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# Swimming pools inundated by flood waters

This page provides information about repairing an aquatic facility after it has been inundated with flood or wastewater.

It is relevant for pools and spas used for recreation in the following environments:

- commercial
- educational
- community.

Private swimming pool owners in a similar situation should consult a trained swimming pool and spa technical operator to undertake these works.

## Terms explained

Aquatic facility – a man-made body of water used for sport, recreation or educational or therapeutic water activities, which generally includes:

- swimming pools
- spa pools
- river rides
- water slides
- water playgrounds.

Flocculants – chemicals used in swimming pools to bond floating particles for easy removal.

## Why is flooding of a swimming pool a problem?

Flood waters can be contaminated with:

- sewage
- waste
- mud
- brackish water.

Remedial work will be required to get a flooded public, commercial, tourist, educational or local government pool up to an acceptable standard for use.

This will include cleaning out and flushing or treatment with flocculants and chemicals to remove solids and contaminants.

## Pool to be closed for maintenance

The pool should be closed for maintenance, allowing time to:

- clean and sanitise the pool
- take samples of pool water.

The samples should be taken by an environmental health officer or trained technical operator (as applicable).

After receiving satisfactory results from a National Association of Testing Authorities (NATA) accredited water laboratory the pool can be re-opened for public use.

In the event that the operator does not close the facility, the local government may deem it to be a health risk and order it closed until satisfactory water samples are obtained.

In Western Australia, an environmental health officer may issue a closure order, which must be endorsed by the Executive Director

Public Health within 48 hours (at all times).

A scanned copy of the order may be [emailed to the Department of Health](#) for endorsement.

## If the pool can be emptied

The operator will need to make an assessment as to whether it is safe to empty the pool.

Advice from a building consultant will be required, especially in areas with a high water table.

Emptying a pool situated in an area with a high water table or in water-logged soils may put the pool walls under stress.

This could result in cracking or collapsing of the pool walls, or forcing the pool up out of the ground.

It will also be important that potentially contaminated pool water can be disposed of to a location where it will not:

- cause overflows in an already overloaded drainage system
- contaminate other water bodies.

If it is safe to empty the pool, then all water and residue should be removed.

You should also flush the plumbing pipes leading to the filters and replace filters or filter media.

Once emptied, the pool floor can be cleaned and sanitised using a 10 parts per million (ppm) chlorine solution.

Walls can be cleaned with a 10 per cent bicarbonate solution. Bicarbonate is also used to raise the pH.

Once completely cleaned, the pool can be refilled using scheme water, providing this has not also been compromised by the flood.

Disinfectant can be added to bring it up to the operating parameters.

Read more about the parameters in the [Code of Practice for the Design, Operation, Management and Maintenance of Aquatic Facilities \(PDF 95KB\)](#).

When the pool has been operating at the correct levels continuously for 24 hours, the local government environmental health officer should undertake start-up sampling of:

- the pool
- the backwash of each filter.

Samples should be forwarded, with an accompanying form, to a NATA accredited water laboratory.

Read [further information about pool sampling \(PDF 245KB\)](#).

## Where a pool cannot be emptied

Where the pool cannot be emptied, a trained technical operator will need to inspect the pool.

The operator will determine an appropriate treatment to remove solids from the water, for example flocculation.

Depending on the amount and type of inundation, the water may need to be treated over several days.

This will allow for all undissolved solids to descend to the floor of the pool ready for vacuuming.

Only when all the sand and sludge has been removed from the pool can effective chlorination commence.

The pool and filters should be superchlorinated to 20mg/l (ppm) for up to 13 hours.

Depending on the nature and amount of contamination and the volume of the pool, the chemical treatment process and chlorination of the pool may take up to 1 week to complete.

Once the pool water is visibly clean, the pool motor and filter(s) may then be used to operate at the required chemical levels (for example chlorine, pH, bromine, cyanuric acid level).

Operators should determine the time required for a complete filtration cycle.

It should be noted that 4 complete cycles of the pool water are required to achieve 98 per cent filtration of pool water.

Contact the local government environmental health officer once the pool is maintaining the chemical levels listed in the Code of

Practice for the Design, Construction, Operation, Management & Maintenance of Aquatic Facilities (May 2010).

They will undertake start-up sampling of the pool (or spa) and backwash of each filter.

Samples should be forwarded with an accompanying form to the Pathwest Laboratory in Nedlands.

## Sampling of swimming pool waters

Operators in Western Australia should allow 3 to 4 days (metropolitan area) and up to 7 days (country areas) for water samples to be collected and the results returned to the operator.

Where an initial sample fails to meet the standard in Section 5 of the Code of Practice, an additional sample must be taken and time allowed for the results to be forwarded to the operator.

## More information

For further information you can [email the Department of Health](#) or phone the Environmental Health Directorate on 9388 4999.

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