What is the cause of waterborne illness?

Waterborne illness is caused when swimmers at beaches are exposed to contamination, most commonly either by swallowing contaminated water, or when contaminated water comes into contact with their skin, eyes, or ears. This contamination can be introduced by illicit sewer connections, failing on-site wastewater systems, combined or sanitary sewer overflows, illegal dumping, or other types of spills or leaks.

What are the three types of contamination?

There are three types of contamination:
1. Chemical (oil, hazardous material, heavy metals)
2. Physical (sludge deposits, solid refuse, floating solid/grease/scum wastes)
3. Biological (E.coli, enterococci bacteria)

What are the regulations and laws that govern health and safety at public and semi-public beaches?

The regulations and laws that govern health and safety at public and semi-public beaches include:

- The BEACH Act requires the EPA to develop performance criteria for testing, monitoring, and notifying public users of possible coastal recreation water problems in order to improve the quality of coastal beaches and reduce the risk of illness.
- The Massachusetts Beaches Act directs the MDPH to:
  1. adopt marine and freshwater beach standards that would protect public health
  2. require LBOH to conduct regular bacteriological testing at all public and semi-public beaches in MA and notify the public when standards had been violated or exceeded
  3. publish an annual report analyzing statewide testing results
- 105 CMR 445.000 aims to protect the health, safety and well-being of beach users, establish acceptable standards for the operation of bathing water, and establish a procedure for informing the public of any beach closures
- MGL Ch111 s127A1/2 (Christian’s Law) requires all municipal and recreational programs and licensed camps to:
  1. Determine each minor’s swimming ability prior to allowing participation in swimming activities
  2. Make available properly sized and snug-fitting Type I, II, or III PFDs to all minor children who have been determined to be a non-swimmer or an at-risk swimmer
  3. Accept a PDF provided by a parent or guardian of a minor for the minor to use while in attendance at the program or camp
- 105 CMR 432.000 governs minimum requirements for PFD for minors at municipal and recreational programs and camps

Do state owned or operated beaches fall under LBOH enforcing authority?

Under 445.034, state-owned or operated beaches fall under MDPH’s enforcing authority. However, MDPH should collaborate with LBOH on health and safety matters of all state-owned or operated beaches.
What are the four key functions LBOH have to ensure that beaches comply with 445?

The four key functions LBOH have to ensure that beaches comply with 445 are:
1. Issuing operating permits
2. Inspecting beaches
3. Monitoring bathing water quality
4. Taking action based on water quality results

How often do bacteriologic samples need to be collected?

Under 445, the mandated bacteriologic sample collection frequency is:
- Within the 5 days immediately preceding the opening of a bathing season
- At least weekly during the bathing season
- Prior to reopening a beach after closure due to the presence or suspected presence of any conditions specified in 445.030(B)

The LBOH has the authority to increase testing frequency if a beach has a prior history of unacceptable water quality or has known sources of pollution.

How can a beach operator get an operating permit?

Beach operators need a LBOH-issued permit to operate. An application is required for new and existing beaches. Upon receipt of a completed application form and any applicable fee, the LBOH will review the application and make a determination. A permit can be valid for up to two years from the date of issue. The LBOH may suspend, revoke, or refuse to renew a permit to an operator who is not in compliance with 445.

What happens if the LBOH determines that the beach does not meet the standards?

A beach may be closed to bathing or swimming due to bacteriological contamination, poor physical quality (including safety hazards), or for the presence of oil, hazardous materials, or heavy metals. Whenever the bathing water quality doesn’t meet the requirements of 445, the LBOH should immediately (and in no event later than 24 hours) notify MDPH and ensure a sign prohibiting swimming is posted at each parking lot and beach entrance. Beaches may be reopened after violations of bacteriological quality after the LBOH verifies that the certified results of the laboratory analysis are within acceptable standards. Beaches may be reopened after other violations after the LBOH confirms by analytical testing or other verifiable means that the conditions no longer constitute a threat to public health or safety.

What are some other things LBOH can do to promote the health, safety, and well-being of beach users?

Many LBOH are involved in activities that go beyond regulatory compliance. Some LBOH publicly share their water quality results, while others maintain a website with health topics related to beaches.

How can I learn more?

LPHI On Your Time trainings and resources
- http://sites.bu.edu/masslocalinstitute/training/on-your-time-trainings/
- http://sites.bu.edu/masslocalinstitute/resources

Manual of Laws and Regulations Relating to Boards of Health