



MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

MOLLUSCAN SHELLFISH GROWING WATERS MANAGEMENT PLAN

Introduction

The purpose of the *Molluscan Shellfish Growing Waters Management Plan* is to ensure the sanitary control of molluscan shellfish produced for human consumption within the State of Mississippi. This plan was developed in accordance with the Interstate Shellfish Sanitation Conference (ISSC), National Shellfish Sanitation Program (NSSP) Model Ordinance for the sanitary control of molluscan shellfish consumption.

The management plan is designed to update growing water management criteria on an annual basis. Each year all growing waters will be evaluated, and management plan criteria will be assessed and changed accordingly.

Growing Water Classifications

The Mississippi Department of Marine Resources classifies molluscan shellfish growing waters through rigorous water quality monitoring and annual shoreline surveys. This process, known as the Shellfish Sanitation Program, ensures that growing waters meet the required standards for safe oyster consumption, thereby safeguarding public health. Illnesses from consuming raw or undercooked molluscan shellfish often result from elevated levels of bacteria from human and animal waste, known as fecal coliforms, which concentrate in oysters during the filter feeding process.

The molluscan shellfish growing waters located in the Mississippi Sound are divided into 8 areas beginning in the west with Area 1 and ending in the east with Area 8. Mississippi currently uses five classifications as defined by the NSSP Model Ordinance. They are defined as follows:

- **Approved** – Molluscan shellfish growing waters classification used to identify a growing area where harvest of shellfish for direct marketing is allowed

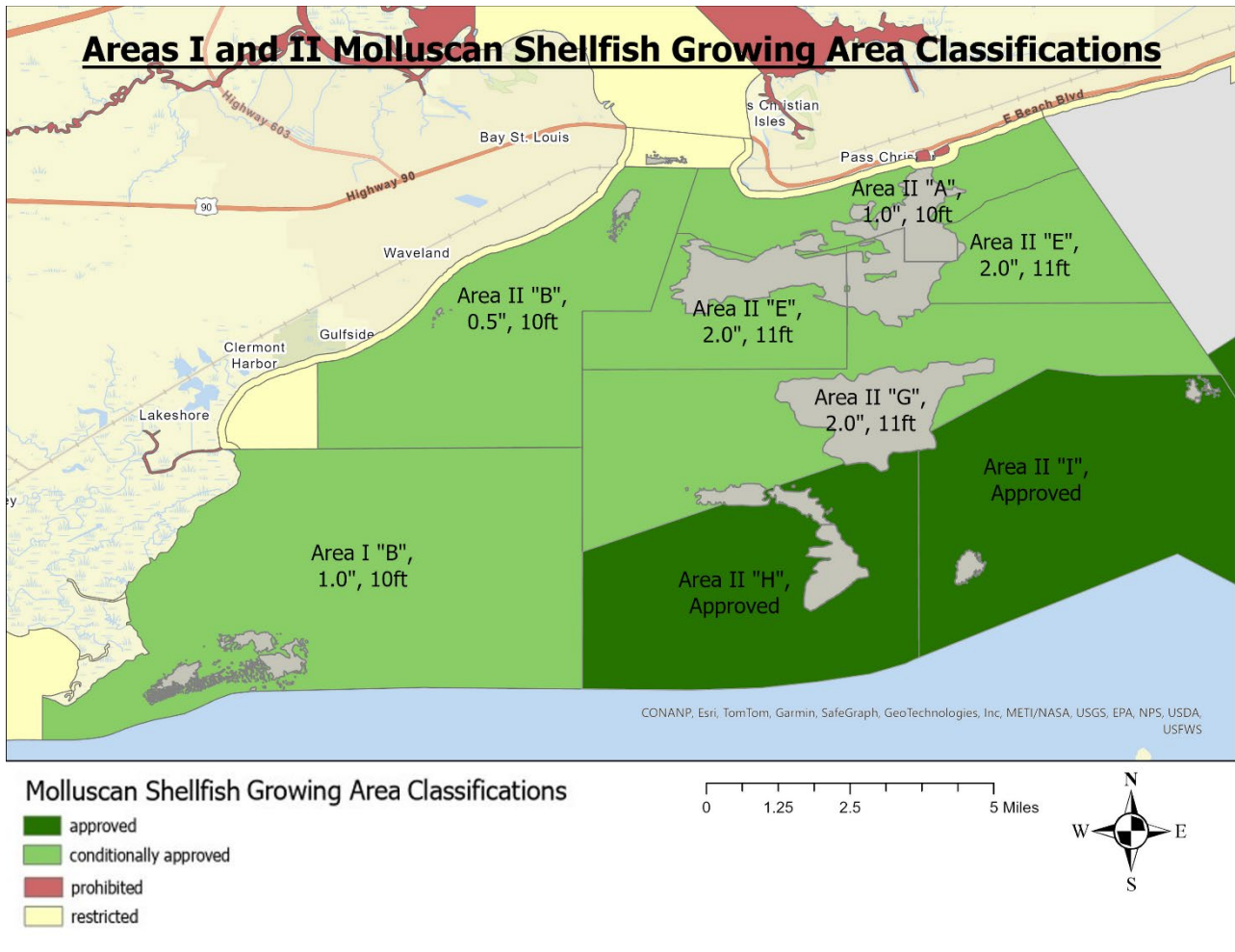
- **Conditionally Approved** – Molluscan shellfish growing waters classification that meets the criteria for approved classification except under certain environmental conditions such as rainfall and river stage
- **Restricted** – Molluscan shellfish growing waters classification used to identify a growing area where harvesting shall be by special license and the shellstock, flowing harvest, is subject to a suitable and effective treatment process through relaying or depuration
- **Prohibited** – Molluscan shellfish growing waters classification where the harvest of shellstock for any purpose is not permitted, except depletion, gathering of seed or nursery culture for aquaculture
- **Unclassified** – Waters from which molluscan shellfish harvesting is prohibited pending a sanitary survey of the area

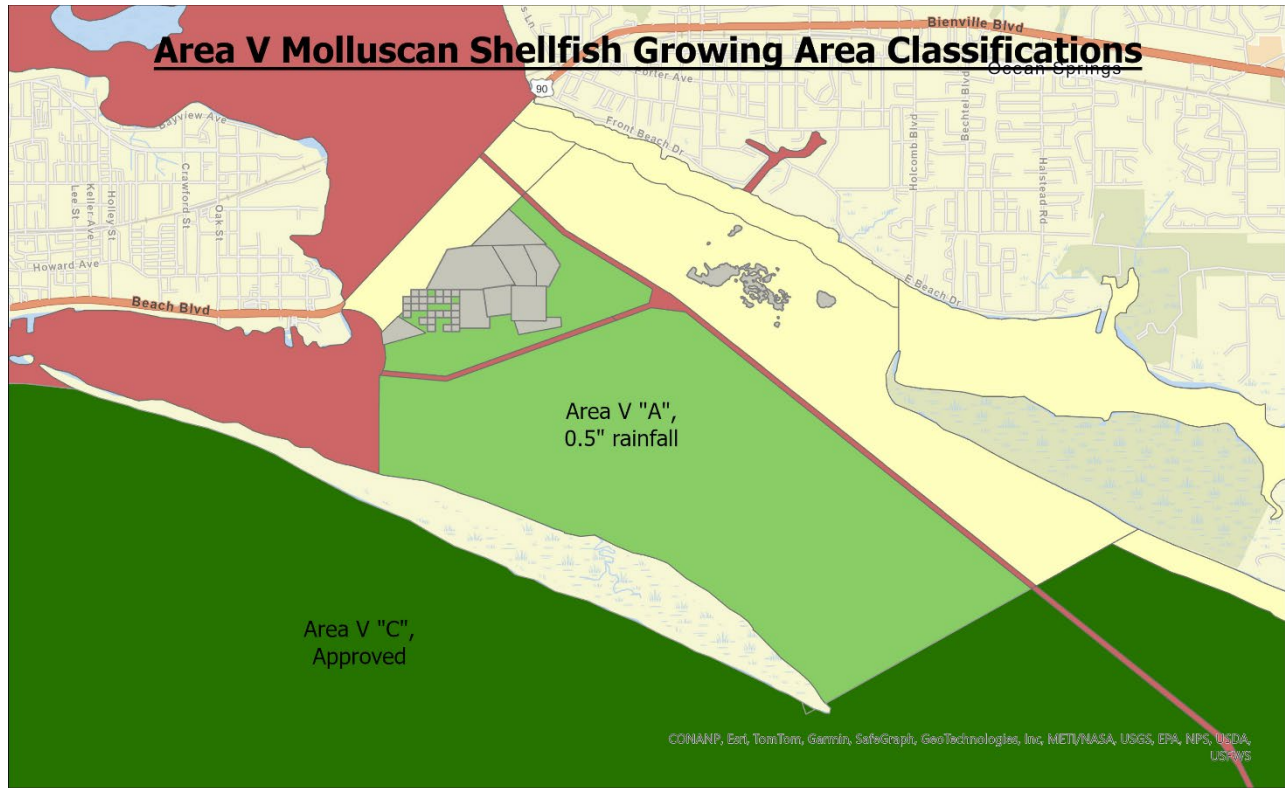
Depending on the findings of the Shellfish Sanitation Program, areas will encompass multiple growing water classifications and sections. The table below details the classifications found in each area.

Area	Classification
I	Prohibited
I “A”	Restricted
I “B”	Conditionally Approved
II	Prohibited, Restricted
II “A”	Conditionally Approved
II “B”	Conditionally Approved, Restricted
II “D”	Restricted
II “E”	Conditionally Approved
II “F”	Conditionally Approved
II “G”	Conditionally Approved
II “H”	Approved
II “I”	Approved
III	Unclassified, Restricted, Prohibited
IV	Approved, Restricted
V	Prohibited, Restricted, Approved
V “A”	Conditionally Approved
V “C”	Approved

VI	Restricted
VII	Prohibited
VIII	Restricted

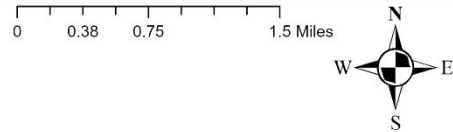
Bacteriological samples are collected monthly from Mississippi’s molluscan shellfish growing waters, especially during colder months when fecal coliforms are more prevalent. Historical test results and proximity to pollution sources establish thresholds indicating a higher risk of fecal coliform presence. Therefore, molluscan shellfish growing waters with a conditionally approved classification are open for direct oyster harvesting except when these thresholds are exceeded, such as during excessive rainfall or high river stages. The area will close until additional samples receive passing results. Areas with an approved classification will only close under emergency conditions, such as hurricanes, tropical storms, harmful algal blooms, etc. Harvesting oysters from prohibited areas is not permitted, whereas harvesting from restricted areas requires written approval from the MDMR Shellfish Bureau.





Molluscan Shellfish Growing Area Classifications

- approved
- conditionally approved
- prohibited
- restricted



Closing Criteria

Listed below are the closing criteria for all approved and conditionally approved waters in Mississippi.

Area I “B” Conditionally Approved Waters

- The Pearl River is equal to or exceeds 10 feet as measured at the Pearl River, Louisiana gauge, and/or, when one (1) or more inches of rainfall occur in any 24 consecutive hours as measured at the Hancock County Utility Authority.

Area II “A” Conditionally Approved Waters

- The Pearl River is equal to or exceeds 10 feet as measured at the Pearl River, Louisiana gauge, and/or, when one (1) or more inches of rainfall occur in any 24 consecutive hours as measured at the Hancock County Utility Authority.

Area II “B” Conditionally Approved Waters

- The Pearl River is equal to or exceeds 10 feet as measured at the Pearl River, Louisiana gauge, and/or, when half (0.5) or more inches of rainfall occur in any 24 consecutive hours as measured at the Hancock County Utility Authority.

Area II “E”, “F”, “G” Conditionally Approved Waters

- The Pearl River is equal to or exceeds 11 feet as measured at the Pearl River, Louisiana gauge, and/or, when two (2) or more inches of rainfall occur in any 24 consecutive hours as measured at the Hancock County Utility Authority.

Area II “H” and “I” Approved Waters

- After emergency conditions (i.e. tropical storm, hurricane, harmful algal bloom, etc.)

Area V “A” Conditionally Approved Waters

- When half (0.5) an inch or more inches of rainfall occur in any 24 consecutive hours as measured at the Keesler Air Force Base gauge.

Area V “C” Approved Waters

- After emergency conditions (i.e. tropical storm, hurricane, harmful algal bloom, etc.)

Opening/Re-opening Criteria

Areas may be opened to the start of the season and/or may be re-opened when the following area specific criteria are met:

Area I “B”, Area II “A”, or Area II “B” Conditionally Approved Waters

- The Pearl River has receded to less than 10 feet or has crested as measured at the Pearl River, Louisiana gauge, and/or the microbiological analysis of seawater samples indicates that the seawater is again acceptable, and the shellfish have gone through sufficient time interval to permit natural biological cleansing.

Area II “E”, “F”, “G” Conditionally Approved Waters

- The Pearl River has receded to less than 11 feet or has crested as measured at the Pearl River, Louisiana gauge, and/or the microbiological analysis of seawater samples indicates that the seawater is again acceptable, and the shellfish have gone through sufficient time interval to permit natural biological cleansing.

Area II “H” and “I” Approved Area

- After the emergency conditions have ended and the water is deemed safe

Area V “A” Conditionally Approved Waters

- The microbiological analysis of seawater samples indicates that the seawater is again acceptable, and the shellfish have gone through a sufficient time interval to permit natural biological cleansing.

Area V “C” Approved Area

- After the emergency conditions have ended and the water is deemed safe

***Vibrio vulnificus (V.v)* and *Vibrio parahaemolyticus (V.p)* Risk Management**

Found naturally in warm marine waters, *Vibrio* bacteria can cause serious illness in immune-compromised individuals who eat raw or undercooked oysters. Similar to fecal coliforms, the bacteria accumulate in oysters during the filter-feeding process. Unlike fecal coliforms, however, *V.v.* and *V.p.* are more prevalent in the warmer months of the year. To mitigate risk of illness, the MDMR develops a risk calculator that restricts the amount of time the bacteria have to reach elevated levels within the oyster meat. Based water and air temperature from the previous five years, these time/temperature controls are updated annually and comply with the standards of the NSSP Model Ordinance.

	Average Max Monthly Water Temp (°F)	Air Temperature During Harvest (°F)	Maximum Time Unrefrigerated (hrs)	Maximum Time to Cooldown (hrs)	Description
May '25	80	84	2.5	2	<i>Vibrio</i> Management
Jun '25	84	89	2.5	2	<i>Vibrio</i> Management
July '25	87	90	2.5	2	<i>Vibrio</i> Management
Aug '25	88	90	2.5	2	<i>Vibrio</i> Management
Sept '25	83	84	4	2	<i>Vibrio</i> Management
Oct '25	75	76	5	2	<i>Vibrio</i> Management
Nov '25	68	69	18	10	A3 Product Level 3
Dec '25	59	62	18	10	A3 Product Level 3
Jan '26	56	57	24	10	A3 Product Level 2
Feb '26	60	63	18	10	A3 Product Level 3
Mar '26	66	70	18	10	A3 Product Level 3
Apr '26	72	77	7	2	<i>Vibrio</i> Management