



Factsheet

Commercial Pool Trade Waste Requirements

Swimming Pool Wastewater Features

Swimming pools use filtration systems to remove contaminants from pool water. To maintain filter efficiency, filters must be backwashed regularly to remove accumulated dirt and contaminants.

Contaminants in pool backwash water can include organic matter such as hair and skin, fine particles including sediment, dirt and leaves, oily residues from sunscreens and lotions, and harmful bacteria. Treated pool water may also contain chlorine, chlorine disinfection by-products, and elevated levels of Total Dissolved Solids (TDS).

The backwash and pool water from commercial swimming pools and ornamental ponds are considered a trade waste and may not be discharged to the wastewater network without prior approval from Unitywater. The approval typically specifies:

- wastewater quality requirements
- permitted volumes of treatment and discharge
- allowable discharge flow rates to the wastewater network
- magnetic flow meter type and installation location for discharge verification

Unitywater may accept swimming pool backwash water to the wastewater network provided that key wastewater management principles are met. These principles ensure sufficient capacity within the wastewater network and require that large particles, particularly sand and grit, are captured and removed prior to discharge.

Backwash Water Holding Tank and Controls

A backwash water holding tank must be installed prior to discharge of wastewater to Unitywater's wastewater network. Refer to figure 1 below for the key features required in a backwash holding tank.

A typical backwash water holding tank provides the following benefits:

- Allows sand and grit in the backwash water to settle out
- Improves the overall quality of wastewater discharged
- Controls the rate of discharge to the wastewater network

The typical acceptable discharge flow rate to the wastewater network is two litres per second. Where a higher discharge rate is required, the customer will need to apply for approval. Unitywater will assess whether sufficient capacity exists within the wastewater network to accommodate the increased flow rate. Discharge hours may be restricted to low-flow periods to protect network capacity and operations.

Size of Backwash Water Holding Tank

The backwash water holding tank must be sized to accommodate the largest backwash cycle of the pool plus an additional 15% volume. This allowance includes:

- 10% contingency for potential overflows during backwashing
 - 5% capacity for sludge accumulation
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Shape of Backwash Water Holding Tank

A holding tank is considered the minimum pre-treatment requirement for commercial pools under trade waste requirements and ensures controlled flow and solids removal prior to discharge to our wastewater network. The tank must be designed to allow the effective settling of suspended solids to form sludge. Acceptable designs include tanks with a sloping floor or a conical base to enhance solids settlement and facilitate sludge production and removal.

A high-level cut-off switch must be installed to automatically stop the backwashing cycle and prevent overflow to the wastewater network or local stormwater collection system. A low-level cut-off switch is also required to maintain sludge containment and prevent solids entering the wastewater network.

Maintenance of Backwash Water Holding Tank

The backwash water holding tank must be regularly maintained. As a minimum, the tank should be de-sludged every six months. The tank should be inspected monthly, as the required frequency of de-sludging will vary depending on tank size, backwashing frequency, pool filtration type, chemical composition and water quality.

Unitywater may request sampling or field testing of backwash water components such as TDS, pH, chlorine and turbidity where water quality appears atypical or where sludge accumulation indicates potential contamination.

Repair and Maintenance of Pool

Commercial pools may periodically need to be drained for the repair or maintenance of pool surfaces or other sections of the subsurface drainage or pump system.

In the event that a commercial pool needs to be completely or partially drained, the contents are not permitted to be discharged to the wastewater network without prior approval. Unitywater will only consider acceptance of this volume under strict conditions for each individual drainage event.

Specifically, emptying a pool requires special approval to avoid excessive hydraulic or treatment load. Discharge will be subject to flow limits, time-of-day restrictions, and is usually prohibited during wet weather. Saltwater pools may be subject to TDS and other pollutant limits, particularly where discharging to smaller or sensitive Wastewater Treatment Plants.

Trade Waste Approval for Commercial Pool Backwash

Unitywater will assess commercial pool trade waste backwash discharge to enable streamlined approvals for low-risk dischargers. Under this model, discharges are deemed approved only where the following standard conditions are met. If any of these conditions cannot be met, a Trade Waste Permit Application will be required to be submitted for assessment.

Permitted Discharges

- Pool filter backwash only
- Maximum discharge rate 2 L/s
- Stormwater, pool overflow or spillage must not enter the wastewater system
- Back wash from ornamental or decorative pools may be included (fish ponds are excluded)

Prohibited Substances

- Strong acids, detergents, or cleaning wastewater
- Any cleaning chemicals used on pool surfaces unless approved; SDS must be provided on request
- Undiluted float tank wastewater due to extremely high TDS and adverse impacts on the wastewater network (these may be assessed on a case-by-case basis)

Pre-treatment Requirements

- Mandatory backwash holding tank with controlled discharge
- Solids removal and sludge management as per maintenance requirements

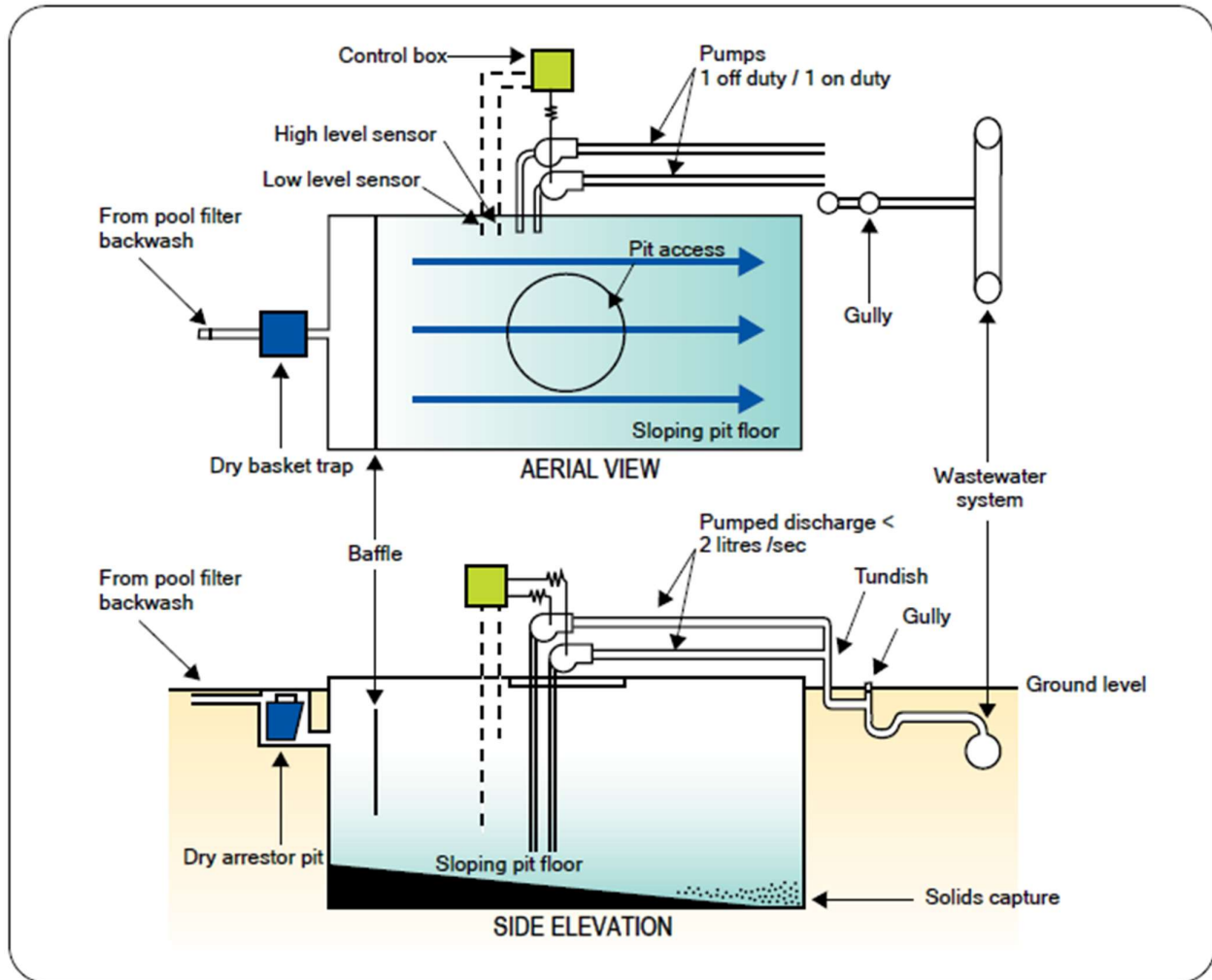


Figure 1 - Key features of a typical backwash water holding tank