 coastal counties in Florida, only 13 counties reported beach water sampling. In addition, there is no statewide standardization of sampling methods, indicator organisms, sampling frequencies, or laboratory methods in those counties conducting sampling. Consequently, Florida's beaches have been classified as "Bum Beaches" (popular beaches with no regular beach water testing and public notification) by the Natural Resources Defense Council (NRDC). This classification had, and still has, the potential to adversely affect the recreational and occupational use of the beaches by residents and tourists alike.

Many states and localities with popular beach areas do not have regular beach water-monitoring programs in place to provide protection to beach goers. Four states (Alabama, Louisiana, Oregon, and Washington) lack any regular monitoring of beach water for swimmer safety. Three states (Mississippi, Puerto Rico, and Texas) have monitoring programs for all or a portion of their beaches, but no public notification procedures.

In 1999, Georgia, previously identified by NRDC as a "Beach Bum," for the first time implemented a beach water-monitoring program. North and South Carolina, and Mississippi began monitoring in 1997. In 1998, public notification procedures were in effect in the Carolinas, but none have been established in Mississippi. In 1997, California passed a bill requiring monitoring of beaches beginning in 1999. Connecticut, Delaware, Illinois, Indiana, New Hampshire, New Jersey, North Carolina, Ohio, and Pennsylvania monitor recreational ocean, bay, and Great Lakes beaches regularly for swimmer safety and notify the public of potential health threats.

Thirteen states have regular monitoring and public-notification programs for a portion of their recreational beaches: California, **Florida**, Hawaii, Maine, Maryland, Massachusetts, Michigan, Minnesota, Rhode Island, South Carolina, Virginia, Wisconsin, and New York, which comprehensively monitors its coastal beaches, but only partially monitors its Great Lakes beaches.

Florida's Beach Tourism Industry

Florida has 48.7 million visitors per year. Florida's Atlantic and Gulf beaches are a principle component of the state's successful tourism industry. Coastal tourism, attributable in part to clean beaches, generates substantial revenues for state and local government. The tourism industry generates \$45 billion in sales, with a sales tax revenue of \$2.7 billion, a rental car surcharge income of \$139 million, and \$298 million in local bed tax revenues. The tourism industry generates 818,700 jobs in Florida. Thirty-six percent of Florida's visitors spend time at or near the state's beaches.

Water-borne Health Risks

Most beach closings are based on monitoring that detects elevated levels of bacteria which indicate the presence of microscopic, disease-causing organisms from human and animal wastes. These wastes typically enter coastal waters from sewer overflows, sewage spills, malfunctioning septic tanks, and storm water runoff from urban, suburban, and agricultural areas. Sanitary sewers may have breaches, obstructions, cracks, storm water cross-connections, and open manholes which can permit infiltration by groundwater and inflows of storm water. These sanitary sewers can become overloaded, especially during rains and can overflow and discharge raw sewage out from manholes, pump station bypasses, and treatment plant bypasses. Sewer lines are often old and in many cities, inadequately maintained. They can break and spill sewage directly into streets or into waterways.

Improperly handled boating wastes can pose a health and aesthetic threat to the quality of beaches. Elevated bacterial concentrations have been found in areas with high boating density, despite requirements in law which require boats with on-board toilets to either treat the waste before discharging, or to hold the waste and later pump it out for treatment. Many areas lack sufficient pump-out facilities, and compliance with no discharge may be poor in some areas.

Studies conducted during the past several decades show a relationship between the amount of indicator bacteria in coastal waters and the incidence of swimming-associated illnesses. Indicator bacteria are total and fecal coliform, *enterococcus*, and *E. coli*. They are called indicator bacteria because they are relatively easy to test for and are typically found in the presence of other harmful viruses and bacteria.

A 1995 large-scale epidemiological study in California investigated possible adverse health effects associated with swimming in ocean waters contaminated by urban runoff. The Santa Monica Bay Restoration Project study involved initial interviews of 15,492 beach goers who bathed and immersed their heads, and follow-up interviews with 13,278 to ascertain the occurrence of certain symptoms such as fever, chills, nausea, and diarrhea. Water samples were taken and analyzed for total and fecal coliform, *enterococcus*, and *E. coli*. Water samples were also collected at storm-drain sites and analyzed for enteric viruses.

The study found an increase in risk of illness (with symptoms including fever, chills, ear discharge, and vomiting) associated with swimming near flowing storm-drain outlets in Santa Monica Bay as compared to swimming more than 400 yards away. For example, swimmers near storm drains were found to have a 57 percent greater incidence of fever than those swimming farther away. This study also confirmed an increased risk of illness associated with swimming in areas with high densities of indicator bacteria. Illnesses were reported more often on days when the samples were positive for enteric viruses.

In addition to this study of the effects of urban runoff, previous studies have found a strong correlation between sewage-polluted marine waters and swimmers' illnesses. One of the most detailed studies was based on swimmer interviews at saltwater beaches. This study found "a direct, linear relationship between swimming-associated gastrointestinal illness and the quality of the bathing water." The study noted also that even those swimming in marginally polluted water run the risk of contracting gastroenteritis.

Microscopic plants called phytoplankton are found in coastal waters, forming the basis of the marine food web. Of the thousand species of phytoplankton, 63 are known to be toxic to animals and humans. High concentrations of nitrogen and phosphorus, which came largely from either sewage discharges (even if treated) or animal waste, act as fertilizers for microscopic plants. These single-celled organisms multiply rapidly and form blooms that can last for days or months. In some instances, depending on the type of toxic organism, beach goers and fishermen can experience a host of illnesses ranging from respiratory problems and eye irritation from exposure to the toxic algae in surf waters to neurotoxic poisoning that can cause short-term memory loss, dizziness, muscular aches, peripheral tingling, vomiting, and abdominal pain. Toxic outbreaks of such organisms as *pfisteria piscicida* have been found for the past seven years to be associated with fish kills in coastal and estuarine waters. In 1997, Maryland closed several rivers tributary to the Chesapeake Bay where *pfisteria piscicida* was found in high concentrations. Exposure to *pfisteria piscicida* blooms may result in short-term memory loss, dizziness, muscular aches, peripheral tingling, vomiting, and abdominal pain. Several leading scientists believe that the number and frequency of outbreaks such as these and toxic blooms are increasing around the world and that these blooms may be attributed in part to coastal pollution.

Beach Water Quality in Florida

The Pilot Beach Water Sampling Program was developed by DOH to ensure public safety and combat negative media reports stating that Florida is a state with multiple "bum beaches." DOH conducted studies which monitor the amount of bacteria found in the beach water sampled from various locations around the state. The majority of the results were reported in the good range, which is a recognized safe bacterial level for the majority of the bathers; however, there were incidences of less than optimal results throughout the testing counties. In observation of Sarasota and Volusia County results, only a few water samples were found to deviate from the "good" range. Broward County results were good overall with the majority of their moderate and poor ratings occurring during two separate sampling events, the first sampling date and the day after the Super Bowl, when a large number people were in the area. Okaloosa County results experienced more moderate and poor ratings than three of the five sampling counties, Broward, Sarasota, and Volusia. Although a definitive cause was not established, DOH reports that a correlation exists between excess rain and storm conditions and these particular results. Pinellas County, on the other hand, experienced the greatest number of poor and moderate ratings throughout the program. The hypothesis formed was that the poor results were caused by limited tidal flushing of the bay area. Additional sampling is needed to find causes and trends of increased *enterococci* counts in all five counties.

Regulation of Public Bathing Facilities in Florida

The Department of Environmental Protection (DEP) and the Environmental Regulation Commission have the authority under chapter 403, F.S., to set water quality standards for state waters. Water quality standards currently applicable to saltwater beaches are located in the DEP rules at chapter 62-302, Florida Administrative Code, Surface Water Quality Standards.

Chapter 514, F.S., governs regulation of public swimming and bathing places in Florida. The statute defines public and private pools, public bathing places, and portable pools. A "public bathing place" is defined as a body of water for swimming, diving, and recreational bathing, used

by the public, whether or not a fee is charged. The statute does not specifically address salt or brackish water beaches.

In chapter 514, F.S., DOH is authorized to adopt and enforce rules to protect the health, safety and welfare of persons using public swimming pools and bathing places, and is required to review such rules, at a minimum, biennially. Standards shall include, among other things, source of water supply, bacteriological, chemical and physical quality of water in the pool or bathing area, and measures to ensure the safety of bathers.

Section 514.025, F.S., requires that DOH assign the functions of reviewing applications, and plans for construction, development or modification of swimming pools and bathing places, conducting inspections for and issuance of initial operating permits to county health departments which are staffed with qualified engineering personnel. If county health departments are not assigned the functions of application and plan review and the issuance of initial operating permits, DOH is required to be responsible for such functions. After the initial operating permit is issued the county health department is required to assume full responsibility for routine surveillance, complaint investigations, enforcement procedures, reissuance and renewal of operating permits.

III. Effect of Proposed Changes:

Section 1. Amends s. 514.011, F.S., to add waters along costal and intracoastal beaches and shores to the definition of public bathing places to be regulated by the Department of Health.

Section 2. Creates s. 514.023, F.S., which allows DOH to adopt and enforce rules to protect the health, safety and welfare of persons using beach waters of the state. The rules must establish health standards and prescribe procedures and time frames for bacteriological sampling of beach waters. DOH is permitted to issue health advisories if beach water fails to meet standards DOH has developed. The function of issuing beach health advisories is preempted to the state. Beach waters are defined as waters along coastal and intracoastal beaches and shores, including both salt and brackish waters. DOH is required to perform a 3 year study to determine the water quality at beaches throughout the state, to be performed in all counties which have public access saltwater and brackish water beaches. The study is contingent on the appropriation of \$600,000 non recurring by the Legislature.

Section 3. Amends s. 514.03, F.S., to exempt coastal and intracoastal beaches from the construction plans approval requirements applicable to public swimming pools and bathing places.

Section 4. Amends s. 514.031, F.S., to exempt coastal and intracoastal beaches from the operating permit requirements applicable to public swimming pools and bathing places.

Section 5. Appropriates \$745,000 to the Department of Health for a 2 year “Healthy Beaches” study in the costal waters of Escambia and Santa Rosa Counties and the Tampa Bay area of Pinellas county to determine which indicator organism is best suited to be used with respect to bacteriological sampling of Florida’s waters and to establish a statewide model which will predict when possible water-quality problems will occur.

Section 6. Requires DOH to form a technical advisory committee to oversee the performance of the studies in sections 2 and 5 of the bill, and to advise it in rulemaking pertaining to coastal and intracoastal public bathing places. The committee consists of equal numbers of staff of DOH and DEP having expertise in the subject matter of the studies. Members are to be appointed by the respective secretaries and the committee is to be chaired by a DOH representative.

Section 7. Establishes an effective date of July 1, 2000.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

The provisions of this bill have no impact on municipalities and the counties under the requirements of Article VII, Section 18 of the Florida Constitution.

B. Public Records/Open Meetings Issues:

The provisions of this bill have no impact on public records or open meetings issues under the requirements of Article I, Subsections 24(a) and (b) of the Florida Constitution.

C. Trust Funds Restrictions:

The provisions of this bill have no impact on the trust fund restrictions under the requirements of Article III, Subsection 19(f) of the Florida Constitution.

V. Economic Impact and Fiscal Note:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

The bill will assist in either restoring public confidence in the quality of the waters at Florida beaches or assist state and local government in identifying and mitigating beach water pollution problems. As such it has the potential to increase tourism and commerce in coastal and beach areas of the state.

C. Government Sector Impact:

The fiscal impact of the bill is \$1,345,000.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Amendments:

None.

This Senate staff analysis does not reflect the intent or official position of the bill's sponsor or the Florida Senate.
