

**Model Aquatic Health Code
Hygiene Facilities Draft Module**

**Hygiene Facilities Module Code Section for the First 60-day Review
Posted for Public Comment on 10/31/2011**

Currently Open for Public Comment that Closes on 12/29/2011

In an attempt to speed the review process along, the MAHC steering committee has decided to release MAHC draft modules prior to their being fully complete and formatted. These drafts will continue to be edited and revised while being posted for public comment. The complete versions of the drafts will be available for public comment again when all MAHC modules are posted for final public comment. The MAHC committees appreciate your patience with the review process and commitment to this endeavor as we all seek to produce the best aquatic health code possible.

This information is distributed solely for the purpose of pre dissemination public comment under applicable information quality guidelines. It has not been formally disseminated by the Centers for Disease Control and Prevention. It does not represent and should not be construed to represent any agency determination or policy.

MAHC Hygiene Facilities Module Abstract

Swimmer hygiene is a critical component that plays a role in documented waterborne disease outbreaks and poor water quality. The Hygiene Facilities Module is a first step towards improving swimmer hygiene and facility water quality to reduce the associated health effects. The Hygiene Facilities Module contains requirements for new or modified construction that include:

- 1) Minimum distances for hygiene facilities from aquatic venues.
- 2) Newly defined diaper-changing stations.
- 3) Implementation of rinse vs. cleansing showers.

MAHC Hygiene Facilities Module Review Guidance

The [Model Aquatic Health Code \(MAHC\) Steering](http://www.cdc.gov/healthywater/swimming/pools/mahc/steering-committee/) (<http://www.cdc.gov/healthywater/swimming/pools/mahc/steering-committee/>) and [Technical](http://www.cdc.gov/healthywater/swimming/pools/mahc/technical-committee/) (<http://www.cdc.gov/healthywater/swimming/pools/mahc/technical-committee/>) [Committees](#) appreciate your willingness to review this draft MAHC module. Your unique perspectives and science-based suggestions will help ensure that the best available standards and practices for protecting aquatic public health are available for adoption by state and local environmental health programs.

Review Reminders:

- Please download and use the [MAHC Comment Form](http://www.cdc.gov/healthywater/swimming/pools/mahc/structure-content/) (<http://www.cdc.gov/healthywater/swimming/pools/mahc/structure-content/>) to submit your detailed, succinct comments and suggested edits. Return your review form by December 29, 2011, as an email attachment to MAHC@cdc.gov.
- If part of a larger group or organization, please consolidate comments to speed the MAHC response time to public comments.
- To provide context for this module review, please consult the [MAHC Strawman Outline](http://www.cdc.gov/healthywater/pdf/swimming/pools/mahc/structure-content/mahc-strawman.pdf) (<http://www.cdc.gov/healthywater/pdf/swimming/pools/mahc/structure-content/mahc-strawman.pdf>). Section headers of related content have been included in this draft module to assist reviewers to see where each section fits into the overall MAHC structure. Additional MAHC draft modules that contain this content will be or already have been posted for your review.
- MAHC Grading System
 - A grading system is provided for the recommended standards. It is based on the perceived reliability and accuracy of the material presented. This grading system is divided into three levels. The MAHC grading system is as follows:
 - Grade A: Practice supported by science/research/data.
 - Grade B: Generally accepted practice not supported by science/research/data.
 - Grade C: No generally accepted practice. Proposed language not yet supported by science/research/data.
- The complete draft MAHC, with all of the individual module review comments addressed will be posted again for a final review and comment before MAHC publication. This will enable reviewers to review modules in the context of other modules and sections that may not have been possible during the initial individual module review.
- The published MAHC will be regularly updated through a collaborative all-stakeholder process.

Please address any questions you may have about MAHC or the review process to MAHC@cdc.gov. You may also request to be on the direct email list for alerts on the other draft MAHC modules as they are released for public comment.

Thank you again, and we look forward to your help in this endeavor.
Sincerely,

Douglas C. Sackett, Director
MAHC Steering Committee

The following chart shows the context of the Hygiene Facilities Design, Construction, Operation and Maintenance in the overall Model Aquatic Health Code's Strawman.

Reviewer Note on Module Section Numbering:

Please use the specific section numbers to make your comments on this Draft Model Aquatic Health Code module. These numbers may eventually change during the editing of the compiled draft that will be issued for a final round of comments.

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4.0 Design Standards and Construction

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5.10 Hygiene Facilities (Bathhouse)**5.10.1 General****5.10.2 Location****5.10.3 Bathhouse Design****5.10.4 Fixture Requirements****5.10.4.1 General Requirements****5.10.4.2 Showers****5.10.4.3 Toilets and Urinals****5.10.4.4 Diaper-Changing Stations****5.10.4.5 Non-Plumbing Fixture Requirements****5.10.5 Suits and Towels****Acronyms in this Module:**

AHJ	authority having jurisdiction
ASTM	American Society for Testing and Materials
ICBO	International Council of Building Officials
IPC	International Plumbing Code
OSHA	Occupational Safety and Health Administration
UPC	Uniform Plumbing Code
WC	water closet

Glossary Terms in this Module:

“Aquatic Facility” means a physical place that contains one or more aquatic venues and support infrastructure under a single management structure.

“Aquatic Venue” means an artificially constructed or modified natural structure where the general public is exposed to water intended for recreational or therapeutic purpose. Such structures do not necessarily contain standing water, so water exposure may occur via contact, ingestion, or aerosolization. Examples include swimming pools, wave pool, rivers, spas (including spa pools and hot tubs), therapeutic pools, and spray pads.

“Authority Having Jurisdiction” (AHJ) means an agency, organization, office, or individual responsible for enforcing the requirements of a code or standard, and/or for approving equipment, materials, an installation, or a procedure.

“Backflow” means a hydraulic condition caused by a difference in water pressure that causes non-potable water or other liquid to enter the potable water system by either backpressure or back-siphonage.

“Bather” means a person at an aquatic venue who has contact with water either through spray or partial or total immersion. Bathers, which includes staff members, can be exposed to contaminated water as well as potentially contaminate the water.

“Cleansing Shower” means a shower located within a hygiene facility using warm water and soap. The purpose of these showers is to remove contaminants including perianal fecal material, sweat, skin cells, personal care products, and dirt before bathers enter the pool.

“Code” means a systematic statement of a body of law, especially one given statutory force.

“Diaper-aged children” means children less than 5 years of age.

“Diaper-changing station” means a hygiene station that includes a safe and approved diaper-changing unit, adjacent handwashing sink, soap dispenser, and trash receptacle, and disinfectant products to clean the changing surface after use.

“Diaper-changing unit” means a safe and approved diaper-changing surface that is part of a diaper-changing station.

“Foot Bath” means standing water in which patrons or aquatics staff rinse their feet.

“Hygiene Facility” means a structure or part of a structure that contains toilet, shower, diaper changing, and dressing capabilities serving bathers and patrons at an aquatic facility.

“Hygiene Fixtures” means all components necessary for hygiene facilities including showers, sinks, toilets/urinals, diaper-changing stations, trashcans, soap dispensers, and paper towel and toilet paper dispensers.

“Plumbing Fixtures” means fixture or device for the distribution and use of water; for example, toilets, urinals, showers, and hose bibs.

“Pool Deck” means surface areas serving the aquatic venue, beyond perimeter deck, which is expected to be regularly trafficked and made wet by bathers.

“Rinse Shower” means a shower typically located in the deck area with ambient temperature water. The main purpose is to remove dirt, sand, or organic material prior to entering the aquatic venue.

Preface: *This document does not address all safety concerns, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to each use.*

Model Aquatic Health Code Hygiene Facilities Module

Keyword	Section	Code	Grade
	4.0	Design Standards and Construction	
	4.1	Plan Submittal	
	4.2	Materials	
	4.3	Equipment Standards	
	4.4	Pool Operation and Facility Maintenance	
	4.5	Pool Structure	
	4.6	Indoor/Outdoor Environment	
	4.7	Recirculation and Water Treatment	
	4.8	Decks and Equipment	
	4.9	Filter/Equipment Room	
	4.10	Hygiene Facilities	
<i>General</i>	4.10.1.	General	
<i>Hygiene Facilities</i>	4.10.1.1	AQUATIC FACILITIES shall provide HYGIENE FACILITIES that include, at a minimum, toilets, urinals, showers, DIAPER-CHANGING STATIONS, and other HYGIENE FIXTURES, as specified herein.	
<i>Building and plumbing Codes</i>	4.10.1.2	HYGIENE FACILITIES shall be constructed in accordance with applicable state and local CODES or as modified herein.	
<i>State & Local Code</i>	4.10.1.3	The number of HYGIENE FACILITIES provided shall be in accordance with applicable state and local CODES or as modified herein.	
<i>Based on Bather Load</i>	4.10.1.3.1	The minimum number of PLUMBING FIXTURES, showers, toilets, and urinals, and other HYGIENE FIXTURES shall be based on maximum BATHER load of each AQUATIC VENUE.	
<i>Location</i>	4.10.2	Location	
<i>300 feet</i>	4.10.2.1	Except as required in 4.10.2.1.1, a drinking fountain, toilet, hand washing sink, and DIAPER-CHANGING STATIONS shall be located no greater than 300 feet (91m) walking distance from the nearest entry/exit of the most distant AQUATIC VENUE to the entry/exit of the HYGIENE FACILITY.	
<i>Diaper-Aged Children</i>	4.10.2.2	An AQUATIC VENUE intended designed primarily for DIAPER-AGED CHILDREN (children less than 5 years of age) shall have a drinking fountain, toilet, hand washing, and DIAPER-CHANGING STATIONS located no greater than 200 feet (61m) walking distance and in clear view from the nearest entry/exit of the AQUATIC VENUE.	
<i>Design & Construction</i>	4.10.3	Design and Construction	

Keyword	Section	Code	Grade
Floors	4.10.3.1	The floors of HYGIENE FACILITIES and dressing areas serving AQUATIC FACILITIES shall have a smooth, hard, easy-to-clean, impervious-to-water, slip-resistant surface.	
Floor Base	4.10.3.2	A hard, smooth, impervious-to-water, easy-to-clean base shall provide a sealed, covered juncture between the wall and floor and extend upward on the wall at least 6 inches (15cm).	
Floor Drains	4.10.3.3	Floor drains shall be installed in HYGIENE FACILITIES and dressing areas where PLUMBING FIXTURES are located.	
Opening Grill Covers	4.10.3.3.1	Floor drain opening grill covers shall be ½-inch (1cm) or less in width or diameter.	
Sloped to Drain	4.10.3.3.2	Floors shall be sloped to drain water or other liquids.	
Partitions and Enclosures	4.10.3.4	Partitions and enclosures adjacent to HYGIENE FACILITIES shall have a smooth, hard, easy-to-clean, impervious surface.	
Hose Bibb	4.10.3.5	At least one hose bibb shall be located in each HYGIENE FACILITY.	
Fixture Requirements	4.10.4	Plumbing Fixture Requirements	
Protected	4.10.4.1.1	PLUMBING FIXTURES shall adequately protect the potable water supply from back siphonage or BACKFLOW.	
Easily Cleaned	4.10.4.1.2	PLUMBING FIXTURES shall be designed so that they may be readily and frequently cleaned, sanitized, and disinfected.	
Showers	4.10.4.2	Showers	
Shower Count	4.10.4.2.1	Total male and female shower count shall be in accordance with applicable state and local CODES or as modified herein. The total count will at a minimum, be equal to half of the total toilet count	
Rinse Showers	4.10.4.2.1.1	RINSE SHOWERS adjacent to AQUATIC VENUES may be included in the count of available showers.	
Ratio	4.10.4.2.1.2	The ratio for RINSE SHOWERS to CLEANSING SHOWERS shall be up to 3:1.	
Compartments	4.10.4.2.2	CLEANSING SHOWER compartment entryways shall be enclosed by a door or curtain.	
Doors	4.10.4.2.2.1	Shower doors shall be of a smooth, hard, easy-to-clean material.	
Curtains	4.10.4.2.2.2	Shower curtains shall be of a smooth, easy-to-clean	

Keyword	Section	Code	Grade
		material.	
Rinse Showers	4.10.4.2.3	RINSE SHOWERS shall be located adjacent to the AQUATIC VENUES to allow all BATHERS to rinse off prior to entering the AQUATIC VENUES.	
Floor sloped	4.10.4.2.3.1	Floors of RINSE SHOWERS shall be sloped to drain wastewater away from the AQUATIC VENUE.	
Toilets	4.10.4.3	Toilets and Urinals	
Counts	4.10.4.3.1	Total male and female toilet or urinal counts shall be in accordance with applicable state and local CODES or as modified herein.	
Diaper-Changing Stations Defined	4.10.4.4	Diaper-Changing Stations	
	4.10.4.4.1	DIAPER-CHANGING STATIONS are defined to include a DIAPER-CHANGING UNIT, adjacent handwashing sink, soap dispenser, and trash receptacle, and disinfectant products to clean the changing surface after use.	
One station in each bathroom	4.10.4.4.2	All venues allowing diaper-aged BATHERS shall have at least one DIAPER-CHANGING STATION in each male and female HYGIENE FACILITY or make available a uni-sex DIAPER-CHANGING STATION.	
Conform	4.10.4.4.3	DIAPER-CHANGING UNITS shall conform to ASTM standard F2285-04 "Consumer Performance Standards for Commercial Diaper-Changing Stations" or the standards for diapering-changing surfaces in the most current version of Caring for Our Children: National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs.	
Signage	4.10.4.4.4	Signage shall be posted at DIAPER-CHANGING STATIONS stating: <ol style="list-style-type: none"> 1) Dispose of used disposable diapers in the diaper bucket or receptacle provided. 2) Dump contents from reusable diapers into toilets and bag diapers to take home. 3) Use the materials provided to clean/sanitize the surface of the DIAPER-CHANGING STATION before and after each use. 4) Wash your hands and your child's hands after diapering. 5) Do not swim if ill with diarrhea. 	
Unisex	4.10.4.4.5	If only a unisex HYGIENE FACILITY is provided, it must have a DIAPER-CHANGING STATION that conforms to 4.10.4.4.	

Keyword	Section	Code	Grade
Sink and soap	4.10.4.4.6	A hand-washing sink and soap dispenser shall be directly adjacent to the DIAPER-CHANGING UNIT.	
Trash Can	4.10.4.4.7	A covered, hands-free, plastic-lined trash receptacle or diaper pail shall be located directly adjacent to the DIAPER-CHANGING UNIT.	
Sanitizing Wipes	4.10.4.4.8	Dispensers of EPA-registered detergent-disinfectant and disposable towel dispensers, sanitizing wipes, or disposable covers shall be provided for cleaning and sanitizing the DIAPER-CHANGING UNIT surface before and after each use.	
Non-Plumbing Fixtures	4.10.4.5	Non-Plumbing Fixture Requirements	
Easy to Clean	4.10.4.5.1	All HYGIENE FIXTURES and appurtenances in the dressing area shall have a smooth, hard, easy-to-clean, impervious-to-water surface and be installed or raised above the floor to permit thorough cleaning.	
Lockers	4.10.4.5.2	Lockers shall be set either on a solid base at least 6 inches (15cm) high or on legs at least 6 inches high and far enough apart to allow for drying and cleaning underneath the locker.	
Soap Dispensers	4.10.4.5.3	Soap dispensers shall be securely attached adjacent to hand-washing sinks and at each CLEANSING SHOWER.	
Dispenser Materials	4.10.4.5.3.1	The dispensers shall be of all metal, plastic or other shatterproof materials that can be readily and frequently cleaned.	
Glass	4.10.4.5.3.2	Glass shall not be permitted in AQUATIC VENUES.	
Dryers/ Paper Towels	4.10.4.5.4	Hand dryers or paper towel dispensers shall be provided and securely attached adjacent to hand-washing sinks.	
Materials	4.10.4.5.4.1	Hand dryers and paper towel dispensers shall be of all metal, plastic or other shatterproof materials that can be readily and frequently cleaned.	
Toilet Paper Holders	4.10.4.5.5	Toilet paper holders shall be securely attached to wall or partition adjacent to each toilet.	
Female Facilities	4.10.4.5.5.1	In female HYGIENE FACILITIES, covered receptacles adjacent to each toilet shall be provided for disposal of used feminine hygiene products.	
Trash Can	4.10.4.5.5.2	A minimum of one hands-free trash receptacle shall be provided in areas adjacent to hand-washing sinks.	
Mirrors	4.10.4.5.6	All mirrors provided in HYGIENE FACILITIES or dressing areas shall be of shatterproof materials that can be readily and frequently cleaned.	

Keyword	Section	Code	Grade
<i>Suits and Towels</i>	4.10.5	Suits and Towels	
<i>Reusable Suits and Towels</i>	4.10.5.1	Facilities providing reusable suits and towels shall provide adequate cleaning, sanitizing, drying and storage of these materials.	
<i>Foot baths</i>	4.10.6	Foot baths	
<i>Prohibited</i>	4.10.6.1	FOOT BATHS shall be prohibited.	
<i>Sharps</i>	4.10.7	Sharps	
<i>Sharps Container</i>	4.10.7.1	If razors or other sharps are provided by the facility an approved sharps container must be provided.	
<i>Biohazard Action Plan</i>	4.10.7.2	A biohazard action plan shall also be on file as required by LAW.	

Model Aquatic Health Code Hygiene Facilities Module

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	5.0	Operation and Maintenance	
	5.1	Plan Submittal	
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	5.8	Decks and Equipment	
	5.9	Filter/Equipment Room	
<i>Hygiene Facilities</i>	5.10	Hygiene Facilities	
<i>General</i>	5.10.1	General	
<i>Cleaned Daily</i>	5.10.1.1	HYGIENE FACILITY fixtures and dressing area fixtures, floors, and furniture shall be cleaned and sanitized daily with an EPA-approved product and as needed to provide a clean and sanitary environment.	
<i>Mold and Mildew</i>	5.10.1.2	HYGIENE FACILITY floors, walls, and ceilings shall be kept clean and free of visible mold and mildew.	
<i>Location</i>	5.10.2	Location [N/A]	
<i>Bathroom Design</i>	5.10.3	Bathroom Design [N/A]	
<i>Fixture Requirements</i>	5.10.4	Fixture Requirements	
<i>General Requirements</i>	5.10.4.1	General Requirements	
<i>Cleaned and Sanitized</i>	5.10.4.1.1	HYGIENE FACILITY fixtures and dressing area fixtures and furniture shall be cleaned and sanitized daily with an EPA-approved product and as needed to provide a clean and sanitary environment.	
<i>Showers</i>	5.10.4.2	Showers	
<i>Cleaned and Sanitized</i>	5.10.4.2.1	Showers shall be cleaned and sanitized daily with an EPA-approved product and as needed to provide a clean and sanitary environment.	
<i>Easy Access</i>	5.10.4.2.2	RINSE SHOWERS shall be easily accessible.	
<i>Not Blocked</i>	5.10.4.2.3	Equipment and furniture on the POOL DECK shall not block access to RINSE SHOWERS.	
<i>Temperature</i>	5.10.4.2.4	<i>RINSE SHOWER water shall not require heating.</i>	
<i>No soap at Rinse Showers</i>	5.10.4.2.5	Soap dispensers and soap shall be prohibited at RINSE SHOWERS.	

Keyword	Section	Code	Grade
Toilets	5.10.4.3	Toilets and Urinals	
Lavatories	5.10.4.1	Toilets and urinals shall be cleaned and sanitized daily with an EPA-approved product and as needed to provide a clean and sanitary environment.	
Toilet Paper	5.10.4.2	Toilet paper shall be provided at all times.	
Diaper-Changing Stations	5.10.4.4	Diaper-Changing Stations	
Maintenance	5.10.4.4.1	DIAPER-CHANGING STATIONS shall be cleaned and sanitized at least daily or as needed. They shall be kept in good condition and free of visible contamination.	
Non-Plumbing Fixtures	5.10.4.5	Non-Plumbing Fixture Requirements	
Well-stocked	5.10.4.5.1	Paper towels, toilet paper dispensers, and EPA-approved cleaner-disinfectant or sanitizing wipes shall be provided.	
Liquid Soap	5.10.4.5.2	Soap dispensers at sinks and CLEANSING SHOWERS shall be kept full of liquid or granular soap.	
Bar soap prohibited	5.10.4.5.2.1	Bar soap shall be prohibited.	
Trash	5.10.4.5.3	Trash receptacles shall at a minimum be emptied daily or as needed.	
Wooden Racks	5.10.4.5.4	Wooden racks, also known as duckboards, and mats are prohibited on HYGIENE FACILITY and dressing area flooring.	
Shared Equipment	5.10.5	Suits, Towels, and Shared Equipment	
Cleaned and Sanitized	5.10.5.1	Suits and towels that are provided by the facility shall be cleaned, sanitized, and thoroughly dried after each use.	
Used Suits and Towels	5.10.5.1.1	Used suits and towels shall be kept separate from clean suits and towels and kept in good repair.	
Receptacles	5.10.5.1.2	Receptacles shall be provided for collection of used suits and towels.	
Shared Equipment	5.10.5.2	Shared equipment, including but not limited to snorkels, nose clips and goggles, fins, kick boards, and noodles, provided by the facility shall be cleaned, sanitized, and thoroughly dried after each usage.	
Good Repair	5.10.5.2.1	Shared equipment shall be in good repair.	
Used Equipment	5.10.5.2.2	Used shared equipment shall be kept separate from clean shared equipment.	

Keyword	Section	Code	Grade
Receptacles	5.10.5.2.3	Receptacles shall be provided for collection of used shared equipment.	