

## Section VI, Chapter A: Beach Monitoring (Marine Waters)

### A. Objective

The objective of this program is to protect the health of the public visiting Florida's coastal and intracoastal waters by systematically sampling the water for indicators of human and animal pathogens. The program's procedures establish a clear and comprehensive method for the sampling of the enteric bacterial indicator enterococci. To protect the public's health there is a public notification system in which sampling results are posted on the Department of Health (DOH) [Florida Healthy Beaches Program website](#). Results are shared with all responsible news media, local municipalities with beaches, the Florida Department of Environmental Protection (DEP), and other interested entities. Health ADVISORY signs are posted at beaches when bacteria standards are exceeded. Similar requirements are listed for freshwater bathing places in Chapter N, Swimming Pools and Bathing Places.

### B. Narrative Description

Each coastal county office participating in the Florida Healthy Beaches program is responsible for the collection, transport, its water samples and reporting of the water quality results. Once the samples have been taken, they are transported to a Department of Health or other DOH certified laboratory within six hours at less than ten (10) degrees Celsius. After the laboratory has analyzed the samples, the results are sent back to the county. The county office is then responsible for posting the results to the [DOH Healthy Beaches website](#) and for notifying local government officials, the State Health Office, DEP and media outlets, of any issued advisories.

### C. Authority

Chapter 514, FS, authorizes the Department to sample the beach waters and to issue health advisories along the coastal and intracoastal beaches of the state. The authority can be found in the following sections of that statute:

1. [Section 514.011\(4\), FS](#)
2. [Section 514.023, FS](#)

### D. Standards and Reporting Requirements

1. The marine water bacterial indicator that has been adopted by the United States Environmental Protection Agency (EPA) is enterococci. This criterion establishes an enterococci single sample standard of no more than 104 enterococci per 100 milliliters of marine water for a single day sample. It also establishes an enterococci geometric mean of no more than 35 colony forming units (CFU). The geometric mean is calculated from all samples taken in the last five (5) sample periods for 30 days, so only county office's sampling weekly can

calculate a geomean. If any of these action limits is exceeded, it is considered a potential health risk to the bathing public.

2. Program activities shall be reported on the Daily Activity Record (DAR) or the HMS Employee Activity Record (EAR) using program component number 47.

## **E. Procedures**

### **1. General**

a. It is recommended that each CHD maintain a separate file for each sample period in which samples are collected. Contained in each file shall be ocean or gulf sampling reports, lab information, media contacts and sampling results. Files should be maintained in date order. The county office may use an alternative method of filing information, including electronic methods, for ease of tracking relevant program information and retrieval of such. If an alternative method is used the county office shall notify the program office (email is sufficient) so any concerns can be addressed in advance. There may be some limitations due to EPA grant conditions to take into consideration.

b. Each beach site shall be identified by its designated sampling point (SP) number. These numbers shall be assigned when the beach is first sampled and shall remain associated with that beach indefinitely.

c. Water samples are taken on a bi-weekly basis and should be taken early in the week in case it becomes necessary to perform a confirmatory resample. North Florida county offices will suspend their sampling during November through February. If counties identify additional resources they may sample weekly or during winter. In this case you should file a current Program Summary form with the state coordinator.

d. Samples shall be sent only to DOH certified laboratories.

e. Once the results have been received, the county office shall post all the results on the DOH Internet website on the same day that lab results are received. County offices shall also report at least the advisory results to appropriate media outlets, also on the same day that lab results are received.

f. If any of the results are unsatisfactory (see 3.b (i) below for criteria), a resample may be taken and analyzed. If no resample is taken or if resample results remain unsatisfactory, an "ADVISORY" must be issued, reported, and sign(s) posted on the same day that lab results are received.

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g. In accordance with FS 514.023 (4), in the event an advisory is issued for a beach, the appropriate municipal or county contact and Florida Department of Environmental Protection personnel shall be notified on the same day.

h. Samples should be taken using the "grab" method with the open container plunged quickly straight down into the water, filled, and quickly brought straight up out of the water so as to limit the amount of surface "scum" admitted to the sample.

i. Whenever possible samples should be collected in water with an approximate depth of 36 inches. The sample container should be filled at a depth of approximately 18 inches.

## 2. Equipment Needed

a. Sterile sampling bags or other collection bags/bottles approved by the DOH certified laboratory. The collection containers should be at least 100 ml volume, but should not exceed 1000 ml volume, to ensure an adequate sampling size.

b. Thermometer

c. Cooler or ice chest

d. 15 compartment single or double grid racks (preferred)

e. Official identification

## 3. Issuing a Health Advisory

a. County offices shall issue "advisories" when conditions of increased health risk are confirmed by unsatisfactory water quality test results. The advisory is to notify the bathing public of this increased health risk based on the science based criteria adopted by EPA. .

b. Enterococci Standards

i. An "advisory" shall be issued when the resample results of an enterococci single sample water analysis exceeds 104 CFU/100 ml. If a resample is not collected, the original sample result shall determine the issuance of the advisory.

Enterococci Single Sample Results Description:

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**Good:** 0-35 Enterococci CFU per 100 ml of marine water

**Moderate:** 36-104 Enterococci CFU per 100 ml of marine water

**Poor (unsatisfactory):** 105 or greater Enterococci CFU per 100 ml of marine water

- ii. An "advisory" shall be issued when the geometric mean of the enterococci results from the last five sample periods (for 30 days) is observed to exceed 35 CFU/100 ml. The advisory notifies bathers of potential hazards of bathing based on the marine water bacterial indicator that has been adopted by the EPA.

Enterococci Geometric Mean Results Description:

**Good:** 0-35 Enterococci CFU per 100 ml of marine water

**Poor (unsatisfactory):** 36 or greater Enterococci CFU per 100 ml of marine water

#### 4. Complaint Investigations

a. Complaints pertaining to environmental health conditions at all of Florida's coastal and intracoastal waters shall be investigated within two working days of receipt of the complaint. The outcome of the complaint investigation shall be reported to the complainant, excluding any confidential information.

b. Epidemiological investigations of disease outbreaks and reporting investigative results to proper authorities shall be performed as necessary. County offices shall coordinate and receive direction from the Bureau of Epidemiology as necessary to complete the investigations.

#### F. Relationship to other Department of Health Units

1. The DOH Bureau of Public Health Laboratories or other DOH certified laboratories perform bacteriological analysis on Florida's coastal and intracoastal water samples on a bi-weekly or weekly schedule.

2. The DOH Bureau of Epidemiology performs epidemiological investigation when a waterborne disease outbreak occurs associated with Florida coastal and/or intracoastal water.

**G. Relationship to other Agencies**

1. The Florida Department of Environmental Protection (DEP) sets standards for the regulation of Class III recreational waters, which include fresh, brackish and marine water environments. DEP, per FS 514.023(4), will investigate for wastewater discharges within 1 mile of the beach extent that has been issued a health advisory. DEP will report the findings to DOH and the local municipality or county beach manager.
2. The U.S. EPA adopts standards and regulations for marine water testing.

**H. Useful Publications**

1. Microbial Methods for Monitoring the Environment Water and Wastes - EPA, Office of Research and Development, Washington, DC, Dec 1978
2. Health Effects Criteria for Marine Recreational Waters - EPA Health Effects Research Laboratory, Research Triangle Park, N.C., August 1983
3. Ambient Water Quality Criteria For Bacteria – 1986 - EPA Office of Water Regulations and Standards Criteria and Standards Division, Washington, DC, January 1986
4. Action Plan for Beaches and Recreational Waters – EPA Office of Research and Development, Office of Water, March 1999
5. Standard Methods for the Examination of Water and Wastewater, 22nd edition, 2012, American Public Health Association, et.al.