



## CITY OF WILLIAMS LAKE COUNCIL REPORT

**DATE OF REPORT:** February 17, 2023  
**DATE & TYPE OF MEETING:** May 24, 2023 Central Cariboo Joint Committee Meeting  
**AUTHOR:** Stacey Miranda, Director of Community Services  
**SUBJECT:** NATATORIUM – DECK SLIPS AND FALLS  
**FILE:** 7900-10-03

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### Recommendation

That Council receive this report for information.

### Purpose

There has been concern regarding patrons slipping on the West Fraser Aquatic Centre Deck and receiving injuries. This is a concern for natatoriums in every community; when a floor is wet, it is slippery, and caution must be taken. The specific tiles and grout used for the aquatic centre pool deck were chosen specifically to assist with slippage. The aquatic centre deck flooring meets the guidelines set out in the *Public Health Act*, **BC Guidelines for Pool Operations** (October 2021), as well all **BC Guidelines for Pool Design** (October 2021). Notwithstanding this, staff continually endeavour to investigate options and seek advice on improving safety for patrons and employees of the aquatic centre.

### Background / Discussion

The covering of the deck tiles could affect the warranty of the tiles, as they were chosen to be effective when the pool design was authorized. This may also impact insurance coverage if implemented without adequate investigation of the base issue/concern. Matting may seem like the easy solution, but also has the added entrapment of water, creating an environment for many types of bacteria to gather and grow. Based on considerable research, staff would need to remove and clean the matting and floor every six hours in order to maintain the disinfection integrity. Staff continue to explore options to help address safety concerns in this regard, but given the inherent nature of pools as having wet conditions, there is likely no way to entirely mitigate the potential for slip and fall risk where water is on the floor and deck areas. There is signage posted throughout the facility, and staff educate patrons on a regular basis to be cautious and walk slowly. What seems to be a quick and simple may end up causing a bigger problem if not acted on with due consideration. There are handrails and mats at the locations currently designated by staff and patron recommendations, as well as what the building designs dictate. Before making any decisions, it is recommended that staff undertake a thorough review of the situation and investigate possible alternatives to address concerns from the public. Currently, the West Fraser Aquatic Centre meets or exceeds all legislated requirements and guidelines, and has easily passed Environmental Health Inspections.

The Community Services Department is continually working hard with other pools to ensure a safe aquatic facility. There are several municipalities in contact regarding the latest innovations to mitigate slip and fall hazards in natatoriums.

Again, even with matting, water on the matt (floor) will equate to a slippery surface in a naturally warm and wet environment. The Community Services Department is proceeding with the purchase of this matt that seems to provide some stability and does not affect drainage or cleaning. It was tested in March 2023 and found as a comfort to some patrons, and seems a temporary solution.

Please see below for regulations and guidelines.

### *Reference Section of Pool Regulation: Section 6 (BC Guidelines for Pool Operators)*

**All pools in British Columbia that fall under the Pool Regulation must have a valid operating permit issued by the health authority.** The regulation requires that an operating permit be posted in a prominent place on the premises and that all requirements set out in the permit are complied with. An operating permit is not transferable – the permit is valid only for the pool for which it has been issued and is not valid with a change of pool ownership. It expires on the earlier date specified in the permit, if any, or one year following issuance of the permit.

An application for an **operating permit** must include the following documentation:

- 1. A signed statement from an engineer or architect once they are satisfied that the pool has been constructed so as to substantially comply, in all material respects, with the plans and specifications submitted in the application for construction permit.** For a copy of this application refer to the BC Guidelines for Pool Design on the Ministry of Health's website at:  
[http://www.health.gov.bc.ca/protect/ehp\\_recreational\\_water\\_quality.html](http://www.health.gov.bc.ca/protect/ehp_recreational_water_quality.html).
- 2. A copy of the completed pool data sheet.** For a copy of the pool data sheet, refer to the Pool Safety Plan Guide for Pool Operators on the Ministry of Health's website at:  
[https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/recreational\[1\]water-quality](https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/recreational[1]water-quality).
- 3. A copy of the pool safety plan for your pool prepared in accordance with Section 13 of the Pool Regulation.** For information on pool safety plans, refer to *Part 4: Pool Safety Plans* in this document. To read the Pool Safety Plan Guide for Pool Operators, visit:  
[https://www2.gov.bc.ca/assets/gov/health/forms/guide\\_and\\_pool\\_safety\\_plan.pdf](https://www2.gov.bc.ca/assets/gov/health/forms/guide_and_pool_safety_plan.pdf). The operating permit may state terms and conditions for the pool operation, such as maximum bather load, design flow rate and any other conditions required by the health authority. Contact your local health authority to apply for an operating permit or get more information on obtaining one.

### *3.2 DECKS AND DECK DRAINS (BC Guidelines for Pool Design)*

Pools should have sufficient room surrounding them to allow patrons including those with disabilities to pass safely and allow staff and emergency workers access to all areas of the pool. There should be sufficient room for an ambulance gurney to pass easily.

## POOL DECK

A continuous walkway should extend completely around the pool and should:

- **Provide a minimum walkway width of 1.2 m (4 ft) beyond the edge of the pool and gutter.** (see Appendix D for pandemic considerations).
- Maintain a minimum 1.2 m (4 ft) wide deck around obstructions; such as pool features (e.g., slides, columns and play features); and other possible obstructions (e.g., rolled up pool covers) to provide adequate emergency access.
- Provide drainage to mitigate deck water from entering the pool and deck level gutter (where provided) in a manner that will not create muddy, hazardous or objectionable conditions within the pool enclosure, and will facilitate washing and drainage without obstructions to the drains.
- **Slope to drain with a minimum uniform slope of 2% (1 in 50) and a maximum slope of 4% (1 in 25),** except for wheelchair (accessible) ramps.
- Have decorative features, where used, (such as those used to direct foot traffic) that are slip[1]resistant, and do not interfere with deck drainage or impede emergency access. Linear drains generally result in fewer irregular deck slopes than point drains. Where practical, linear drains should be considered. Internal pool walls are walls that divide a pool into two or more sections but are not intended to be walked on. Such walls may be less than 1.2 m (4 ft) wide. Signage should be placed indicating “no bather access,” as appropriate. Such dividing walls should be capped with a finish that discourages patrons from standing or walking on these surfaces (e.g., decorative rocks)

### 3.3 FLOORING (BC Guidelines for Pool Design)

Flooring within the pool area – including floors in dressing rooms, shower stalls, toilet areas, decks, stairs, and other walking areas, as well as flooring cove joints – should:

- **Be made of durable material that is impervious to moisture and designed to minimize bacterial growth.**
- Allow for easy and thorough cleaning and disinfection.
- **Retain a nonslip (slip-resistant) texture** and cause no discomfort to bare feet.
- Be free of tripping hazards such as uneven surfaces or changes in elevation.
- Wherever practical and for pool areas exposed to direct sunlight, be of a surface material and colour that does not cause the deck surface to become too hot (e.g. to cause burns to bare feet).
- Be free from physical hazards that could cause injury to bare feet. • Be designated by the manufacturer as suitable for walking surfaces in wet areas or for use in pool areas.
- Be covered at the wall juncture for ease of cleaning and disinfection.
- **Allow free drainage over the deck surface** (stamped concrete is not acceptable).

#### ***TILE SLIP RESISTANCE TREATMENTS** [\(BC Guidelines for Pool Design\)](#)*

Use of chemical treatments to enhance the slip resistance of existing tiles should be discussed with a health officer prior to application. In some cases, these treatments can affect the tile's integrity and lead to maintenance difficulties.

**TILE SIZE** Smaller tiles, less than 10 cm x 10 cm (4 in x 4 in) on pool decks and 5 cm x 5 cm (**2 in x 2 in**) in **pool basins** – help reduce slip hazard. **Since smaller tiles have a greater density of grout lines than larger tiles, smaller tiles provide more slip resistance than larger tiles of the same material.** Tiles greater than 15 cm x 15 cm (6 in x 6 in) – are not recommended due to potential slip hazards and difficulty in maintaining pool deck slope.

**CONTRASTING COLOURS** The use of contrasting colours or textures should be limited to the delineation of edges such as those on stairs, ledges, and drop-offs. Also, the use of contrasts on floors and deck surfaces for reasons other than delineation may pose challenges to those with impaired cognition or limited vision

#### ***4.7 HANDRAILS AND GUARDRAILS** [\(BC Guidelines for Pool Design\)](#)*

This section should be read in conjunction with Section 4.6. Handrails and guardrails should:

- In accessible pools, be designed according to best practices, such as those outlined in the ADA Accessibility Standards.
- For diving boards, be designed with reference to the FINA Facilities Rules (current edition, Section FR5).
- Have vertical rails on diving platform guardrails to prevent swimmers from falling and becoming entrapped.
- Serve all treads.
- Be made of corrosion-resistant materials to allow for gripping in a wet environment.
- Be inset in the walls or have a clearance distance of less than 9 cm (3.5 in) or greater than 23 cm (9 in) from walls to reduce the risk of entrapment. Consideration should also be given to installing handrails or grab bars in strategic locations where falls are most likely to occur – e.g., on stairs and ramps. Where a piece of equipment is designed to be used by those under the age of 12, additional considerations should be given to the following:
  - The size of the handrails should be of reduced diameter to accommodate smaller hands.<sup>9</sup> <https://www.access-board.gov/ada/#ada-1009> <sup>10</sup> <https://www.fina.org/rules/facility-rules>
- Additional guardrails should be provided to prevent falling or becoming entrapped.
- Designers can reference CSA Standard CSA-Z614: Children's Playspaces and Equipment for guidance

Our pool has many handrails and ladder handles in and out of all the pools and the slide. We have handrails in the changeroom hallway leading to the natatorium.

- [B.C. Guidelines for Pool Design \(PDF, 1MB\)](#)
- [B.C. Guidelines for Pool Operations \(PDF, 1MB\)](#)

**Financial Considerations (Cost and Resource Allocation)**

- ☒ Yes, the desired matting costs will be less than \$2000.00
- ☐ N/A

**Legislative Considerations (Applicable Policies and/or Bylaws)**

- ☒ Yes – *Public Health Act*; Swimming pools, Swimming pool, Spray Pools and Wading Pool Regulations, BC Guidelines for Pool Design, BC Guidelines for Pool Operation.
- ☐ N/A

**This project aligns with the following Strategic Priority Areas:**

- ☒ Resilient and Diversified Economy
- ☒ Strong Community Relationships
- ☒ Financial Stability and Sound Asset Management
- ☒ Positive Community Image
- ☐ Healthy and Inclusive Workplace
- ☐ Other

**Other Implications (Environmental/Social/Economic)**

- ☐ Yes (explain)
- ☒ N/A

**This report has been prepared in consultation with:**

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**Approved for agenda by:**

Chief Administrative Officer, Gary Muraca

Respectfully submitted,

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