

Winery Operations

Trade Waste Guideline No. 35

INTRODUCTION

Trade waste discharges from companies processing grapes for production of wine/spirits have the potential to adversely affect the sewerage system. Appropriate management practices at each site are therefore necessary. This Guideline outlines the areas of concern and available technologies for the control of trade wastes.

KEY TRADE WASTE QUALITY REQUIREMENTS

PARAMETER	GENERALLY ACCEPTED LEVEL	
	METRO WWTP	COUNTRY WWTP *
Biochemical Oxygen Demand	<1,000 mg/L	<50 mg/L
Suspended Solids	<500 mg/L average	<50 mg/L average
Total Dissolved Solids	<1500mg/L	<1500mg/L
pH	Between 6-10 units	Between 6-10 units
Temperature	<38°C	<38°C
Flow rate to sewer	Dependant on capacity of receiving sewer	Dependant on capacity of receiving sewer

*Country Waste Water Treatment Plants (WWTP's) are generally unable to cope with significant additional pollutant or hydraulic loads.

BEST PRACTICE MANAGEMENT ASPECTS

- Process areas and floors dry cleaned/swept to remove solids prior to wash down.
- Water use per tonne of grapes processed should not exceed 1500 litres.
- Collected solids, skins and lees (fermentation sludge) are disposed via distiller, land or solid waste stream (with appropriate approvals i.e.: [Environment Protection Authority](#) (EPA) and/or [Local Govt Authority](#) (LGA)).
- Depending on waste water quality, reuse may be a viable option (e.g. woodlot irrigation). This is subject to EPA / LGA approval.

TYPICAL PRETREATMENT

- Screening of all waste water via bow screens, rotating screens, hydro-cyclones etc.
- pH buffering/adjustment tank. Automatic dosing with alkali and acid correction solutions to neutralise wine, sterilants and cleaning solutions.
- Settling tank, clarifier or enhanced gravity separation system (e.g. DAF) with sludge removal facilities.
- Winery facilities are roofed and bunded in accordance with the [Trade Waste Bunding Guideline No.4](#), to prevent stormwater or product loss to sewer. This applies to all areas of the winery including the grape receiving area, winery, tank farm, and waste water treatment plant or balance storage tanks.
- Wineries discharging to small WWTP's, or where local issues dictate, have additional wastewater treatment stages, such as biological treatment (or equivalent) to achieve the required waste water discharge quality.
- Pretreatment system size accommodates peak demand during Vintage and other key periods.

Reviewed September 2011

ADDITIONAL PRETREATMENT

- Dewatering of sludges. (e.g. belt press, or filter socks)
- Balance tanks for waste water storage may be required depending on the hydraulic capacities of the local sewer network or WWTP.

MAINTENANCE

It is the responsibility of site management to ensure the effective operation of all pre-treatment equipment (e.g. ongoing removal of accumulated solids, sludge removal, chemical replacement).

SPOILT WINE

- Preferred option is to recover spoilt wine for reuse, using distillation or other means.
- **No disposal to sewer**, due to the high organic load in wine. However, this material will be accepted at designated receiving points at SA Water wastewater treatment plants. Refer to [Trade Waste Liquid Hauled Waste Guideline No. 23](#)

ADDITIONAL INFORMATION

Mains Water Protection (AS/NZS3500-2003 Part 1), [Trade Waste Blind Tank Guideline No.3](#), [Trade Waste General Policy](#), [Standards of Acceptance of Liquid Waste to Sewer](#), Fact Sheets: [Trade Waste Charges](#)

Reviewed September 2011

Further information

(08) 7424 1336

www.sawater.com.au

tradewastebbranch@sawater.com.au