

Using recycled water safely



Background

Recycled water is a valuable resource but its use must be carefully managed in order to protect public health and ensure environmental sustainability.

The Department of Primary Industries, Parks, Water and Environment Environmental Guidelines for use of Recycled Water in Tasmania 2002 (The Guidelines) provide a guide for safe and sustainable recycled water use in Tasmania and should be used as the first point of reference for recycled water management.

In addition to the requirements of The Guidelines, every property utilising recycled water must operate in accordance with:

- A supply agreement/contract with TasWater
- A site specific irrigation management plan and/or development proposal and environmental management plan (DPEMP) for the recycled water scheme.

This factsheet is intended as a general guide only. For information specific to individual recycled water uses, please refer to the relevant site management plan or contact TasWater.

Non-permitted uses of recycled water

Recycled water must not be used for any of the following:

- Drinking (by humans or livestock)
- Any domestic uses (e.g. filling tanks, household irrigation, personal bathing)
- Irrigation of any land intended for grazing by pigs or poultry
- Irrigation of food crops that will be sold fresh to consumers (e.g. potatoes, carrots, onions, salad greens) regardless of whether they are intended to be cooked prior to consumption
- Filling of any storages (e.g. dams, tanks, etc.) other than those specifically approved for recycled water storage in the site management plan.

In addition to the above, recycled water from the Clarence and Brighton schemes must not be used for irrigation of pasture or crops to be consumed by cattle. This includes production of fodder, including hay and silage, intended for cattle consumption (unless express permission has been granted by TasWater). For further information, refer to Taswater's Recycled Water and Livestock factsheet.

Health and safety requirements

Anyone that may contact recycled water – staff, contractors, site visitors – must be made aware of the following protocols for using recycled water:

- Avoid contact with recycled water. This includes ingestion of water and inhalation of aerosols
- When working near/with recycled water wear protective equipment including waterproof gloves and safety glasses – and if working on irrigation equipment under pressure, a P2 mask
- Hands are to be washed with soap after contacting recycled water or irrigation equipment

- Do not allow contact of recycled water with open wounds
- Flush irrigation equipment with freshwater prior to undertaking maintenance
- Staff/contractors that may come into contact with recycled water are encouraged to speak to their doctor about relevant vaccination requirements (typically Hepatitis A/B is recommended).

Public safety precautions

- Recycled water irrigation must not occur if there is a risk that the public will sustain skin or aerosol contact
- Recycled water, aerosols and spray drift should be minimised by using large droplet irrigation systems, in low wind conditions
- Any infrastructure failures (e.g. leaking pipes) must be promptly reported to TasWater or, if private infrastructure, repaired
- In areas where there is public access, including golf courses, access to irrigation areas must be restricted for a minimum of four hours after irrigation or until irrigation area is dry.

Fencing and signage requirements

- Recycled water signage must in place on the property entrance and boundaries of land utilising recycled water
- Recycled water access points (e.g. taps) must have signage, be coloured lilac and be protected from public access
- Recycled water storages (e.g. dams) must have appropriate fencing and signage.

Buffer zone requirements

- All recycled water users must comply with the recycled water buffer zones defined in either the site management plan or The Guidelines (Table 1)
- Generally, unless otherwise specified in the site irrigation management plan, the following apply:
 - 100 metre buffer to public roads and houses for spray irrigation
 - 20 metre buffer to public roads and houses for drip irrigation.

Environmental precautions

- Recycled water application must be managed to prevent surface ponding and run off into stormwater systems, dams and other waterways
- Recycled water often has higher salinity than other sources of irrigation water and hence users should be aware that it may not be suitable for all species of plant crops
- TasWater undertakes annual soil monitoring on all properties utilising recycled water. Landowners should review soil data to ensure that property management practices (including fertiliser use) are appropriate.

Table 1 – Default minimum recycled water distances

Type of activity	Minimum buffer to nearest road or dwelling (metres)	Reason for buffer
Storage lagoons/holding dams ^{a, b}	250	Odour
High pressure spray irrigation (including mini and micro sprinklers) ^{a, b, c}	100 ^f	Spray drift
Pivot irrigators	Dependent on technology	Spray drift
Wastewater transfer and irrigation pumps ^{b, c}	50	Noise
Flood irrigation ^e	50	Odour and runoff
Drip irrigation (including bubble type emitters) ^{b, d}	20	Odour and runoff
Surface waters	Dependent on dilution and movement of water	Water quality protection

Key: **a** – The possible effects of local winds, particularly in spring, should be considered in addition to prevailing winds. **b** – Appropriate fencing and warning notices are required (refer to section 5.4 and 7.1 of The Guidelines). **c** – Distance measured from the edge of the wet surface created by the sprinkler(s). **d** – Subject to pump type, wastewater quality and appropriate noise controls. **e** – Lower quality wastewater may require more restriction to public access such as secure fencing. **f** – For design wind speed 10 kilometres per hour. For each 10 kilometre per hour increase of wind speed above this, double the buffer distances for high pressure sprays. Reference: Table 6.1, DPI/PWE 2002.

Emergency contact

Please contact TasWater for emergencies (broken pipes, accidental spraying of residents), questions or concerns on 13 6992.

The Guidelines

The Guidelines can be accessed online at http://epa.tas.gov.au/Documents/Use_of_Recycled_Water_December_2002.pdf