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Council for the Model Aquatic Health Code

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Dr. Fitzgerald:

2017 CMAHC Voting Results

We are pleased to send the final results of the Council for the Model Aquatic Health Code (CMAHC) member voting on the 179 MAHC Change Requests (CR's) submitted in 2017. Following is an overview of the voting outcomes:

- 179 Change Requests submitted
 - 68% (121/179) passed
 - Weighting of the vote (public health and industry are weighted at 50% each) affected 3.9% (7/179). Six CR's that were NO by straight vote changed to YES on weighted vote. One tie on the popular vote changed to a YES.

They have been reviewed by the CMAHC Board of Directors and me. All CR-associated materials can be found for review on the CMAHC website (<https://www.cmahc.org/display-change-request-vote.php>). We endorse the voting results, with the exception of concerns we have for 12 of the passed CR's discussed below. We offer the following comments on these specific CRs for CDC to consider while revising the MAHC to create the 2018 MAHC 3rd Edition.

- CR 3.2 "Aquatic Venue"-0001: **We recommend CDC accepts only a modified version of this CR.**
The CR was intended to clarify the existing definition of Aquatic Venue so that it could not be misconstrued to include facilities where the primary use is for other than recreational or therapeutic purposes such as livestock, fishing, irrigation, water storage, etc. However, the proposed modification to the definition also adds "*having a closed loop circulation of water, not influenced by surface waters and*". This wording significantly changes the intent of what is an "Aquatic Venue". The type/level of water treatment, as included in this CR, does not define what is to be regulated. The intended public use and exposure to water in an artificially constructed or modified natural structure is the primary criteria. Then, the necessary water treatment to protect public health and safety, is specified. We recommend deleting the phrase stated above from the CR wording.
- CR 4.7.3.3.2-0002: **We recommend that this CR not be accepted by the CDC.**
This CR proposes a change to the secondary disinfection requirements by allowing a combined secondary disinfection system with log removal credits for

other components (“...If it is a combined system, the log removal credits from each component must be combined to achieve a total 3-log reduction per pass.”). There are several concerns with this CR:

- This CR was to be considered as part of a group of three interrelated CR’s which includes CR’s 4.7.3.3.2-0001 and 4.7.3.3.5-0001. CR 4.7.3.3.2-0001 passed, but CR 4.7.3.3.5-0001 did not pass. However, key aspects for implementing this CR are included in CR 4.7.3.3.5-0001, which did not pass.
- There is a lack of needed details regarding “Log removal credits”.
- There is currently no validation or a validation protocol for a filtration system component for log reduction for *Cryptosporidium*.

We recommend that this CR not be accepted by the CDC due to the lack of needed details regarding “Log removal credits” and the absence of a filtration system validation protocol for *Cryptosporidium* log reduction.

- **CR 4.7.3.3.3.3-0001: We recommend that this CR not be accepted by the CDC.**

This CR would require that 100% of interactive water play aquatic venue water pass through a secondary treatment system. There are a number of concerns related to this CR.

- This CR would establish alternate secondary treatment system sizing criteria for interactive water play aquatic venues by modifying the language contained in the “installation” portion of the secondary treatment section. This is confusing and misplaced. Sizing criteria for secondary disinfection systems is defined in 4.7.3.3.2.5.
- This proposal may be misunderstood by the members who voted for it. While reducing the risk of exposure, passing 100% of the water through a secondary treatment system does not guarantee that water being discharged from an aquatic feature will be below an infective dose of *Cryptosporidium*, which is the treatment goal for secondary treatment system sizing criteria.
- There is also a concern about cost impact. While it was reported to the Technical Review Committee that the cost impact would be minimal (it was stated that the changes would require 300-500 gpm through a UV unit in lieu of 100-150 GPM as currently required per the MAHC), that is not universally true. As an example, an actual interactive water play system in operation today has 900 gpm passing through a UV system (meeting MAHC secondary disinfection requirements), but has a total of 9,060 gpm flowing through the various aquatic features. This code change would require a 10x increase in the amount of installed UV if this same system were built in accordance with this revision.

We recommend that this CR not be accepted by the CDC. There is no defined treatment goal nor data to support the stated reason for the change that “...we are able to effectively treat 100% of the water which is not possible in any other

venue.” Additionally, this could have a very high cost impact while not providing documentation of the need for the change. CMAHC will be creating an Ad Hoc Committee to review the complete design requirements for Interactive Water Play Aquatic Venues including secondary treatment system requirements specific to these venues. This Committee will assess if current requirements can be improved and make recommendations for appropriate CRs for the next MAHC update cycle.

- CR 4.12.2.1.3-0001: **We recommend that this CR not be accepted by the CDC.**

The CR requires flow meters for waterslides at each connection to confirm water flow rates are within manufacturer’s specifications. This CR did *not* pass by unweighted vote count (Total 53.3% no vote; Industry 61.3% no vote; Public Health 24.1% no vote), the public health-weighted vote resulted in the CR passing. There are significant concerns about this CR:

- The term “*each connection*” poses problems in that many new water related amusement rides use sprayers to lubricate the fiberglass as well as injection points to add water to the main flow. Some injection points use multiple injectors. This requirement could literally require hundreds of flow meters for a single water related amusement attraction.
- There are additional/different methods than flow meters to monitor/meter flow.
- There are MAHC scope issues related to these waterslide design and operational requirements:
 - The design and operation of Water Related Amusement Rides is already covered in ASTM F2376; Standard Practice for Classification, Design, Manufacture, Construction and Operation of Water Slides Systems.
 - The ASTM F2376 standard is the nationally and internationally recognized standard for the design, maintenance, and operation for water slides. The MAHC already defers to, and requires compliance with, this ASTM Standard for design. If improvements/changes to waterslide design are needed, we think CMAHC and CDC should work with ASTM to address needed changes to the ASTM standard. By independently incorporating changes such as this in the MAHC, there is a potential for creating inconsistent standards between the MAHC and ASTM should ASTM develop different requirements.
 - We advise that including such changes is outside the agreed-upon scope of the MAHC.
 - To fix this issue, the CMAHC is working with CDC to develop more explicit guidance on the scope of the MAHC that should assist those submitting future Change Requests.

- CR 4.12.2.1.4-0001: **We recommend that this CR not be accepted by the CDC.**

This CR requires a scale to be provided at a facility with waterslides that are designed to accommodate multiple riders at one time on a tube or raft. This scale will confirm that the group weight is within manufacturer's specifications. Like CR 4.12.2.1.3-0001 above, this CR did *not* pass by unweighted vote count (Total 57.0% no vote; Industry 62.9% no vote; Public Health 36.7% no vote). The public health weighted vote resulted in the CR passing.

- Also, like CR 4.12.2.1.3-0001 above, this aspect of waterslides may not be within the scope of the MAHC vs. the ASTM F2376 standard (see related discussion of scope for CR 4.12.2.1.3-0001 above).
- CR's 5.7.3(NEW)-0001, 5.7.3.1.3-0001, 5.7.3.1.5.1-0001, 5.7.3.3.2.1-0001, 5.7.3.4.2-0001: **We recommend that CDC accept these CRs only with the specified language modifications.**

All of these CRs are similar in that they require the various pool chemicals/products to be certified, listed, and labeled to NSF/ANSI Standard 50 by an ANSI-accredited certification organization. None of these CRs passed by the respective unweighted vote count. The public health weighted vote resulted in the CRs passing.

- Numerous comments were received from industry members opposing these CRs citing economic issues.
- There was also additional comments and discussion suggesting that NSF/ANSI 60 or EPA FIFRA registrations should be accepted/referenced. NSF/ANSI 60 is already required for drinking water and some of the standard chemicals used there (including acids and bases) are already covered.

We recommend that CDC consider modifying these five CRs to require certification, listing, and labeling to either NSF/ANSI Standard 50 or Standard 60 by an ANSI accredited certification organization, and/or have a U.S. EPA FIFRA Sanitizer or Disinfectant registration (underlined language to be adopted into MAHC). NSF, the submitter of these CRs, has agreed to this modification while moving towards NSF/ANSI 50 as the primary standard for swimming pool treatment chemicals in the future.

- CRs 6.6.3.1.1-0001 and 6.6.3.1.2-0001: **We recommend that these two CRs not be accepted by the CDC.** Both of these CRs changed "must" to "shall" to be consistent with conventions used in the MAHC as specified in MAHC section 2.2.6 Conventions. However, in these two sections, use of "must" is appropriate as the context is different; the word is used in a list vs. in regulatory or enforcement language.

We hope this information is helpful to CDC in making revision decisions while creating the 2018 MAHC 3rd Edition. A complete database containing all Change Requests, Technical Review Committee reports, member comments, and voting results can be found for your review on the CMAHC website (www.cmahc.org) at <https://cmahc.org/display-change-request-vote.php>

The CMAHC Board of Directors, with membership concurrence, has moved the MAHC update process to a 3-year cycle. This will allow more time for Ad Hoc Committee and other work to create the best possible content improvements for the MAHC. Therefore, the next CMAHC Conference and member vote on updates is scheduled for October 2020. The continued interaction with NCEZID and NCEH, the two key CDC Center's in this effort, assures a strong partnership between the CMAHC and CDC. We look forward to strengthening the CDC-CMAHC partnership to make the MAHC the best model code it can be so that our national partnership achieves our common vision of "Healthy and Safe Aquatic Experiences for Everyone".

Sincerely,

A handwritten signature in blue ink, appearing to read "Doug Sackett", with a long horizontal flourish extending to the right.

Douglas C. Sackett,
Executive Director

Cc: CMAHC Board of Directors