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All-Inclusive or à la Carte? Many Routes to Adopt the Model Aquatic Health Code

Editor's Note: NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature this column on environmental health services from the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In these columns, authors from CDC's Water, Food, and Environmental Health Services Branch, as well as guest authors, will share insights and information about environmental health programs, trends, issues, and resources. The conclusions in these columns are those of the author(s) and do not necessarily represent the official position of CDC.

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In 2014, the Centers for Disease Control and Prevention (CDC) released the first edition of the Model Aquatic Health Code (MAHC), a free, science-based resource to help states and localities make swimming and other water activities healthier and safer (Figure 1). MAHC guidelines address the design, construction, operation, maintenance, policies, and management of public aquatic facilities. States and localities can use it to create or update existing pool codes to reduce risk for drowning, waterborne illness outbreaks, and injuries from pool chemicals.

Every state and local jurisdiction is different, so a "one size fits all" approach will not work for everyone. The MAHC is a comprehensive guideline, but it can be easily adapted to fit the needs of various jurisdictions. Health departments interested in MAHC adoption can adopt the whole guid-

ance or choose parts to fill the gaps in their state or local codes. New Mexico and Florida took different approaches to using the MAHC to strengthen aquatic safety and health.

All-Inclusive: How New Mexico Adopted the Entire MAHC

How Long Did MAHC Adoption Take?

In September 2013, the New Mexico Aquatics Program started reviewing the state aquatics code to update its Public Aquatics Program regulations. This time consuming process involved getting our aquatics team together multiple times for meetings and following the state procedural timelines for changing the regulations (Figure 2). Scheduling meetings with staff and interested inspectors was challenging for various reasons, including conflicting work schedules, time constraints, and

distance from meetings. The newly adopted MAHC guidelines took effect in August 2016 after nearly three years of work.

What Was the Biggest Challenge to Adoption?

One of the most challenging aspects of the process was helping aquatic facilities understand that chapter 4 of the MAHC (Design & Construction) does not apply to existing facilities, except for the following items:

- diaper changing stations at all facilities that allow diaper age children in pool enclosure,
- automatic controllers within one year of adoption (we changed it to two years to give facilities time to budget for the change), and
- interlocks between automatic feeders and recirculation system.

The program anticipated that the biggest complaint would be requiring automatic controllers for disinfectant and pH control on all vessels, but this requirement was broadly accepted by most aquatic facilities. The diaper changing station requirement caused the most negative reaction mainly from homeowner associations and apartment complexes. Hotels and large aquatic facilities already had them in place.

What Advice Might Help Other Jurisdictions Considering Adopting the Entire MAHC?

Do your homework by comparing your jurisdiction's current policies with the MAHC to see if there are as many differences as you think and document those differences (see the sidebar for a link to the MAHC compari-

FIGURE 1

Model Aquatic Health Code: Code Language

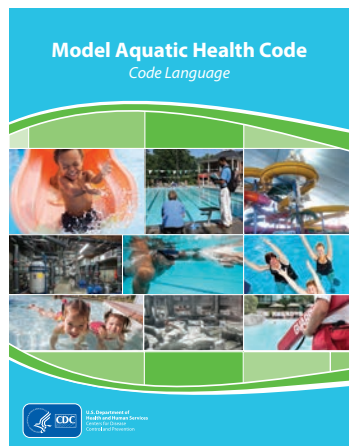


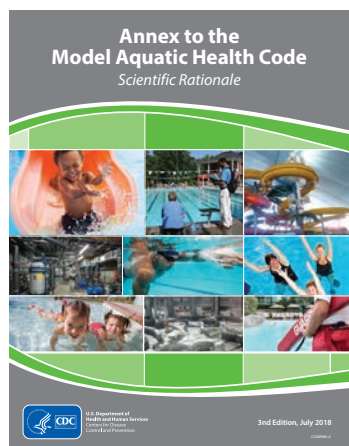
FIGURE 2

New Mexico Model Aquatic Health Code Adoption Timeline

2013	September	New Mexico Environment Department (NMED) began revising outdated pool regulations.
	April	NMED decided to consider the MAHC for adoption.
	April–September	NMED compared revised draft swimming pool regulations with the MAHC drafts released for public comment.
2014	October	NMED determined that most of the proposals under consideration by the department were already in the MAHC, and the MAHC was more clear and easy to understand than the department's current guidelines.
	December	NMED decided to pursue official MAHC adoption.
	January–June	NMED worked with the Office of General Council to incorporate the MAHC as a major part of the swimming pool regulation for the Environmental Health Bureau.
2015	July	The Environmental Health Bureau developed a presentation for a public meeting and a website on how the new proposed regulations would affect existing pool facilities and new construction.
	August	Public meetings were planned and letters were mailed announcing the new proposed regulations and inviting all stakeholders to offer public comments.
	October–December	Proposed regulations were revised in response to the public comments collected at the meetings and revisions were posted on the Environmental Health Bureau's website.
	February	Proposed regulations were presented to the State Environmental Improvement Board for adoption as state swimming pool regulations.
2016	May	The State Environmental Improvement Board adopted the regulations incorporating MAHC guidance after hearing written and oral evidence in a public hearing.
	May–August	Staff training on new regulations and inspection forms was conducted. New regulations and inspection forms were posted on the Swimming Pool Programs web page. Numerous questions were answered regarding the new regulations.
	August	Newly adopted aquatic venue regulations took effect.

FIGURE 3

Annex to the Model Aquatic Health Code: Scientific Rationale



son help website). When the New Mexico Aquatics Program compared the state pool code with the MAHC, the program thought there would be many differences between them, but they were surprisingly similar. Also, prepare a presentation for public meetings to show the differences between your current regulations and the MAHC. Our presentation was very useful for educating inter-

ested parties and answering many of their questions. It is essential to use the MAHC Annex (Figure 3) in conjunction with the Code to show the scientific reasoning behind how the Code is trying to improve public health. Lastly, do not become frustrated with changing your current regulations. Adoption is a long process that requires hard work and time to accomplish, but the improvements to public health will be worth the hard work and diligence it takes to get there.

A la Carte: How Florida Uses the MAHC to Help Fill Gaps

What Prompted You to Look to the MAHC for Help With Your State Code?

In April 2012, Florida state law changed, directing building code officials to begin issuing construction permits for pools. At this time, Florida's original pool code from 1923 had been revised only 16 times by the state health department. This system introduced many challenges for implementing the building and health departments' differing pool codes.

How Did You Begin to Update the Florida Code?

When the law changed in 2012, the pool building code's technical advisory committee appointed two state health department representatives. During the 2011–2014 and 2015–

2018 code revision cycles, many health and safety revisions were included to better align the health department code with the building code. Issues still remain with the permitting process, which leaves contractors and pool owners responsible for corrections before opening. The program hopes to continue improving this process with future code revisions.

How Do You Maintain Consistency Among so Many Stakeholders?

With nearly 600 building department jurisdictions and 16 engineering offices in the state health department, the two departments strive to seek consistency daily with education opportunities, reporting templates, and checklists.

Where Have You Seen the MAHC at Work in Florida?

Outbreaks caused by *Cryptosporidium* are notoriously associated with spray pads (also known as interactive water play venues) due to children using the water features as both drinking fountains and bidets. This increased risk warranted the MAHC to recommend secondary disinfection systems (e.g., ultraviolet light or ozone) to be installed to inactivate *Cryptosporidium*, an extremely chlorine-tolerant parasite. Since this innovation was already in the MAHC, the state health department was able to convince stakeholders of the public health need, and this provision

was accepted into the 2018 Florida Building Code. In addition, health department staff are encouraged to review the MAHC Annex (Figure 3) for useful understanding and analysis of the rationale. 🐼

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Quick Links
<ul style="list-style-type: none"> • Model Aquatic Health Code (MAHC) website: www.cdc.gov/mahc • MAHC comparison help: www.cdc.gov/mahc/usingthemahc.html • MAHC network, tools, and forms: www.cdc.gov/mahc/networks-tools-forms.html • Policy statements and other stakeholder support for the MAHC: www.cdc.gov/mahc/policy.html • Council for the Model Aquatic Health Code website: www.cmahc.org

Did You Know?

NEHA will host its Second Annual Lobby Day in Washington, DC, on May 1. The entire NEHA board of directors will be there to meet with Democrats and Republicans to discuss the importance of environmental health professionals, as well as why Congress should invest in building a credentialed environmental health workforce. Lobby days are critical to demonstrate to members of Congress that Americans from around the country care about environmental health. They are also a great way to make your voice heard loud and clear on Capitol Hill. Stay tuned to www.neha.org for more information about NEHA's Second Annual Lobby Day!



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