

Welcome to the

# CDC's Model Aquatic Health Code Network Webinar

## Interim Guidance for Safe Operation of Artificial Swimming Lagoons

11/16/2022  
1 PM EST

Listen via your computer speakers or  
Call: 301 715 8592 / Webinar ID: 886 4132 4726  
**Questions may be submitted/upvoted via the Q&A box.**  
**This webinar is being recorded.**

**NACCHO**  
National Association of County & City Health Officials

# 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

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Proposed Interim Guidance from CDC

A blue-tinted photograph of a swimmer underwater, viewed from the side. The swimmer is wearing goggles and has their arms extended forward. Bubbles are visible around their head and arms. The background is dark blue with some light rays filtering through.

*Driven by your expertise.*

# What is an Artificial Swimming Lagoon?

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**“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?

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**“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?

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- 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?

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- 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?

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## 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?

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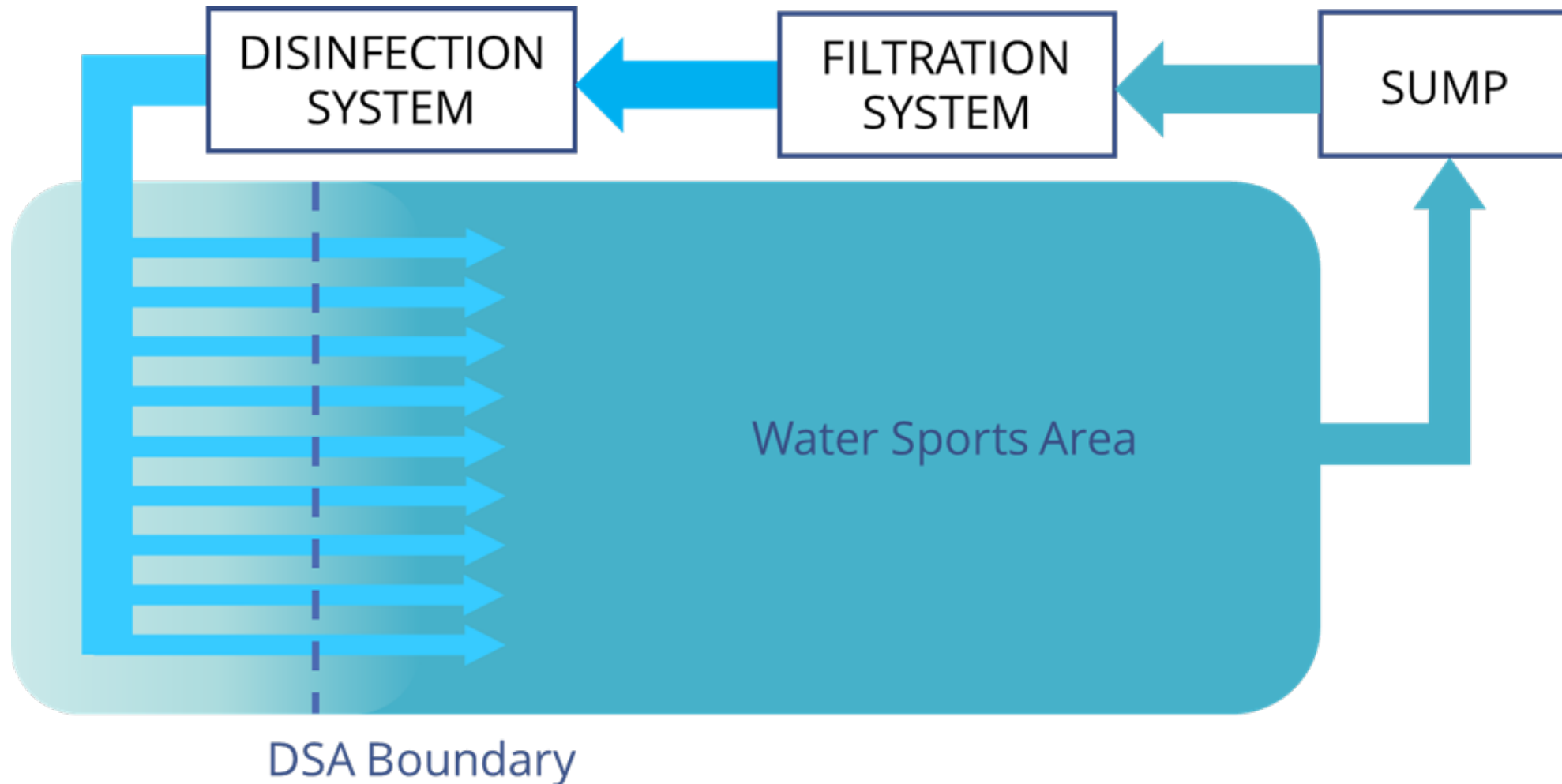
# What is an Artificial Swimming Lagoon?

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# Water Flow from DSA to Open Water Area

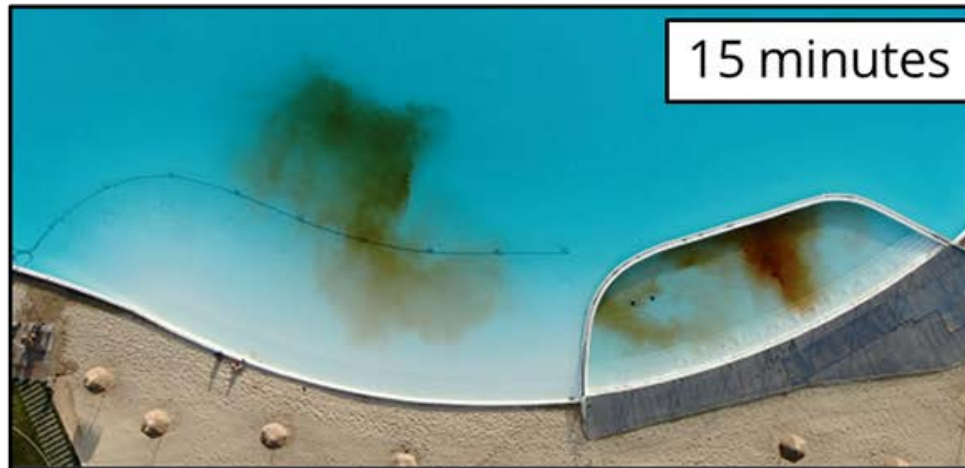
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# Dye Tracer Confirmation

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# Change Request for 4th Ed. MAHC

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- 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**

# Change Request for 4th Ed. MAHC

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- CMAHC – **T**echnical **R**eview **C**ommittee (TRC)
- Recommend **No Vote**
- Recommended re-submittal for 5<sup>th</sup> 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

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- 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.



# 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

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## 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

# Interim Guidance

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## 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



# Current Status

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- 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](https://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



# Questions?

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

Thank you for attending today's webinar!

You will receive a follow-up email with the webinar recording and slides.