

Industrial customers

Acceptance standards and charging rates for 2018-19

Sydney Water accepts trade wastewater to the wastewater system, if it meets certain acceptance standards.

What are acceptance standards?

Acceptance standards are generally limits to the concentration of substances in composite samples of trade wastewater discharge. For substances that pose a particular health and safety risk, acceptance standards also apply to the concentration of substances in a discrete sample of trade wastewater discharge.

Table 1 lists the acceptance standards for domestic substances, and Table 2 lists those for non-domestic substances. Table 1 also shows the value of the domestic equivalent concentrations in industrial discharges, which we deduct when calculating charges.

IPART has determined that Sydney Water will adjust all trade waste fees and charges from 1 July every year (IPART Determination No 5, 2016). These tables show the prices from 1 July 2018.

Who should do the testing?

Customers must ensure laboratories, registered by the National Association of Testing Authorities (NATA), test the substances specified in their trade waste agreements or permits, for the class of test(s) or specific test(s). You can download the approved analytical methods at sydneywater.com.au.

What are they based on?

Acceptance standards are based on:

- safe levels of substances that may otherwise be a health risk to workers in and around the wastewater system
- safe levels of substances to protect public health
- pollution reduction targets and discharge licence conditions set by the Environmental Protection Authority NSW (EPA NSW)
- the need to protect our assets and treatment processes
- the capability of the wastewater system to transport 'domestic substances', that is, suspended solids, grease and BOD
- concentrations obtainable by using proven pre-treatment technology (the standards do allow for you to trial new technology)
- quality specifications for biosolids and re-use water
- re-use considerations, including the need to provide wastewater that doesn't interfere with re-use treatment processes, or limit re-use opportunities
- national acceptance criteria published as *National wastewater source management guidelines*, July 2008, WSAA.

Table 1: Acceptance standards, domestic equivalents and charging rates for domestic substances

Substance	Acceptance standard (mg/L)	Domestic equivalent (mg/L)	Note	Charging rate (\$/kg)
BOD5 – primary treatment		230	1	$0.308 + (0.133 \times [\text{BOD mg/L}]/600)$
BOD5 – secondary/tertiary treatment		230	1	$2.001 + (0.133 \times [\text{BOD mg/L}]/600)$
Suspended solids – primary treatment	600	200		0.559
Suspended solids – secondary/tertiary treatment	600	200		1.619
Grease – primary treatment	110	50	2	0.504
Grease – secondary/tertiary treatment	200	50	2	1.546
Nitrogen	150	50	4	1.834
Phosphorus	50	10	4	6.577
Ammonia*	100	35	3, 5	-
Sulphate	2,000	50		-
Total dissolved solids (ocean systems, no discharge limitation)	10,000	450	12	-
Total dissolved solids (inland and ocean systems with limitation)	500	450	12	-
Total dissolved solids (inland and ocean systems with advanced treatment to remove TDS)	10,000	450	12	-

* For substances that pose a particular health and safety risk, apply acceptance standards to the concentration of substances in a discrete sample of trade wastewater discharge as well as in composite samples.

Trade waste requirements

- Sydney Water will determine standards for colour and interference with ultra violet disinfection on a system-specific basis.
- There must be no fibrous material in the trade wastewater that we believe could obstruct or block the wastewater system.
- Non-faecal gross solids must have:
 - a maximum linear dimension of under 20 mm
 - a maximum cross section of 6 mm
 - a quiescent settling velocity of under 3 m/hr.
- Sydney Water will negotiate radioactive material activity rates for wastewater discharge on a site-specific basis.
- The Head of Developer and Business Customer Services will determine the acceptance standards for substances other than those listed in this fact sheet.
- Sydney Water does not accept substances (or mixtures of substances) that cannot mix with water.
- Exceeding acceptance standards can adversely impact the beneficial re-use of biosolids and recycled water quality.
- Exceeding acceptance standards can also represent a significant risk to staff safety and the environment.

Table 2 Acceptance standards for non-domestic substances

Substance	Acceptance standard (mg/L)	Note
Acetaldehyde*	5	5
Acetone*	400	5
Aluminium	100	
Arsenic	1	
Barium	5	
Boron	100	
Bromine*	5	5
Cadmium	1	
Chlorinated phenolics	0.05	6
Chlorine*	10	5

Substance	Acceptance standard (mg/L)	Note
Chromium	3	7
Cobalt	5	
Copper	5	
Cyanide*	1	5, 8
Fluoride	20	4
Formaldehyde*	30	5
General pesticides (excludes OC and OP)	0.1	9
Herbicides and defoliants	0.1	
Iron	50	
Lead	2	
Lithium (specified systems only)	10	10
Manganese	10	
Mercaptans	1	
Mercury	0.03	
Methyl Ethyl Ketone*	100	5
Molybdenum	100	
Nickel	3	
Organoarsenic compounds	0.1	
pH*	7-10 units	1
Petroleum hydrocarbons (flammable)*	10	5, 11, 14
• Benzene*	0.1	5
• Toluene*	0.5	5
• Ethylbenzene*	1	5
• Xylene*	1	5

Substance	Acceptance standard (mg/L)	Note
Phenolic compounds (non-chlorinated)	1	
Polynuclear aromatic hydrocarbons	5	
Propionaldehyde*	5	5
Selenium	5	
Silver	5	
Sulphide*	5	5
Sulphite	50	
Temperature*	38° C	1
Thiosulphate	300	
Tin	10	
Uranium	10	
Volatile halocarbons*	1	5, 13
• Chloroform*	0.1	5
• Perchloroethylene*	0.3	5
• Trichloroethylene*	0.1	5
Zinc	5	

* For substances that pose a particular health and safety risk, apply acceptance standards to the concentration of substances in a discrete sample of trade wastewater discharge as well as in composite samples

See notes on the next page.

Want to know more?

- Visit sydneywater.com.au.
- Email businesscustomers@sydneywater.com.au.
- Call 1300 985 227 to speak to a business customer representative.

Notes to acceptance standards

1. Sydney Water will introduce acceptance standards for a substance on a sub-system specific basis as determined by:
 - how much the receiving system can transport and treat
 - how corroded the sub-system is
 - how wastewater treatment products will be used.
2. You must not discharge oil, fat or grease into the wastewater system.
3. Where ammonia is present with other nitrogenous compounds, the amount of nitrogen in the ammonia is deducted from the total nitrogen as measured by Total Kjeldahl Nitrogen.
4. Fluoride, phosphorus and nitrogen limits don't apply where the customer's wastewater system is connected to a wastewater treatment plant (WWTP) that discharges to the ocean.
5. Acceptance standards also apply to concentrations of ammonia, benzene, bromine, chlorine, cyanide, formaldehyde, petroleum hydrocarbons, sulphide and volatile halocarbons in discrete samples.
6. We will determine acceptance standards for individual chlorinated phenolic compounds on a catchment basis, following pollution reduction targets set by the EPA NSW. The concentration limit is a guide only. We may set lower limits for individual chlorinated phenolic compounds.
7. We don't allow discharge from cooling towers and evaporative condensers using products containing hexavalent chromium (chromate) or organometallic algicides.

We don't allow discharge of hexavalent chromium from contaminated sites.
8. Cyanide is defined as labile cyanide amenable to alkaline chlorination. This includes free cyanide and those complex cyanides that are almost entirely, or in a large degree, dissociable, and so potentially toxic in low concentrations.
9. We won't consent to any discharge of organochlorine pesticides (including chlordane, dieldrin and heptachlor), or organophosphorus pesticides (including chlorpyrifos, diazinon and malathion) into the wastewater system.
10. The limit for lithium applies only to the Rouse Hill wastewater catchment.
11. Where flammable and/or explosive substances may be present, the customer must demonstrate to us that there is no possibility of explosions or fires in the wastewater system. We will discuss limits and charges with individual customers, before a negotiating a trade waste agreement. The flammability of the discharge must never exceed five per cent of the Lower Explosive Limit (LEL) of hexane at 25 °C. In some cases, we may require a customer to install an LEL meter.
12. We will determine acceptance standards for total dissolved solids on a catchment-specific basis. A limit of 500 mg/L may apply to customers discharging to an inland WWTP or to one that is part of a designated re-use system. Acceptance standards will only apply to those customers discharging over 100 kg/day of total dissolved solids (TDS) or greater than one per cent of the total catchment TDS load (whichever is lower).
13. Analysis of volatile halocarbons must, at a minimum, include methylene chloride, chloroform, trichloroethylene and perchloroethylene.
14. This substance is made up of several substances including benzene, toluene, ethylbenzene, (m+p)-xylene and o-xylene.
15. As at 1 July 2013, the limit for soluble BOD applies only to the Smithfield catchment and SPS 67 catchments, due to corrosion.