

Closing Beaches for Public Health Reasons, Including COVID-19

Margot Blaire Woolverton

Introduction

The paramount reason for closing a beach or prohibiting access to the water is ensuring human health and safety. Recent events that threatened public health at the beach include the coronavirus, harmful algal blooms (HABs), and hurricanes. In fact, these events created such dangerous conditions that state and local authorities in Alabama and Mississippi closed beaches for extensive periods. To illustrate, the coronavirus (aka COVID-19) prompted Alabama to close its beaches for 41 days and Mississippi to close beaches for up to 29 days. HABs prompted Mississippi to close access to all coastal waters for up to 19 days and issue a water contact warning for 95 days in 2019.¹ Also in 2019, Gulf Shores and Orange Beach, Alabama, closed the water for three days because of rip currents from Hurricane Barry.² And in every year, heavy rains force warnings regarding water quality for swimmers and shellfish due to increased bacteria caused by stormwater runoff. The length and prevalence of beach closures call for an examination of the legal mechanisms used to keep people safe.

Beach closing mechanisms consist of a governing entity authorized to close the beach or stop water access and a notification system that alerts the public to hazardous conditions or beach closures. For the coronavirus, HABs, and Hurricane Barry closures, statutes and ordinances authorized local and state entities to close the sand or the water, notifying the public of the closures. Interestingly, the coronavirus, HABs, and Hurricane Barry were naturally occurring events resulting in prolonged beach closures as opposed to the brief warnings issued for sewer overflows or stormwater runoff. The frequency and severity of naturally caused beach closures shows the need for precise notification systems that accurately communicate hazardous conditions to the public.

Legal Bases for Closing Beaches

First, local authorities may close the sand and beach access points because local authorities own and manage these areas. For example, in Gulf Shores, the Gulf Shores Emergency Management Team, the Mayor's Office, and the police and fire departments made a joint decision to close city-owned beaches and beach access points at the outset of the coronavirus.³ Then, the Baldwin County Commission closed all beach access points and sand areas throughout the county.⁴ County boards and various municipalities decide when to close the sand and access points within their jurisdictions.

In Mississippi, the state's [emergency management provisions](#) instruct local authorities to take necessary steps to ensure human safety if there is a local emergency. The Hancock County Board of Supervisors used the emergency powers to keep the sand and beach access points closed after the state lifted the state-wide beach closure.⁵ Although the coronavirus was an emergency, local authorities have jurisdiction over the sand and may close it without declaring a local emergency.

State entities also have power to close the sand. In Alabama, the Alabama Department of Public Health (ADPH) [may restrict public access](#) to the sand or the waters of the Gulf to abate public health issues. The coronavirus, for example, posed a public health threat, so ADPH closed access to all sand areas to slow the spread of the virus along Alabama's coast.⁶

In Mississippi, the state office that closes access to the sand varies depending on the circumstances. First, the [Governor may close access](#) to the beaches by declaring a state of emergency. However, the Mississippi State Department of Health (MSDH) also has [authority to close beaches](#) to manage a public health threat, such as an epidemic. Last, the Secretary of State performs the

[administrative duties concerning tidal lands](#), so he or she has stake in closing Mississippi's shoreline. These entities often work together when deciding to close the sand.

Additionally, state authorities monitor bacteria levels in the water and notify the public of dangerous conditions under the Beaches Environmental Assessment and Coastal Health Act ([BEACH Act](#)). Bacteria comes from stormwater runoff, boating waste, sewer overflows, wildlife, heavy storms, and other human activities. When things like stormwater, septic tanks, and sewers are not managed properly, heavy rains wash pollutants and pathogens into coastal waters. Elevated bacteria levels indicate pollutants are present that may cause sicknesses, rashes, and infections.

The BEACH Act required Beach Monitoring Programs in Alabama, Mississippi, and other coastal states to assess bacteria levels in coastal waters. In Alabama, two state agencies are involved in the Beach Monitoring Program. Specifically, ADPH reviews all water quality data collected by Alabama Department of Environmental Management (ADEM).⁷ ADPH issues advisories and warnings based on ADEM's data. ADPH may even close the water for unsafe bacteria levels because it has the [general authority to take necessary steps](#) to ensure public safety at Alabama's beaches.

In Mississippi, the Mississippi Department of Environmental Quality (MDEQ) and the Beach Monitoring Task Force (BMTF) monitor the water quality, issue warnings and advisories, and close access to the water.⁸ For example, MDEQ issued beach closures at all the Beach Monitoring Program testing sites for HABs in 2019. Contact with HABs may cause nausea, skin rashes, or headaches.⁹ In addition, MDEQ and BMTF partner with MSDH, Mississippi Department of Marine Resources, and the Secretary of State to implement the Beach Monitoring Program. Monitoring and closing access to the water for elevated bacteria levels requires the cooperation of various state entities.¹⁰

Finally, local authorities monitor and close access to the water for dangerous surf conditions. To close the water for rip currents after Hurricane Barry, Gulf Shores and Orange Beach used the Beach Flag Warning System to indicate the severity of the surf conditions and issue closure proclamations. The Beach Flag Warning System communicates the severity of surf conditions by flying different colored flags. If the conditions are severe enough,

the mayor or his designee will issue a closure proclamation by flying a double red flag. If a closure proclamation is in effect, water contact is illegal.¹⁰

[Analysis of Beach Closure Notification Systems](#)

Authorities with legal bases for closing beaches have different systems and protocols for communicating beach closures and advisories to the public. For example, authorities announced beach closures due to the coronavirus through executive orders and press releases specifying that the sand was closed to ensure people remained physically distant. Since the coronavirus beach closures were communicated through orders and press releases, they are unlike beach closures issued through Beach Monitoring Programs or the Beach Flag Warning System.

Under the Beach Monitoring Program, ADPH and ADEM use a three-color water quality status system to inform the public of water quality conditions. ADEM posts location status and test results on its website, and ADPH issues public health advisories through news releases. A green status means acceptable, but both yellow and red status mean there is an increased risk of illness from water contact.¹¹ The change between yellow and red status is based on the number of positive tests. On one hand, a red status may indicate a location is more dangerous because the site has been contaminated for multiple days. However, a red status may indicate that the water is consistently contaminated, not that the water is more dangerous than a yellow status. A more distinct and precise meaning for a red status would clarify the severity of the contamination and inform necessary safety precautions.

MDEQ and BMTF issue water contact warnings, water contact advisories, recommendations, and beach closures to indicate unsafe bacteria levels. The Beach Monitoring Program notifies the public of contamination through press releases, signs at monitoring locations, and updates on its website. The Beach Monitoring Program website does not specify the difference between a water contact warning, a water contact advisory, and a recommendation. However, these warnings, advisories, and recommendations mean the bacteria levels pose an elevated risk to human health, so contact with the water is advised against but not prohibited. Additionally, MDEQ issued beach closures for HABs. The phrase beach closure connotes that both the sand and water are closed

when, in fact, only the water is closed. Using phrases like water closure and sand closure would better communicate that only the water or the sand is closed. Issuing advisories, warnings, and closures in a unified and consistent manner would reduce confusion and better ensure human health and safety at Mississippi's beaches.

The Beach Flag Warning System in Gulf Shores and Orange Beach clearly communicates the severity of surf conditions. The cities raise the appropriate color flag on flag poles at the beach and indicate the flag color on the city websites. A green flag means low hazard, a yellow flag means moderate hazard, and a purple flag indicates dangerous marine life. A single red flag means there are hazardous surf conditions while double red flags indicate the water is closed. Each flag color communicates a distinct message to the public, so people can adequately assess the risks of swimming and boating during and after severe weather events.

Comparison of Recent Beach Closures

The coronavirus, HABs, and dangerous surf conditions do not originate from human sources. The coronavirus and HABs events prompted extensive beach/sand closures and advisories. As a reminder, coronavirus related beach closures lasted 29 days in Mississippi and 41 days in Alabama. HABs beach closures in Mississippi lasted 19 days and water contact warnings lasted 95 days. Similarly, Gulf Shores and Orange Beach closed the water for three days because of Hurricane Barry in July 2019. In contrast, bacterial contamination typically only prompt ADPH and MDEQ to issue warnings and advisories for a few days at a time.¹² Based on these beach closures and advisories, natural events appear more likely to cause severe hazardous conditions requiring an extensive beach closure.

Unlike the coronavirus and HABs, surf conditions change rapidly, so closures do not last as long. In fact, surf condition monitoring and Beach Monitoring Program testing practices reflect the differences in how the conditions change. Gulf Shores updates the surf flag color daily based on forecasts posted by the Weather Forecast Office for Mobile/Pensacola while the Beach Monitoring Programs test designated sites for elevated bacteria weekly or monthly. Surf conditions change daily and bacterial contamination happens irregularly, so monitoring practices diverge accordingly.

Conclusion

Local and state authorities employ different systems to close beaches and issue advisories to protect human health and safety. The Beach Flag Warning System clearly communicates dangerous surf conditions to the public while Beach Monitoring Programs lack distinct and unified communication systems. Clear and precise communication of hazardous conditions ensures human safety because people can accurately assess the risks of participating in beach activities like swimming and boating.

Notably, natural events prompting beach closures and advisories such as the coronavirus, HABs, and dangerous surf conditions happen more frequently and may last longer than human-caused closures. Although human causes of beach closures deserve equal monitoring and notification efforts, human causes could be stopped or mitigated at the pollution source. Since natural hazards occur on their own, the best way to protect public health is through adequate and precise notification efforts. 🦋

Margot Blaire Woolverton was a Summer Research Intern at the Mississippi-Alabama Sea Grant Legal Program and is a second-year law student at the University of Alabama School of Law.

Endnotes

1. Mississippi Beach Monitoring Program, *Closures and Advisories* (June 25, 2020).
2. Leada Gore, *Gulf Shores, Orange Beach, Panama City Beach, Destin close water to the public; no swimming allowed* (updated July 13, 2019).
3. Fox 10 News, *Gulf Shores will close city-controlled beaches starting Friday* (Mar. 19, 2020).
4. Baldwin County Commission, *Baldwin County Commission Emergency Special Meeting Minutes* (Mar. 19, 2020).
5. Hancock County Board of Supervisors, *Regular Meeting Minutes* (Apr. 20, 2020).
6. Alabama Department of Public Health, *Order of the State Health Officer Suspending Certain Public Gatherings due to Risk of Infection by Covid-19* (Mar. 19, 2020).
7. Alabama Department of Environmental Management, *ADEM/ADPH Coastal Alabama Beach Monitoring Program* (June 25, 2020).
8. Mississippi Beach Monitoring Program, *More Information* (June 25, 2020).
9. Mississippi Department of Environmental Quality, *MDEQ Issues Two Additional Beach Closures* (July 7, 2019).
10. Gulf Shores, Ala., Code § 6-12.
11. Alabama Department of Environmental Management, *ADEM/ADPH Coastal Alabama Beach Monitoring Program* (June 25, 2020).
12. Mississippi Beach Monitoring Program, *Closures and Advisories* (June 25, 2020).