



Aquatic Facility Guidance Note 10

Response to Unsatisfactory Aquatic Facility Water Chemistry

Maintaining correct water chemistry in an aquatic facility (including pools, spas, water slides and spray grounds) is essential to minimize the risk of users contracting water borne illness and infection. The legal obligations placed on both aquatic facility operators to correctly monitor/maintain water chemistry and on local governments to enforce health regulations and undertake monthly microbiological sampling are intended to minimize and protect users from such water borne health risks.

This Guide is aimed at local government officers and aquatic facility operators/owners for use in deciding appropriate and necessary actions in response to unsatisfactory aquatic facility water chemistry results.

This guide's recommended actions (as described in the attached Water Chemistry Summary & Recommended Actions tables) may not be necessary or adequate in all circumstances and the ultimate decision on actions necessary rests with the local government (with advice from the Department of Health where necessary) to ensure operators are satisfying their regulatory obligations and on operators to ensure their aquatic facility is kept in good order and water quality is at all times satisfactory and not a health risk to users.

Unsatisfactory microbiological water results and recommended actions are dealt with separately in the Environmental Health Guide - *Response to PathWest Water Sample Results in Aquatic Facilities*, which is available on the Department of Health [Website](#).

Operator/Owner Responsibilities & Obligations

The *Health (Aquatic Facility) Regulations 2007* (*the Regulations*) require operators of aquatic facilities to manage, operate and maintain their aquatic facility in accordance with the requirements of the *Code of Practice for the Design, Construction, Operation, Management and Maintenance of Aquatic Facilities*. (*the Code*), and this includes:

1. Generally keeping the aquatic facility in good order and ensuring it's construction and equipment is maintained to function in the same operational state as was approved for use;
2. Having nominated persons with required qualifications who understand and know how to operate the facility correctly and undertake other required duties dependant on the aquatic facility's Class/Group type, as prescribed in the Code;
3. Having an Operations Manual for the aquatic facility stored onsite which documents the required chemical operating parameters and individual responsibilities of those persons involved in operation of the aquatic facility, including 1-2 above; and

Whenever the pool is open for use*:

4. Ensuring water chemistry always complies with the prescribed water chemistry operating parameters (including the minimum sanitizer concentration, within the prescribed pH range & have less than the prescribed maximum stabilizer content);

5. Manually testing the water chemistry with an approved water chemistry test kit at the prescribed frequency and recording all test results into a logbook stored onsite.

Note: As prescribed in Section 5.5 of the Code, during the off season (i.e. when the facility is shut down for all use) operators are no longer required to satisfy item 4 & 5 above, subject to them:

- Maintaining water chemistry for water clarity and prevention of algal growth;
- Having all entrances adequately signposted confirming the facility is closed for the season;
- Providing sufficient maintenance to ensure water does not give rise to objectionable odours, insect breeding or any other nuisance or safety hazard; and
- The aquatic facility not reopening for use until approved to do so by the local government's environmental health officer, which primarily will be dependent on correct water chemistry parameters again being established and satisfactory microbiological water sampling results.

Local Government Role & Obligations

Local governments are authorised and directed under the *Health Act* to enforce the requirements of the *Regulations* and *the Code*. Local governments are also obliged to undertake monthly microbiological water sampling from each of those aquatic facilities within their municipality and submit these samples for microbiological testing (unless exempted from that requirement). This monthly water sampling requires that amoeba & bacterial water samples be collected and delivered to a Chief Health Officer approved Waters Testing Laboratory within 24 hours under required temperature control.

Aquatic facilities in remote locations may cause difficulty for local governments to ensure they can satisfy their monthly water sampling obligations and in such situations local governments may need to seek an exemption from the sampling obligations. Further detail about the process for exemptions are explained in Guidance Note 7 *Application - Local Government Exemption*, which is available on the Department of Health [Website](#).

The process of collecting these samples requires that the sampler do manual water chemistry tests and record the test results, sampling detail and site particulars (e.g. the water temp, free chlorine, pH, sample point, site code, sampler's ID, time/date and the type of microbiological analysis required). **These results must be fully recorded on both the water sampling paperwork and sampling bottles.**

Whilst local government officers are at an aquatic facility undertaking water sampling they should routinely view the operator's documentations (e.g. operations manual, qualifications & water chemistry test result logbook) to confirm the aquatic facility is being maintained correctly and to note any irregularities or faults with the aquatic facility.

Unsatisfactory Chemical Test Results

Where the person sampling or testing water finds water chemistry at an aquatic facility does not comply with the required chemical parameters they will need to consider what actions are required (if any) and in such situations it is recommended any decision be based on:

- Time the water chemistry in the aquatic facility has been operating outside of the required chemical parameters, from interview of the operator and inspection of test records.
- The offending chemical parameter in question & how much it is outside the prescribed level.
- The likely reason/reasons why the chemistry levels might not be correct.
- The time necessary for the operator to correct the chemical levels.
- The general state of maintenance at the aquatic facility and the water clarity.

Note: Where a local government officer finds unsatisfactory results they should (when necessary) provide the operator an opportunity to confirm the water chemistry results with their own test kit before ordering closure.

Unsatisfactory Chemical Parameters & Risk

Where water chemistry does not satisfy the prescribed chemical parameters within the Code then (in the absence of any contrary evidence) it must be assumed that the microbiological quality is questionable and a likely serious risk to the health of users.

Therefore, when confronted by an aquatic facility with incorrect water chemistry the operator and/or the local government officer will need to determine whether all use of the facility should cease until the:

- Offending water chemistry parameters are corrected;
- Offending water chemistry parameters are corrected and super chlorination has occurred; or
- Offending water chemistry parameters are corrected & microbiological sampling can confirm satisfactory water microbiology.

Where water chemistry testing results confirm they are not compliant then it is recommended that the operator and/or Local Government Officer take the actions as described in the Water Chemistry Summary & Recommended Actions tables included in this Environmental Health Guide.

Note: Where an operator is unwilling to cooperate, immediate closure by local government due to poor water chemistry, may be effected by formal issuance of a Closure Order, which is available on the Department of Health [Website](#).

More information

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