



The National Environmental Health Association (NEHA) represents more than 7,000 governmental, private, academic, and uniformed services sector environmental health professionals in the U.S., its territories, and internationally. This workforce represents the second largest constituent of the existing public health workforce, second only to nursing. We are the profession's strongest advocate for excellence in the practice of environmental health as we deliver on our mission to build, sustain, and empower an effective environmental health workforce.

Policy Statement on Recreational Waters and the Model Aquatic Health Code

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Policy Sunset: July 2028

NEHA supports national, state, and local policies, regulations, research, and resources that will enhance the abilities of environmental health professionals to ensure aquatic venue safety and to protect public health. NEHA recommends the following for state, local, tribal, and territorial government agencies:

- x Incorporate the Model Aquatic Health Code (MAHC) into state and local regulations and public health policies to reduce aquatic injury and illness at public venues. (Note. The MAHC is not intended for single family residences or small nonregulatory purposes).
- x Participate in the Council for the Model Aquatic Health Code (CMAHC) to provide input and to vote on future editions of the MAHC.
- x Perform pool inspections that are

and recreation in the nation (Centers for Disease Control and Prevention [CDC], 2016). Swimming can reduce the risk of chronic illness, improve mental health, and provide a source of exercise for older adults (CDC, 2022a).

Recreational waters include public aquatic venues, public beaches, backyard pools, and natural bodies of water such as lakes, oceans and rivers; however, injuries, drownings, chemical exposures, and outbreaks can occur at these different types of recreational waters. The MAHC is the foremost public health guidance for public aquatic venues but not for other recreational water venues.

The MAHC draws on the experience of all sectors involved and presents a set of guidelines using evidence-based practices to reduce the risk of illness and injury associated with recreational water experiences” (CDC, 2014). Jurisdictions can choose to adopt the MAHC in its entirety or use sections to amend or supplement current codes.

The MAHC is updated triennially to address new venue types and emerging technologies. The MAHC is focused on

Justification

Implementing measures to reduce the inherent risks associated with engaging in these types of

cryptosporidiosis costs \$9,000– \$20,000 for hospitalized cases and \$270 –\$760 for outpatient treatment. Legionnaires’ disease is also sometimes associated with treated recreational water illness outbreaks and was estimated to cost \$27,000 –\$38,000 for inpatient treatment and \$560 – \$590 for outpatient treatment.

In addition to increasing the risk of waterborne illness, improper operation, water chemistry issues, and equipment failures can cause injuries. Injuries associated with pool chemicals led to approximately 3,000 –5,000 visits to emergency departments every year from 2003 –2012. These injuries can be the result of equipment failure, operational error, and lack of oversight. Common adverse health effects to bathers include irritation of the skin, eyes, nose, and throat. Improper chemical use and storage can also lead to injury. Chemical burns, respiratory irritation, headache, and nausea can occur from the improper mixing and handling of chemicals (Hlavsa et al., 2014). Aspects of facility design can also affect exposure to pool chemicals and disinfection byproducts. In 2007, 665 reports of respiratory and eye irritation were documented among employees and patrons at a newly opened indoor water park in Ohio. An investigation determined that the ventilation system installed at the time was insufficient to reduce levels of airborne pool chemicals (Chen et al., 2008).

Aquatic venues can also be associated with other injuries. An average of 389 children younger than 15 years fatally drowned in pools and spas every year from 2017 –2019. Of these incidents, 193 (49%) occurred in public venues, while 200 (53%) occurred in private venues. In addition, from 2019–2021, an estimated 6,300 nonfatal drowning injuries related to pools or spas are treated in hospital emergency departments each year (U.S. Consumer Product Safety Commission, 2022). In the U.S., drowning is the leading cause of death in children aged 1–5.

References

Centers for Disease Control and Prevention. (2014). The Model Aquatic Health Code: The code (1st ed.).

U.S. Consumer Product Safety Commission. (2019). 2014–2018 reported circulation/suction