Welcome to the CDC’s Model Aquatic Health Code Network Webinar

Interim Guidance for Safe Operation of Artificial Swimming Lagoons

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1 PM EST

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This webinar is being recorded.
Webinar Agenda

Artificial Swimming Lagoons: Proposed Interim Guidance from CDC

Questions & Answers
Today’s Presenters

**Dewey Case**
Technical Director, Council for the Model Aquatic Health Code
Centers for Disease Control and Prevention (CDC)

**CDR Joe Laco, MSEH, REHS/RS, CPO**
Environmental Health Scientist, National Center for Environmental Health
Centers for Disease Control and Prevention (CDC)
Artificial Swimming Lagoons

Proposed Interim Guidance from CDC

Driven by your expertise.
What is an Artificial Swimming Lagoon?

“Artificial Swimming Lagoon” means a large aquatic body, with a large venue format. The ASL is also designed to mimic a natural water body and consist of one or more designated swimming areas with the remainder designated for other, non-traditional uses, including:

- Kayaking
- Paddle-boarding
- Windsurfing
- Boating
- Scuba diving training
What is a Designated Swimming Area?

“Designated Swimming Area” (DSA) means a section of water within an ASL for swimming, wading, or bathing. Typically, a designated swimming area is visually separated from the rest of the ASL using a buoyed safety line or similar device approved by the authority having jurisdiction (AHJ). The AHJ ensures water quality is achieved by maintaining a positive hydraulic gradient where the area is open for bathers. Typically, DSAs are shallower than the open-water areas used for boating, kayaking, and paddle-boarding. Swimming and bathing are not permitted outside of DSAs.
What is an Artificial Swimming Lagoon?

• Aesthetic-focused
• Create the illusion of a tropical setting
• Can offer a wide variety of water-based activities

*Source: CMAHC/Crystal Lagoons*
What is an Artificial Swimming Lagoon?

• Large water volumes with high dilution compared to conventional pools
• Different construction methods and systems
• Different water treatment technology
• Multi-use facilities combine bathing, recreation, water sports.

Source: CMAHC/Crystal Lagoons
What is an Artificial Swimming Lagoon?

Hybrid Approach

Water Sports Area ("Lake-Like")
- Water sports
- Water quality:
  - Bacteriological - monthly testing
  - Unregulated bathing load
- Construction:
  - Specific requirements associated with safety
- Safety:
  - Standard signage and lifeguards

DSA ("Pool-Like")
- Swimming
- Water quality
  - Disinfectant
  - Regulated bather load
  - Water replacement
- Construction
  - Some standardized requirements
- Safety
  - Standard signage and lifeguards
What is an Artificial Swimming Lagoon?
What is an Artificial Swimming Lagoon?

Source: CMAHC/Crystal Lagoons
Water Flow from DSA to Open Water Area

DISINFECTION SYSTEM → FILTRATION SYSTEM → SUMP

Water Sports Area

Source: CMAHC/Crystal Lagoons
Dye Tracer Confirmation

Dye Application

5 minutes

15 minutes

25 minutes

Source: CMAHC/Crystal Lagoons
Change Request for 4th Ed. MAHC

- Proposed additional (new) code language for artificial swimming lagoons in 2020
- Chapters 4 and 5, submitted together
- Proposed new section to MAHC chapter 4, design and construction
- 4.12 Specific Aquatic Venues
  - 4.12.11 Artificial Swimming Lagoons
- Proposed new section to MAHC chapter 5, operation in 2020
- 5.12 Special Requirements for Specific Aquatic Venues
  - 5.12.11 Artificial Swimming Lagoons

Source: CMAHC/Crystal Lagoons
Change Request for 4th Ed. MAHC

- CMAHC – Technical Review Committee (TRC)
- Recommend No Vote
- Recommended re-submittal for 5th Edition
- State and local public health and aquatics sector need guidance now
- TRC proposed reconvening CMAHC Ad Hoc Committee to re-vise change request
Interim Guidance

• Addresses the needs of environmental health practitioners responsible for responding to health and safety issues specific to artificial swimming lagoons.
• Will be *interim guidance*.
• Based on science and best practices, performance-based
• Being prepared for potential inclusion into a future version of CDC's Model Aquatic Health Code.

*Source: CMAHC/Crystal Lagoons*
CMAHC ASL Ad Hoc Committee

- CMAHC technical experts
- State health officials
- Lagoon industry experts
- CDC recreational water
- Subject matter experts
- Interim guidance development
- Emphasis on understanding venue-specific concept(s) and safe operation
CMAHC ASL Ad Hoc Committee

CDR Joe Laco – CDC/NCEH
Dewey Case – CMAHC
Jeff Littlejohn – Adams and Reese, LLP
Jeremy Harper – SW Nevada Health District
Bob Vincent – State of FL
Katie Moore – State of TX
Alice Isley – State of NC
Alvaro Mendoza – CES Water Quality
Michele Hlavsa – CDC/NCEZID
Interim Guidance

Design and Construction
• Technical specifications
  • Materials
  • Structure
  • Access/egress
• Zero depth (sloped) entries

• Depth markers and markings
• Recirculation and water treatment
  • Decks and equipment
  • Hygiene facilities
• Water supply/wastewater disposal

Source: CMAHC/Crystal Lagoons
Interim Guidance

Operation and Maintenance
Water quality
Designated swimming area (and non-swimming area)
Halogen disinfection
DSA water replacement (displacement)
Water clarity
Water sample collection and testing
Designated swimming area testing and frequency
Non-swimming area testing and frequency

Source: CMAHC/Crystal Lagoons
Current Status

- Proposed recommendations developed with input by CMAHC Ad Hoc Committee
- Document now in CDC clearance
- To serve as interim recommendations until inclusion into the MAHC.
- Schematic illustration(s)
- CDC’s Healthy Swimming Website
- Change request for 5th edition MAHC
Meet the CMAHC Team

Kristie Riester
Executive Director

Dewey Case
Technical Director

Jill Mastrangelo
Communications Director

Susan Wichmann
Director of Administrative Services
Become a CMAHC Member Today!

Join aquatics professionals and local and state authorities using the Model Aquatic Health Code (MAHC) to help make swimming and other recreational water activities healthier and safer.

Visit CMAHC.org to join and share your expertise!

Make Your Voice Heard
- Participate in CMAHC’s triennial Vote on the Code conference to discuss, debate, and vote on proposed updates to the MAHC

Educational Resources
- Discounts on MAHC webinars and trainings
- Free access to MAHC presentations and case studies

Get Involved
- Serve on one of CMAHC’s many committees, including those focused on research and the MAHC update process
Thank you for attending today’s webinar!
You will receive a follow-up email with the webinar recording and slides.

Questions?
Use the Q&A box to submit your questions for the panelists!