FDACS Shellfish Harvesting Information

To minimize the risk of shellfish-borne illness, the Florida Department of Agriculture and Consumer Services (FDACS) continually monitors and evaluates shellfish harvesting areas and classifies them accordingly. It also ensures the proper handling of shellfish sold to the public. In this context, the term shellfish is limited to bivalve mollusks such as oysters, clams, scallops, and mussels.

Shellfish are filter feeders, which means that they get food and oxygen by pumping large quantities of water across their gills. In addition to food particles, shellfish take in bacteria, viruses, and chemical contaminants. These impurities may become concentrated in their digestive systems and tissues at over 100 times the levels in the surrounding water. Because shellfish are often eaten raw or partially cooked, shellfish that are harvested from polluted areas or are mishandled may cause individuals to become ill.

FDACS routinely monitors shellfish harvesting areas for the presence of fecal coliform bacteria. Because it is found in the feces of all warm-blooded animals, including humans, this group of bacteria is used as an indicator of possible fecal contamination. Most of these bacteria do not make people sick; however, their presence may indicate that other, more dangerous pathogens are also present.

FDACS classifies shellfish harvesting areas using the standards and requirements of the National Shellfish Sanitation Program (NSSP). The NSSP requirements promote the sanitation of shellfish.

Each classification type reflects a different degree of water quality, based on fecal coliform data. For areas to be classified Approved or Conditionally Approved, the level of fecal coliform in subsurface water samples must meet the **NSSP 14/31 standard**. This standard is a geometric mean of at least 30 samples not to exceed 14 colony forming units (CFU) per 100 milliliters (ml) of water. A second part of this standard addresses the variability of the data and requires that the 90th percentile not exceed 31 CFU/100 ml (10% of the samples cannot exceed 31 CFU/100ml).

Approved Area
An Approved area is normally open to shellfish harvesting. It may be temporarily closed under extraordinary circumstances such as red tides, hurricanes, and sewage spills.

Conditionally Approved Area
A Conditionally Approved area is periodically closed to shellfish harvesting based on pollution events, such as rainfall or increased river flow. These areas may be temporarily closed under extraordinary circumstances such as red tide events, hurricanes, and sewage spills.

Restricted and Conditionally Restricted Area
Both Restricted and Conditionally Restricted areas are closed to harvesting except in specifically authorized situations.

Prohibited Area
Shellfish harvesting is not permitted in a Prohibited area due to actual or potential pollution sources and water quality standards exceeding the 14/31 standard.

Unclassified Area
Shellfish harvesting is not permitted. Unclassified waters have not had a sanitary shellfish harvest area survey completed and are not monitored by FDACS.

Due to the danger of contamination, shellfish beds in close proximity to marinas and wastewater treatment plant outfalls are permanently closed to harvest. Because pollution can be unpredictable and intermittent, buffer zones around these areas are established by calculation or hydrographic study.

Shellfish Harvest Area Closures
Shellfish harvesting areas may be temporarily closed due a variety of reasons, including rainfall, higher river levels and harmful algal blooms.

Rainfall/River Management Plans
Management plans based on rainfall or river levels are used to predict when areas should be closed for shellfish harvesting because elevated levels of bacteria may make the shellfish unsafe for human consumption. Rain allows stormwater runoff to transport pollution into surface waters. Some shellfish harvesting areas will be closed after a rain event until adequate flushing of the area has occurred and the shellfish have had a chance to purge themselves of contaminants.

Events such as tropical storms and hurricanes can also cause temporary closures to shellfish harvesting areas.

Harmful Algal Blooms
Harmful algal blooms (HAB) can also cause temporary shellfish harvesting area closures as some of these blooms produce biotoxins and may cause shellfish to become toxic. FDACS partners with Florida Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute located in St. Petersburg to monitor harvesting areas for HAB events. The primary HAB species of concern in Florida include *Karenia brevis* (also known as red tide), *Pyrodinium bahamense* and *Pseudonitzschia* spp. Each species causes a different type of shellfish poisoning, including Neurotoxic Shellfish Poisoning, Paralytic Shellfish Poisoning and Amnesic Shellfish Poisoning. Shellfish harvesting areas are routinely monitored for the presence of these HABs. Detailed closing and reopening criteria can be found in the FDACS Division of Aquaculture's Biotoxin Management Plan.

Shellfish Harvest Area Reopening
Following a closure, FDACS staff assess and collect water and/or shellfish meat samples as soon as possible. The shellfish harvesting areas are reopened to harvest when sampling demonstrates that the standards and requirements of the National Shellfish Sanitation Program are met.

The Florida Department of Environmental Protection (FDEP) refers to the FDACS current open/closed status report to determine impairment at the time of assessment. Additionally, any Class 2 WBIDs that encompass Prohibited shellfish harvesting areas are deemed impaired for Fecal Coliform (SEAS Classification) at the time of assessment. The FDACS water quality data itself is not included in the

assessment. ***Therefore, there may be waterbodies that are impaired for Fecal Coliform (SEAS Classification) with no data for fecal coliform showing up in the Water Quality Snapshot.***

Additional Information

https://www.fdacs.gov/Agriculture-Industry/Aquaculture/Shellfish-Harvesting-Area-Classification

Current status of the harvesting areas in SW Florida: https://shellfish.fdacs.gov/seas/seas_southgulf.htm

metadata-for-water-quality-data.pdf (fdacs.gov)