

specific and thorough; recommend either more detail that is consistent with ISPSC or a reference to the ISPSC section. -- **4.5.4.2** Acceptable means of access/egress shall include stairs/handrails, grab rails/recessed steps, zero depth entries. SEE General Concern/Comment under Basis for Change. – **REFERENCE:** ISPSC Section 411.1.

Changes to Code/Annex:

Additional means of access listed.

- *Comment:*

4.5.5.3 – *There is a 6 inch difference in water depths that mandates pool stairs extending below the static water level and there is also 6 inches difference in the depth the stairs must travel below the water level. Suggest that the language be changed to match the ISPSC.* -- **4.5.5.3** Where stairs are provided in pool water depths **greater than 3.5 feet (1.07 m)**, they shall extend to a minimum depth of **3.5 feet** below the static water level. **411.2.4** Bottom tread. Where stairs are located in water depths **greater than 48 inches (1219 mm)**, the lowest tread shall be not less than **48 inches (1219 mm)** below the deck and shall be recessed in the pool wall. RECOMMEND changing 4.5.5.3 to align with 411.2.4 of ISPSC.

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.5.9.2.2 – *There is a one inch difference with the ISPSC on minimum horizontal clear space between hand rails. This is another example of where inconsistency between codes will cause problems for the local building and health departments, as well as the contractor and consumer/pool owner.* -- **4.5.9.2.2** The horizontal clear space between hand rails shall be not less than ~~17~~**18** inches (45.7 cm) and not more than 24 inches (61 cm). – **REFERENCE:** See Section 322.4.3 of the ISPSC

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.5.9.2.4 – *There is no justification or data for this requirement to differ from what is in the current ISPSC. This is another example of inconsistencies between the codes. If this requirement were to remain, many ladders currently on the market would not be able to meet it without having to purchase expensive tooling at a minimum, and even after such purchase, it may not be technically feasible for manufacturers to produce compliant ladders using current manufacturing methods. An example of a typical clearance for ladders currently on the market is a range between 4.5” to 5.5”.* -- The clear space between hand rails and the POOL wall shall be not less than ~~5.08~~**32** inches (~~129~~**813**mm) and not more than ~~64~~**64** inches (~~1626~~**1626**mm). – **REFERENCE: See ISPSC Section 322.3.1 Wall clearance.** There shall be a clearance of not less than 3 inches (76 mm) and not greater than 6 inches (152 mm) between the pool wall and the *ladder*.

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.5.10.2 – *Zero depth sloped entries are better identified and defined in Chapter 6 (Aquatic Recreation Facilities) of the ISPSC. And D-3 pools have specific requirements not found here. The further break down of the different Public swimming pools is clearly an advantage in addressing the differences of public swimming pools. There is also a two foot difference in the water depth requirement from the ISPSC, see Section 602.1 -- 4.5.10.2 Zero depth entries shall have a maximum floor slope of 1:12 to a water depth of 53 feet (91.4 cm). – REFERENCE: ISPSC Section 602.1*

Changes to Code/Annex:

Minor modifications made to this section.

- *Comment:*

4.5.12 – *Restricts color of interior to “white or light pastel” whereas ISPSC Section 307.7 and ANSI/APSP-1 state “shall not obscure objects or surfaces...” Thus allowing any color that allows for visibility. There is no evidence that “light colors” insure greater visibility. – REFERENCE: See ISPSC Section 307.7 and ANSI/APSP-1*

Changes to Code/Annex:

Recommendation not implemented. Refer to the annex for additional rationale.

- *Comment:*

4.5.14.1 – *ISPSC allows handholds to be located no more than 12 inches above design water line. An unnecessary conflict has been created. The ISPSC language is correct. There is no reason to restrict the depth of the handhold or to preclude its location up to 12 inches above. -- Where not otherwise exempted, every POOL shall be provided with hand holds (perimeter gutter system, coping, or cantilevered decking) around the entire perimeter installed not greater than 9 inches (22.9 cm) above, or 3 inches (7.62 cm) below static water level. SEE GENERAL COMMENT under Basis for Change. – REFERENCE: See ISPSC Section 323.1*

Changes to Code/Annex:

Recommendation implemented.

Comment:

4.5.16.2 – *Another discrepancy, this time of a 1/4”, from what is in the ISPSC. -- The edges of UNDERWATER BENCHES shall be outlined with slip-resistant color contrasting tile or other permanent marking of not less than ~~1 inch (2.54 cm)~~ 3/4 inch (1.91 cm) and not greater than 2 inches (5.08 cm). SEE General Comment under Basis for Change. – REFERENCE: See section 610.6.4 of the ISPSC.*

Changes to Code/Annex:

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Recommendation implemented.

- *Comment:*
4.5.16.4 – *There is a discrepancy of 4 inches between this section & section 411.5.2 of the ISPSC. Further, underwater seats and swim-outs are also addressed in Section 610.6 and 610.7 of Chapter 6 (Aquatic Recreation Facilities) of the ISPSC. Another example of discrepancy by having construction and design elements in two codes that ultimately should complement each other. -- The maximum submerged depth of any seat or sitting bench shall be 24 20 inches (~~61 cm~~) measured from the water line. SEE General Comment under Basis for Change. – **REFERENCE:** See section 411.5.2 of the ISPSC.*

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*
4.5.17.3 – *States that ledges shall only be provide within areas of a pool with water depths of 5 feet or greater. It does not state the minimum distance below the water surface it should be located. Can they be in pools less than 5 feet? What is the width of the ledge? -- UNDERWATER TOE LEDGES for resting shall only be provided within areas of a POOL with water depths of 5 feet (1.52 m) or greater. See General Comment under Basis for Change. – **REFERENCE:** See 404.1 of the ISPSC*

Changes to Code/Annex:

Refer to 4.5.17.6 for allowable tread depth. Clarification has been added that toe ledges may not be less than 4 feet below the water surface. They are not permitted in water shallower than 5 feet because it discourages “wall walking” by children who are poor swimmers and shouldn’t be in deep water.

- *Comment:*
4.5.19.1.4 – *Why the difference in six inches? Another example of conflict between MAHC and ISPSC that will cause considerable problems for the enforcement side, contractor, and consumer. -- 4.5.19.1.4 Depth markers shall also be located on the POOL coping or deck within 42 18 inches (~~30.5 cm~~) (46.6 cm) of the POOL structural wall or perimeter gutter. See General Comment under Basis for Change. – **REFERENCE:** See ISPSC, Section 409.2.5*

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*
4.5.19.3.1 – *An discrepancy between stated depth and actual depth over three inches is not acceptable, and can create a risk of drowning or other injury by misleading bathers, supervising adults, or lifeguards as to the true depth of the water. Three inches is sufficient to account for variation in depth due to water level. -- 4.5.19.3.1 Depth markers shall be located to indicate water depth to the nearest 6 inches (15.2 cm), as measured from the POOL floor 3 feet (91.4 cm) out from the POOL wall to the gutter lip, mid-point of surface*

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skimmer(s), or surge weir(s). See General Comment under Basis for Change. –

REFERENCE: See ISPSC, Section 409.2.3

Changes to Code/Annex:

Recommendation implemented. Depth markers shall be provided to the nearest 3 inches.

- *Comment:*

4.5.19.4.1 – *This section is inadequate because it does not address maximum interval between signs and therefore fails to ensure that a sign will be within the line of vision of a bather. It also fails to reference NEMA Z535 -- 4.5.19.4.1 For POOL water depths 5.0 feet or shallower, all depth markers required by section 4.5.19 above shall be provided with the universal international symbol for “NO DIVING” directly adjacent to the depth marker. See General Comment under Basis for Change. – REFERENCE:* See ISPSC, Section 409.3, NEMA Z535

Changes to Code/Annex:

Initially, the international no diving symbol was required adjacent to the depth markings for water less than 5 feet. And these depth markings were required at 25 ft max spacing per 4.5.19 and the reference to that section in 4.5.19.4.1. However, this section has been modified to require the “No Diving” verbiage with the symbol and will therefore not be adjacent to the depth markings necessarily. So a 25 ft interval requirement has been added here.

- *Comment:*

4.6.1.3.1 – *Large discrepancy for indoor and outdoor requirements here from what is in the ISPSC. -- 4.6.1.3.1 POOL water surface and POOL DECK light levels shall meet the following minimum maintained light levels:*

- 1) Indoor Water Surface - 30 horizontal footcandles
 - 2) Outdoor Water Surface - 10 horizontal footcandles
 - 3) POOL DECK - 10 horizontal footcandles
- **REFERENCE:** See ISPSC, Section 321.2.2

Changes to Code/Annex:

Recommendation not implemented. Current proposal submitted to the ISPSC to align with MAHC lighting requirements.

- *Comment:*

4.6.1.4.1 – *Difference of 2 lumens per square foot of pool water with ISPSC, where it is minimum of 8 lumens per square foot of pool water. Suggest using Section 321.2.3 language. -- Underwater lighting of not less than 6 initial rated lumens per square foot of POOL water surface area shall be provided. Higher un -- REFERENCE:* See ISPSC, Section 321.2.3

Changes to Code/Annex:

- **Recommendation not implemented. Refer to the annex and basis for conversions. It is recommended that future studies be conducted to determine minimum lighting requirements based on water depth, hours of operation, and overhead lighting design. The main goal is to be able to see the bottom of the pool at all times when the pool is open to the public.**
- *Comment:*
4.6.1.6.1 – *Suggested revision to change the emergency lighting requirement to “...in no case shall the path of egress be illuminated to less than a maintained value of ~~0.5~~ 0.6 footcandles.” This would allow for the IBC requirement of 1 footcandle to apply, but still allow the illumination to decline during the 90 minutes of operation. The absolute minimum in either case would then be 0.6 footcandles.* -- POOL areas requiring lighting shall be provided with emergency egress lighting in compliance with the applicable Building Code, but in no case shall the path of egress be illuminated to less than a maintained value of ~~0.5~~ 0.6 footcandles. – **REFERENCE:** See ISPSC, Section 321.3 and IBC, Section 1006.3.1

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*
4.6.3.2 – *This section will create confusion. It also fails to reference NFPA 70, which thoroughly addresses this issue. The MAHC should reference Section 316.4 of the ISPSC, which includes the appropriate references and citations.* -- Where pool-water heating equipment is installed with valves capable of isolating the heating equipment from the pool, a listed pressure-relief device shall be installed to limit the pressure on the heating equipment to no more than the maximum value specified by the heating-equipment manufacturer. See General Comment under Basis for Change – **REFERENCE:** See ISPSC, Section 316.4

Changes to Code/Annex:

NFPA 70 reference added to the other standards listed in 4.6.3.1 of the annex.

- *Comment:*
4.6.3.3 – *Same as above. Suggest using language in Section 316.4 of the ISPSC.* -- Pool-water heating equipment shall be selected and installed to preserve compliance with the applicable codes, the terms of listing, and labeling of equipment, and with the equipment manufacturer’s installation instructions. See General Comment under Basis for Change – **REFERENCE:** See ISPSC, Section 316.4

Changes to Code/Annex:

NFPA 70 reference added to the other standards listed in 4.6.3.1 of the annex.

- *Comment:*
4.6.7.2 – *This will allow facilities where the 48” egress width is not adequate to still comply. This does not change the requirement in the MAHC, but allows it to coordinate with the*

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egress requirements in the IBC. The IBC requires a minimum width of 44", but this can increase based on the occupant load. The IBC will use a factor of 0.2" per person to determine the required egress path width. -- When a spectator area or an access to a spectator area is located within the POOL ENCLOSURE, the POOL DECK adjacent to the area or access shall be an additional 4 feet (1.22 m) wider than provide egress width for the spectators in addition to the width required by Section 4.8.1.5. The additional width shall be based on the egress requirements in the Building Code based on the occupant load served with a minimum width of 4 feet (1.22 m) and have either of the following: -- **REFERENCE:** See IBC

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.6.7.4 – *The ICC 300 Standard is available in 2012 Edition. This section should reference the 2012 edition or refer to the most recent addition of the ICC 300 Standard.* -- 4.6.7.4 Bleachers in a spectator area shall be designed according to International Code Council 300-2007 which has been approved for reference in the 2007 Supplement to the International Codes or another applicable CODE. See General Comment under Basis for Change – **REFERENCE:** ICC 300 Standard

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.8.6.2.3 – *The MAHC should confine itself to the dimensional or construction requirements. The current language fails to provide a maximum and is therefore not enforceable. ISPSC Section 305.27 states the maximum opening formed by a chain-link fence shall not be more than 1.75".* -- **ENCLOSURES** shall be constructed in such a way as to discourage climbing. Horizontal mid-rails are not permissible. Chain-link fencing constructed with standard 2 inches (5.08 cm) mesh is considered climbable and is therefore not permitted. Chain-link fencing constructed of 1 1/4 inches (3.18 cm) mesh is permissible. Chain-link fencing shall have a maximum opening of 1-3/4 inches (4.4 cm). – **REFERENCE:** ISPSC Section 305.27

Changes to Code/Annex:

Recommendation implemented.

Comment:

4.8.6.2.7.1 – *ISPSC Section 305.2.1 and IBC Section 3109.3 require public pools to be completely enclosed by a fence not less than 4 feet (1290mm) in height or a screen enclosure* -- Enclosures shall not be less than ~~4 6 feet (1.22m) (1.83m)~~ 4 6 feet (1.22m) in height. General Comment, See Basis for change – **REFERENCE:** ISPSC and IBC.

Changes to Code/Annex:

Recommendation not implemented. Current state and local standards have a fair amount of disagreement on the preferred minimum height. Many allow 4 feet for unguarded pools (with higher minimum requirements for guarded public pools). However, it was felt that even unguarded pools have some hours of use and entry should be discouraged when it's not intended. 4 foot high fences are generally climbable, even with chain links of 1.75".

- *Comment:*
4.8.6.3.5 – *Current MAHC language is inadequate and fails to state what is required. This section should state the requirement, not what is “allowed.” Should refer to the ISPSC. -- Exit gates or doors shall open outward away from the aquatic venue be allowed to swing outward. -- REFERENCE: ISPSC, Section 305.3*

Changes to Code/Annex:

This section has been modified with alternate language.

- *Comment:*
4.8.6.3.7 – *Uses non-mandatory (may). Further, there is a conflict in height of self-latching devices above finish grade between this section and the IPSC. Suggest using ISPSC Section 305.3 language. – REFERENCE: ISPSC, Section 305.3*

Changes to Code/Annex:

Recommendation not implemented. “May” is not used in this paragraph. It is felt that a latch 3” from the top of a 4 ft high gate, which would be allowed by ISPSC is not safe since small children can operate the gate from outside of the pool enclosure.

- *Comment:*
4.9.1.1.4 – *IPC thoroughly addresses hose bibbs, and MAHC should reference same to ensure consistency. -- 4.9.1.1.4 At least one (1) hose bibb with backflow preventer shall be located in the equipment room or area and shall be installed in accordance with the International Plumbing Code.*

Changes to Code/Annex:

A reference to the International Plumbing Code has been added.

- *Comment:*
4.9.1.8.2.3 – *This section ignores the ventilation requirements of the International Fire Code (IFC) and International Building Code, . See: 2012 IFC - Section 5004.3 Ventilation. Indoor storage areas and storage buildings shall be provided with mechanical exhaust ventilation or natural ventilation where natural ventilation can be shown to be acceptable for the materials as stored. Exception: Storage areas for flammable solids complying with Chapter 59. -- 4.9.1.8.2.3 There shall be no ducts, grilles, pass-throughs, or other openings connecting such equipment rooms to chemical-storage spaces except as permitted by the International Fire Code and International Building Code. – REFERENCE: IFC, Section 5004.3*

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Changes to Code/Annex:

Recommendation implemented. Reference to the International Fire Code added

- *Comment:*

4.9.1.8.3.1.1 – *This section ignores the IBC Section 1003.5 or as part of the accessible route requirements of Section 1104, including Section 1104.3.1) and Section 5004 of the International Fire Code regarding storage of hazardous material or equipment. --*

4.9.1.8.3.1.1 Exception 1. This requirement may be met by a floor all of which is at least four inches below the level of the nearest part of the natatorium floor. General Comment – **REFERENCE:** IBC Section 1003.5, Section 5004 of the International Fire Code

Changes to Code/Annex:

Recommendation not implemented. Mechanical spaces are exempt from accessibility requirements.

- *Comment:*

4.9.1.8.3.2.1 – *The section should require that the door closes and ‘latches’.* -- The door, frame, and automatic closer shall be installed and maintained so as to ensure that the door closes completely and reliably latches without human assistance.

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.9.2.1.1 – *Pool chemicals should not be stored outdoors unless they are kept in a protective enclosure to prevent access by the public and protect the chemicals from sunlight, heat, rain, etc.* -- Pool chemicals, acids, fertilizers, salt, de-icing chemicals, oxidizing cleaning materials, other corrosive or oxidizing chemicals, and pesticides should be stored outdoors in a protective enclosure such as or in a well-ventilated structure not intended for occupation.

Changes to Code/Annex:

“In a protective enclosure” added.

- *Comment:*

4.9.2.2.2 – The construction of the chemical-storage space shall, to the extent practical, protect the stored materials against tampering, wild fires, unintended ~~unexpected~~ exposure to water, etc.

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.9.2.2, 4.9.9.3, 4.9.2.4, & 4.9.2.6 – *The construction of chemical storage rooms are thoroughly addressed in NFPA 400, the IFPC, and the IBC* – **REFERENCE:** See NFPA

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and I-codes

Changes to Code/Annex:

Annex additions made for 4.9.2.2, 4.9.2.3, 4.9.2.4, and 4.9.2.5. As applicable, the standards of NFPA 400, the IFPC, and the IBC shall prevail. This standard is not intended to provide relief from these other regulations, but to provide best practice where these regulations are not adopted or enforced. The more stringent standard shall prevail as applicable.

- *Comment:*
4.9.2.4.5.6 – *Same change as 4.9.1.8.3.2.1, this section should require that the door closes and “latches.”* -- Such doors shall be equipped with an automatic door closer that will completely close the door and latch without human assistance.

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*
4.9.2.10.1 – *MAHC requires emergency ventilation in Section 4.9.2.10.2. The IFC also requires continuous ventilation but at a much lower exchange rate. It could be possible for only the emergency system to be installed since the user may see that is all that is stated in this document. Adding the new section will meet the IFC/IBC/IMC requirements. Then the ‘emergency ventilation’ system will kick in at 60 air changes per hour.* -- Ozone equipment rooms shall be equipped with an emergency ventilation system capable of 60 air changes per hour. Suggest adding a new section as follows: 4.9.2.10.1.1 The ozone equipment room shall be provided with continuous ventilation of 6 air changes per hour. –
REFERENCE: See Section 6005.3.2 of the IFC

Changes to Code/Annex:

Recommendation implemented. This was a typo in the draft. 6 air changes were intended, not 60.

- *Comment:*
4.9.2.10.3.2 – *IFC requires that the ventilation system operate when the ozone detection system is activated. Section 4.9.2.10.2.2 also requires the emergency ventilation system to operate when the ozone detection system is activated. This recommended change ensures consistency with the IFC requirements.* -- Such ventilation system shall be so arranged as to
 - 1) run automatically concurrent with the ozone equipment and for at least a time allowing for 15 air changes after the ozone equipment is stopped, ~~and~~
 - 2) run upon activation of the ozone detection and alarm system, and
 - 3) run on command of a manual switch. – **REFERENCE:** See IFC Section 502.9.9 Ozone gas generators. Ozone cabinets and ozone gas-generator rooms for systems having a maximum ozone-generating capacity of 1/2 pound (0.23 kg) or more over a 24-hour period shall be mechanically ventilated at a rate of not less than six air changes per hour. For cabinets, the average velocity of ventilation at makeup air openings with cabinet doors

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closed shall be not less than 200 feet per minute (1.02 m/s).

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.11.2.2 – *Unless resolved this will be a conflict with local health authorities and building departments due to difference between MAHC and ISPSC sections.* -- A swimming POOL shall be protected against backflow from a wastewater disposal system consisting of an acceptable air gap unless the permitting agency approves the elimination of the air gap. See General Comment – **REFERENCE:** ISPSC Section 320.1 Backwash water or draining water. Backwash water and draining water shall be discharged to the sanitary or storm sewer, or into an approved disposal system on the premise, or shall be disposed of by other means approved by the state or local authority. Direct connections shall not be made between the end of the backwash line and the disposal system. Drains shall discharge through an air gap.

Changes to Code/Annex:

Recommendation implemented. Section modified to reflect potable water supply. Direct connections are allowed by some local jurisdictions for potable water supply with approved backflow preventers and this standard is not intended to contradict them.

- *Comment:*

4.11.2.2.1 – *Why is the stopping point 10 inches? Why not 9 or 11? This conflicts with the IPC, which is accepted nationally. IPC Section 802.2.1 Air gap. The air gap between the indirect waste pipe and the flood level rim of the waste receptor shall be not less than twice the effective opening of the indirect waste pipe.* -- The air gap shall consist of a vertical distance of not less than 2 pipe diameters of the POOL wastewater discharge pipe up to a maximum of 10 inches (25.4 cm) over the highest free-flowing discharge point of the receiving pipe, tank, or vessel. – **REFERENCE:** See IPC Section 802.2.1

Changes to Code/Annex:

This paragraph and the preceding one have been deleted as they are redundant with the first section under Cross-Connection Control (4.11.3). The minimum air gap requirement is two pipe diameters or 6 inches, whichever is greater.

- *Comment:*

4.11.4.1 – *Another inconsistency between the MAHC and ISPSC, the MAHC being subjective in nature where the requirements in the ISPSC for over-the-rim spouts are clear. Suggest referring to the ISPSC in order to provide consistency and not create another area where local building and health officials may differ.* -- 4.11.4.1 If a fill spout is used at a pool, the fill spout shall be located so that it is not a SAFETY hazard to BATHERS. – **REFERENCE:** See ISPSC Section 318.3 Over-the-rim spouts. Over-the-rim spouts shall be located under a diving board, adjacent to a ladder, or otherwise shielded so as not to create a hazard. The open end of such spouts shall not have sharp edges and shall not protrude more than 2 inches (51 mm) beyond the edge of the pool. The open end shall be

separated from the water by an air gap of at least 1.5 pipe diameters measured from the pipe outlet to the rim.

Changes to Code/Annex:

Recommendation implemented. Language modified slightly.

- *Comment:*

4.11.6.3 – *The way it is currently written, it sounds like it is the wastewater that is required rather than the permit.* -- Wastewater discharged from a swimming POOL to surface waters may be required to obtain a permit for disposal.

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.12.1.2 – *The recommended changes provide requirements for exercise spas and spas designed for a special purpose – areas covered in the ISPSC, Section 503.1, but missing here. Without this additional language the MAHC proposes to put all spas in a one size fits all category; limiting design and function.* -- The maximum water depth in spas shall be 4 feet (1.22 m) measured from the design water line, except for spas that are designed for special purposes and approved by the authority having jurisdiction. The water depth for exercise spas shall not exceed 6 feet 6 inches (1981mm) measured from the design waterline. – **REFERENCE:** See ISPSC Section 503.1

Changes to Code/Annex:

Recommendation implemented.

- *Comment:*

4.12.1.2.1 – *Another inconsistency between the ISPSC and MAHC regarding spa design and construction.* -- The maximum submerged depth of any seat, or sitting bench, or multi-level seating shall be 284 inches (71164 mm) measured from the design water line to the lowest measureable point. – **REFERENCE:** See ISPSC Section 503.2

Changes to Code/Annex:

Recommendation implemented

- *Comment:*

4.12.1.5.4 – *What is considered an effective barrier? What is the intent of this requirement? Once again this is another subjective requirement in the MAHC that will be problematic for the AHJ and users of the code. It also is another example of inconsistency with the ISPSC (see Section 607 Barriers).* -- If an effective BARRIER is not provided, a minimum distance of 4 feet (1.22 m) between the POOL and SPA is required. SEE GENERAL COMMENT – **REFERENCE:** SECTION 607 – BARRIERS
607.1 Barriers. Multiple aquatic vessels within a single complex shall be permitted without barriers where a barrier separates the single complex from the surrounding property in accordance with Section 305.

Changes to Code/Annex:

Recommendation not implemented. Refer to the glossary and annex for clarification on intent.

- *Comment:*

4.12.1.7 – Clarifies it is the incoming makeup water that shall not exceed the maximum temperature. Consistent with ISPSC Section 507.1 -- Water temperature entering the spa from the heat source shall not exceed 104°F (40°C). – **REFERENCE:** See ISPSC Section 507.1

Changes to Code/Annex:

Recommendation not implemented.

- *Comment:*

4.12.1.12, 4.12.2.5.4, 4.12.3.4.4, 4.12.4.8, and 4.12.9.6 – There is no code section from the Contamination Burden TC, so the design committee, the burden committee or some other committee will need to draft some verbiage for bather load limits if they are not in another section already.

Changes to Code/Annex:

Agreed. These were internal notes and maximum bather loads will be in the final MAHC.

- *Comment:*

4.12.3.2.2 – What is the rationale for this requirement, which appears to be an unnecessary expense and once again conflicts with the ISPSC, Section 605.1 -- ~~WAVE POOLS shall be provided with handholds at the static water level or not more than 6 inches above the static water level.~~ – **REFERENCE:** See Section 605.1

Changes to Code/Annex:

Recommendation not implemented

31. Vicki Russo, City of Pacifica (Pacifica, CA)

- *Comment:*

4.8.3.3 -- Consistent with USA Swimming regulations -- Change to, "In pools with water depth 4 feet (1.22 meters) or more at starting end, starting platforms shall not be higher than 2 feet 6 inches (.762 meters) above surface of water." – **REFERENCE:** USA Swimming Rule Book page 46, 103.13 Starting Platforms, Short Course Yards

Changes to Code/Annex:

Agreed. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the

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auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

32. Adam Zaczkowski, USA Swimming (DeWitt, NY)

- *Comment:*

4.8.3.3 -- Safety, pools remaining open. -- Currently the minimum depth to use blocks in competition is 4.0 feet and according to Risk Management Services, there have been no bottom strikes since going to this depth. The US has lost over 1,100 pools in the country last season (2011-2012). Going to the new proposed depth will cause even more pools to go off line and be unusable for swim meets. If these new minimum depth requirements are passed, many of our existing pools will be useless for holding swim meets without major costly renovation. -- Starting Block Depth should be 4 ft (1.2921m) for competitive swimming meets and competitions

Changes to Code/Annex:

Agreed. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the

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reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

33. Brian Edmister, GVST Swim Team (Belmont, NY)

- *Comment:*

4.8.3.3 -- *The current depth of 4'0" is sufficient to safely use starting platforms. No injuries have been reported at that depth in our pool.* -- Starting Platforms shall be installed with a minimum depth of 6'7".

Changes to Code/Annex:

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34. Jon Larson, Emmaus Aquatic Club (Emmaus PA)

- *Comment:*

4.8.3.3 -- *Every sanctioning body of competitive swimming has implemented policies regarding minimum depth. Since implementation, there have been no reports of bottom strikes. It is important to note that increasing the minimum to over 6 feet would eliminate so many facilities that the impact on competitive swimming in the US would be catastrophic.* -- Starting platforms shall be installed in a minimum water depth of 4 feet and 0 inches.

Changes to Code/Annex:

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35. Chris Miller, GCIT (Sewell, NJ)

- *Comment:*

4.8.3.3 -- *No empirical evidence of increased danger at that depth, nor empirical evidence showing a change to 2m will decrease any casualties.* -- Depth of water for competition starting blocks should follow FINA and USA Swimming recommendations of 1.35 meters. – **REFERENCE:** FINA guidelines and US Swimming’s Risk Management firm.

Changes to Code/Annex:

Agreed. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the

auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

36. Matthew Sprang, Middle Atlantic Swimming (Sewell, NJ)

- *Comment:*
4.8.3.3 -- Proposed change shall cause irreparable harm to many businesses, children, and the livelihood of many individuals depending on the use of aquatics facilities for their employment. The proposed changes will also do so much harm to the sport of swimming in the United States. Last year alone over 1,100 pools closed in the US. This rule change will force many more facilities to either move forward with extremely costly renovations or close their doors (at least for competitions) as well. We, in Middle Atlantic Swimming, are desperately trying to find more competitive opportunities for our athletes. This proposed rule change will only take competitive opportunities away. Likewise, Risk Management Services, the insurance company which provides coverage for all USA Swimming affiliated teams, has stated that the current allowable depth for starting platforms is more than enough to provide a safe depth for racing starts when a swimmer has been certified as being able to perform a racing start by a USA Swimming Coach Member.-- Maintain current depth for use of starting platforms but require a depth of 6 feet for the teaching of racing starts until the swimmer is certified as proficient as per USA Swimming current standards.

Changes to Code/Annex:

Agreed. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools

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and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

37. Cindy Passalacqua, Jersey Devilrays Swimming (Westampton, NJ)

• *Comment:*

4.8.3.3 -- Starting platforms shall be installed in a minimum water depth of 6 feet and 7 inches (2.01 m). This ruling will render many of the pools in the NJ, DE and PA area useless for swim competitions. There are not enough pools available already for all the swimmers in the Middle Atlantic LSC. USA Swimming requires us to certify that all our swimmers who step up on the blocks are racing start certified, so that they don't dive too deep. Renovation costs will probably force many of the affected pools to stop hosting swim meets. This includes high school swim meets and the summer rec leagues that are very popular in the Tri-State area. Please keep the pool depth for the blocks at the current 4.0 feet.

Changes to Code/Annex:

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addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

38. TJ Liston, YMCA of Central Virginia (Lynchburg, VA)

- *Comment:*

4.8.4.4 (perhaps intended 4.8.3.3?) – USAS-Swimming Rules and regulations -- Starting platforms shall be installed in a minimum water depth of 6 feet 7 inches (2.01 m). – **REFERENCE:** USA-Swimming falls under the US-Olympic Committee umbrella and is the leading organization in competitive swimming. Their rules and regulations have a depth of 4 feet or greater for competitions. 6'7" will eliminate an extraordinary number of competitive facilities across the country and many of the facilities will close without swim team support. Please reconsider the USAS depth levels for racing starts/platforms.

Changes to Code/Annex:

- **Agreed. (actually referring to section 4.8.3.3) Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.**

- *Comment:*
4.6.2 – No change- just encouraging looking at pools different from other open areas to ensure air quality. Thank you. – Ventilation

Changes to Code/Annex:

Not sure what reference is being made. See Ventilation module for exact guidance

39. Kelly Mcclanahan, Univ of Northern Colorado (Greeley, CO)

- *Comment:*
4.8.3.3 -- This will hurt many club, high school and college programs who cannot afford to reconstruct their pools to adhere to that depth. -- Do not implement the 6'7" requirement for starting blocks

Changes to Code/Annex:

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40. Doug Colin, Loras College (Dubuque, IA)

- *Comment:*
4.8.3 -- Question – Will this, in the future, be applied to existing pools? If so, it will end many small college, HS, & club programs, as they will not be able to afford the required expense to make the necessary change. If for only new construction, then it is understandable. I believe there is miswording in the text of the proposed document, when

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referring to “springboards” and “jumpboards”. Are you talking about an actual diving springboard (diving board) or to competitive swimming starting blocks? Improper training and reckless, individual horse-play is responsible for nearly all starting block injuries. When trained correctly, an athlete, regardless of size can execute a safe competitive start into water as shallow as 3 feet. Obviously, 3 ft. is not safe for beginners. NCAA and USA Swimming are currently at 4 ft. for minimum depth. But, to go to 6’7” is an extreme.

Changes to Code/Annex:

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41. William Marlin, Potomac Marlins Swim Team (Herndon, VA)

- *Comment:*

4.8.3.3 -- Starting platforms shall be installed in a minimum water depth of ~~6 feet and 7 inches (2.01 m)~~ 4 feet (1.22 meters). Point of Information: 6 ft. 7 inches is the minimum competition pool depth required by FINA for the Olympic Games and World Championships. This is the high performance depth specified for elite level international competition. It is a “fast-pool” factor not a safety feature. FINA’s minimum depth for racing starts is 1.35 meters (4ft. 6 in.). This also is a pool manufactures spec based on standard depth for steel pool walls and is not a safety feature backed up by any research. Editorial Comment: The proposed minimum depth arbitrarily changes the current industry standard with no research or analysis to support that 6’7” is safer than 4’. Editorial Comment: Greater pool depth does not guarantee racing start safety. Proper education, awareness and supervision are the keys. USA Swimming recommends a specific racing start teaching progression and requires that all swimmers must be certified as proficient in performing a

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racing start. Editorial Comment: If the minimum 6’7” recommendation should become part of the final code, it would be very problematic for competitive swimming and even for many recreational programs. Thousands of pools that currently host swim meets and practices for every major aquatic organization would be adversely impacted. – **REFERENCE**: The Councilman Center for The Science of Swimming completed a study in 2011 on racing start safety published in the International Journal of Aquatic Research and Education. Pages 187-198 of this study address the demonstrated ability of competitive swimmers to modify racing start depth when directed. Go to:
http://www.indiana.edu/~kines/pdf_files/council/White_2011.pdf

Changes to Code/Annex:

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**42. Erik Cozadd, Boys & Girls Clubs of Deep East Texas
(Nacogdoches, TX)**

- *Comment:*
4.8.3.2 – Starting platforms shall be used only for competitive swimming competition and training ~~only~~ and only under the direct supervision of a coach or instructor. -- Starting platforms shall be used only for competitive swimming competition and training ~~only~~ and only under the direct supervision of a coach or instructor. – **REFERENCE: The Councilman Center for The Science of Swimming completed a study in 2011 on racing start safety published in the International Journal of Aquatic Research and Education. Pages 187-198 of this study address the demonstrated ability of competitive swimmers to modify racing start depth when directed. Go to:**

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http://www.indiana.edu/~kines/pdf_files/council/White_2011.pdf

Changes to Code/Annex:

Agreed. Wording added.

- *Comment:*

4.8.3.3 – *Starting platforms shall be used only for competitive swimming competition and training only and only under the direct supervision of a coach or instructor.* -- Starting platforms shall be installed in a minimum water depth of ~~6 feet and 7 inches (2.01 m)~~ 4 feet (1.22 meters). – **REFERENCE:** The Counsilman Center for The Science of Swimming completed a study in 2011 on racing start safety published in the International Journal of Aquatic Research and Education. Pages 187-198 of this study address the demonstrated ability of competitive swimmers to modify racing start depth when directed. Go to: http://www.indiana.edu/~kines/pdf_files/council/White_2011.pdf

Changes to Code/Annex:

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43. Paul Mostinski, Pennsbury Aquatic Club (Bensalem, PA)

- *Comment:*

4.8.3.3 -- *It is safe for competitive swimmers. USA Swimming doesn't have enough swimming pools for competitions deeper than 4 feet. Only beginners need deeper pools for practices.* -- New language in the main document: Starting platforms shall be installed in a minimum water depth of 4 feet (1.33 m) for competitive swimming competition. Minimum water depth for starts from starting platforms used for training only should be at least 6 feet

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and 7 inches (2.01 m). In the annex: FINA and NCAA allow 4 feet (1.22 m) at starting platforms. It is less than the best Olympic regulations, therefore the requirements for the swimmers starting from blocks have to be enforced: any competing swimmer has to maintain document signed by the coach about the proficiency in starting from the block. Only platforms at the side of the pool not less deep as 6 feet 7 inches (2 m) can be used for any training, for beginners practice of any age. – **REFERENCE:** USA Swimming National Convention report by Mick Nelson (from USA Swimming) about safe use of 4' pools in competitions. My own experience as 3 year practice as a stroke and turn judge.

Changes to Code/Annex:

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44. Corey Doise (Mechanicsville, VA)

Comment:

4.8.3.3 -- Starting platforms shall be installed in a minimum water depth of 4 feet.

Changes to Code/Annex:

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public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

45. William Burnley, Parent of Competitive Swimmer (Mechanicsville, VA)

- *Comment:*
4.8.3.3 -- USA Swimming facilities development pool certification program guidelines. USA swimming is the leading swimming authority in the world. To mandate an increase in pool depth would have a devastating impact on competitive swim programs in America. The current USA Swimming standard of 4 ft water depth at the starting blocks is safe. Please consider consultation with USA Swimming before implementing these overly restrictive rules. -- Starting platforms shall be installed in a minimum water depth of 4 feet. –
REFERENCE: Section 103.2 Water Depth in document -
<http://www.usaswimming.org/Rainbow/Documents/3811efc7-eea6-4e32-a770-94b782a797d3/P-Flash%20certification%20process%20for%20pools%20is%20on%20our%20web%20site.pdf>

Changes to Code/Annex:

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body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

46. Pat Hogan, USA Swimming (Colorado Springs, CO)

- *Comment:*

4.8.3.1 -- *To better clarify the intent of the section.* -- Starting platforms shall be installed and conform to applicable standards established by the Federation Internationale de Natation (FINA), USA Swimming, National Collegiate Athletic Association (NCAA), National Federation of State High School Associations (NFHS), YMCA or other sanctioning bodies.

Changes to Code/Annex

Agreed. Wording added to section

- *Comment:*

4.8.3.1 ANNEX -- *Correction:* FINA's minimum starting depth is 4 feet 6 inches. *Editorial Comment:* Instruction and supervision is the primary key to safety. It is important that the Code and Annex recommend supervision of a certified coach. There is no definitive documentation or research that supports the statement "this depth is unsafe for high school age beginners. Five feet (1.52m) is on the edge of safety for a high school age male to make a starting error." There is no research to support the claim that 6 feet 7 inches is the safest starting depth. Also, 6'7" depth is not the recommended minimum starting depth for Olympic competition. We strongly suggest that you remove the final paragraph in this section since the referenced 1990 study actually reviewed the use of springboards and jumpboards and not starting platforms. The angle of entry for dives off of jumpboards and diving boards is entirely different than for racing starts. This study has no bearing whatsoever on racing start safety. -- The intent is to require 4 feet (1.22 meters) 6 feet 7 inches (2m) water depth unless there is a different governing body (e.g. FINA, USA Swimming, NCAA, NFHS NFSHSA, YMCA, etc.) standard that is applicable for sanctioned competitions and for organized practice. FINA USA Swimming, NFHS and the NCAA allow 4 feet (1.22 m) at starting platforms. As is well documented in case histories and litigation, ~~this depth is unsafe for high school age beginners. Five feet (1.52 m) is on the edge of safety for a high school age male to make a starting error. The most conservative and safest starting depth is 6 feet 7 inches or 2 meters. This is consistent with the recommended minimum starting depth for Olympic competition. A seminal study in 1990 investigated 74 neck injuries occurring with use of springboards and jumpboards. Of these injuries, 12.2% occurred in water less than or equal to 4 ft; 66.2% occurred in water less than or equal to 5 ft., 94.6% occurred in water less than or equal to 6ft. all injuries occurred in water of 7 ft or less. These data support increased the diving depth under diving boards or starting blocks due to the increased height before entry and associated increased body velocity.~~ The Counsilman Center for The Science of Swimming completed a study in 2011 on racing start safety. This study suggests that proper education, awareness and

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supervision are the keys to safe racing starts. Racing starts should always be performed under the direct supervision of a certified coach. – **REFERENCE:** Dr. Joel Stager and the Councilman Center for the Science of Swimming completed a study in 2011 on racing start safety published in the International Journal of Aquatic Research and Education. Pages 187-198 of this study address the demonstrated ability of competitive swimmers to modify racing start depth when directed.

http://www.indiana.edu/~kines/pdf_files/council/White_2011.pdf Suggestion: We strongly recommend that the Technical Committee meet with Dr. Stager to get his input. Dr. Stager is arguably the leading authority in the USA on racing start safety. USA Swimming would be happy to assist with arranging such a meeting. _____ Note FINA Rules FR 2.3 (pg. 361) and FR 3.3 (pg. 364) in the 2009-2013 FINA Handbook

Changes to Code/Annex:

Agreed. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

- *Comment:*

4.8.2.1 -- No change; supporting comment: Editorial Comment: Separating recreational swimming from competitive swimming is the most effective way to facilitate a practical minimum water depth for competitive use of starting platforms. Prohibiting and preventing use of starting platforms by recreational swimmers is paramount. -- Starting platforms shall be removed or prohibited from use during all recreational or non-competitive swimming activity.

Changes to Code/Annex:

Agreed. Wording kept intact. (actually referring to 4.8.3.1)

schools in a difficult position vis a vis their swimming programs. Moreover, it would also put other, noncompetitive users of the pool at an increased risk of drowning – a much higher risk than the incidence of serious injury due to competitive racing starts – in the typical multi-use pools used by many high school swimming programs. Based on the above-referenced data from UNC, OSU and the CDC, the technical committee should start over on this section. Such action is all the more appropriate because adding depth to multi-purpose pools, such as the ones used by many high school swim teams, would put at greater risk other pool users such as the young, the old, people learning to swim and people with disabilities. -- Starting platforms should be installed in a minimum water depth of ~~6 feet and 7 inches (2.01 m)~~ 4 feet (1.22 meters). – REFERENCE: Excerpted from research data compiled by Dr. Fred Mueller, Director, National Center for Catastrophic Sports Injury Research. Excerpted from research data compiled by Dr. Dawn Comstock, Principal Investigator, Center for Injury Research and Policy.....
“Unintentional Drowning Deaths and Rates per 100,000, 2000-2010, United States, All Races, Both Sexes, All Ages.” Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: www.cdc.gov/ncipc/wisqars.
White, J. C., Cornett, A. C., Wright, B. V., Willmott, A. P., & Stager, J. M. (2011). Competitive Swimmers Modify Racing Start Depth Upon Request. *International Journal Of Aquatic Research & Education*, 5(2), 187-198.

Changes to Code/Annex:

Agreed. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.

- *Comment:*
4.8.3.2 – Recent research and injury data shows that proper supervision and instruction,

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than any other depth. Editorial Comment: More research is needed to establish a minimum uniform water depth. Currently no data or research exists. The research presented in this annex was based on springboards and jump boards, not starting platforms. Editorial Comment: Expert opinion is also not in agreement to a uniform standard for a minimum depth. This is evident in the inconsistencies found in the annexes of the following MAHC modules: Risk Management and Safety. Annex sections 4.5.5.1 (Depth Measurements) and 4.5.5.2.8 (No diving Symbol) both indicate “This requirement is not intended to apply to competition AQUATIC VENUES where skilled divers train and compete in 4-6 feet (1.3-2m) of water and are under the supervision of a certified instructor.” Lifeguarding and Bather Supervision. Annex section 6.3.3.1 Surveillance Reference - Any aquatic venue which allows the usage of diving boards of any type or starting platforms indicates “There should be absolutely no head first entries in the water in 5 feet (1.52 m) of water or less from the deck or any elevations without proper training and lifeguard supervision.” Editorial Comment: Greater pool depth does not guarantee racing start safety. Proper education, training, safety awareness and close supervision are the keys. USA Swimming and YMCA of the USA require a teaching progression for racing starts. Editorial Comment: If the minimum 6’7” requirement is part of the final code, the implications, both financially and programmatically will be substantial, and could adversely impact competitive swim programs for every major competitive swimming organization Approximately 1000 YMCA programs would be affected. YMCA of the USA estimates that the cost to modify pools to a 6’ 7’ depth at approximately \$200,000 per pool. The safety of program participants is and always has been a priority for YMCAs; thus YMCA is willing to participate in the process and support research efforts designed to determine and substantiate safe depths. -- Delete Section. – **REFERENCE**: The Counsilman Center for The Science of Swimming completed a study in 2011 on racing start safety published in the International Journal of Aquatic Research and Education. Pages 187-198 of this study address the demonstrated ability of competitive swimmers to modify racing start depth when directed. Note FINA Rules FR 2.3 (pg. 361) and FR 3.3 (pg. 364) in the 2009-2013 FINA Handbook Multiple editorial comments. MAHC Risk Management and Safety annex sections 4.5.5.1 and 4.5.5.2.8. MAHC Lifeguarding and Bather Supervision annex section 6.3.3.1.

Changes to Code/Annex:

Agreed on rewording, section not deleted. Change made based on public comment to accept shallower depths with a minimum of 4 ft. below starting platforms for competitive swimming under the auspices of an aquatics governing body. A key goal of the MAHC is to continue to encourage aquatic experiences through increased access to healthy and safe pools and programs, while also promoting continued improvements to pool design and maintenance. The MAHC effort seeks the most effective and feasible interventions to promote pool safety, and we value the collective input of the diverse stakeholders involved in drafting the MAHC who have provided important feedback through the public comment process. The MAHC requires “No Diving” signs around the areas of a pool 5 ft or shallower, which is well supported by data on spinal cord injuries to recreational divers performing deck level dives. This change is based on the reported experience from aquatics governing bodies with progressive training and certification of athletes on shallow water dives and the limited data specifically addressing competitive athletes diving

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off starting platforms and risk for spinal cord injuries: not all competitive swimmers are registered with an aquatics governing body that is collecting information on these injuries. Because some of these studies suggest there is an increased risk of touching or closely approaching the bottom with older, presumably heavier competitive divers diving into shallower depths (4 ft.), it is recommended that more data for competitive diving off platforms be collected to better inform future decision making and re-assessment on this subject. The MAHC Annex includes a short summary of these data.